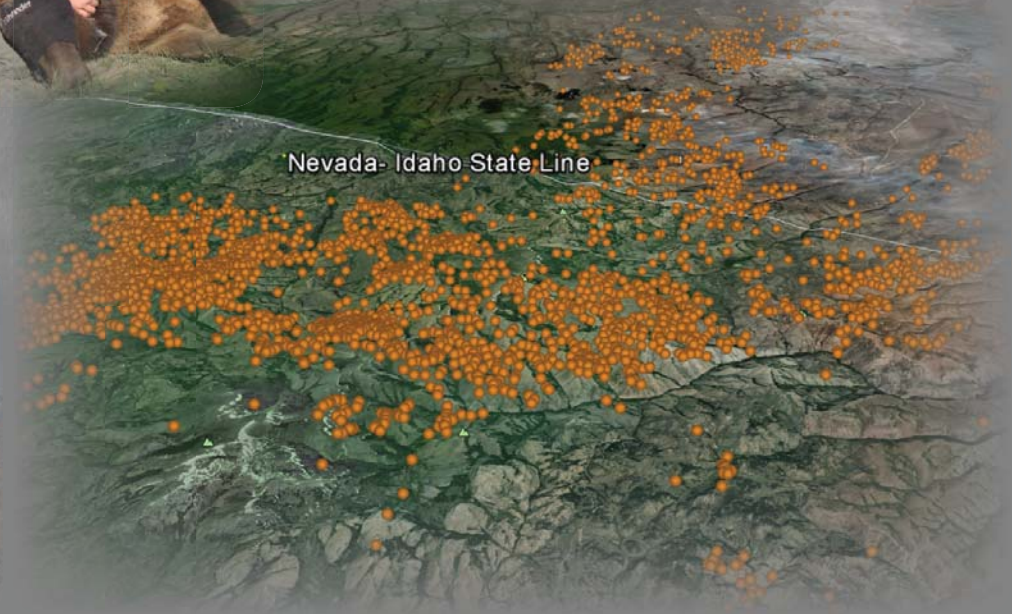
Nevada Department of Wildlife



2012-2013 Big Game Status

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NEVADA DEPARTMENT OF WILDLIFE

2012-2013 BIG GAME STATUS

This Program Receives Federal Aid in Wildlife Restoration
Grant W-48-R-43; Sub-Grant II, Big Game Management

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BIG GAME STATUS STATEWIDE SUMMARY

MULE DEER

The 2012 total statewide mule deer tag quota was 24,257. Despite over a 50% increase in the quota from 2011 to 2012 the observed post-hunt statewide mule deer buck ratio was the same as observed in 2011. The increased tag sales resulted in an increased total deer harvest of 10,112 compared to 5,831 deer harvested in 2011. Of the 10,112 deer harvested, 8,987 were bucks and 1,125 were does. The 2012 statewide hunter success for all deer hunters was nearly 42%, up from the 39% observed in each of the last 2 years.

The 2012 aerial post-season survey effort was greatly improved from 2011 with nearly 34,000 mule deer classified statewide compared to 27,000 in 2011 and just 18,611 deer in 2010. Moderate fawn production was documented at 54 fawns:100 does in late fall/early winter survey. For the second straight year, the highest post-season buck ratio in the history of Nevada was measured at 32 bucks:100 does, reflecting the continued conservatism of past and present tag quotas. The aerial spring 2013 surveys classified 33,346 deer compared to 25,237 in spring 2012. The survey results were indicative of the previously dry winter, dry summer, and cold winter with only 31 fawns:100 adults. Although not surprising, recruitment must improve in order to realize population level gains.

Nevada's mule deer populations have been stable to slightly increasing for the past several years. Following a modest (3%) increase in 2012, the 2013 population is estimated to have experienced a 3% decline. Although sizeable increases in deer tag quotas were realized in 2012, the post season surveys revealed an all-time high buck ratio. However, good forage quality and quantity are still required to allow does the opportunity to twin and bucks to ability to realize their maximum potential for antler growth. With continued drought like conditions in much of the state, fawn production and recruitment will likely suffer. Not only will tag quotas reflect the lower recruitment levels but antler growth will also suffer.

The Game Division initiated the largest Nevada mule deer research and monitoring study in 2011 since the Ruby Butte Deer Herd Study in the 1960s and 70s. Currently, in excess of 800 mule deer collars have been deployed throughout the state. The study involves monitoring survival and migration/movement energetics and strategies in 3 separate mule deer herds in western, central, and eastern Nevada. The data will be instrumental in understanding the challenges that mule deer herds face and their adaptability or lack thereof. This data and information is vitally important to incorporating into large-scale habitat impact/mitigation evaluations on private and public lands if we ever hope to conserve and even improve mule deer habitat and achieve significant herd growth.

PRONGHORN ANTELOPE

Nevada pronghorn hunters continue to enjoy outstanding pronghorn hunting opportunity. There were 3,721 tags available in 2012, an increase of 19% over 2011 and 44% over the last 10-year average. The total pronghorn harvest in 2012 was 2,225, a 13% increase from 2011. We have seen a steady decline in resident rifle hunter success rate over the last 6 years from 80% to 2012's 67%. At the same time nonresident rifle and resident archery success rates have been comparatively static. Multiple reasons are likely causing this trend including: more hunters in the field, less conservative quotas, wildfires that limit access to hunting areas and directly or indirectly resulting in unused tags, increased selectively of hunters, and tag application waiting period reduced for unsuccessful hunters.

Almost 350 tags were available across 7 unit groups targeting female pronghorn in an attempt to: reduce rancher conflicts, maintain herds within compromised carrying capacities, or provide hunting opportunity. These hunts remain popular with 4 applicants competing for each available tag.

Division biologists observed a total of 12,118 pronghorn while conducting their annual composition surveys both from the ground and air. These surveys yielded ratios of 36 bucks:100 does:29 fawns. This buck ratio was slightly above the 2011 ratio but below all other buck ratios observed over the last 10 years. The 2012 statewide fawn ratio declined dramatically from the 37:100 ratio of 2011 and is the lowest fawn ratio

in over a decade. Low snow amounts during the 2011-2012 winter and extremely dry 2012 spring and summer over much of Nevada certainly contributed to this low fawn ratio. This low fawn ratio will level off the strong population growth that pronghorn herds have been experiencing over the last few years. The 2012 statewide pronghorn population estimate is 28,500, relatively static compared to 2011. Just a decade ago the statewide pronghorn estimate was only 18,000.

ROCKY MOUNTAIN ELK

Nevada's elk resource continues to provide substantial elk hunting opportunity for the sportsmen of the state. The sale of 6,035 elk tags in 2012 resulted in the harvest of 2,461 elk compared to 4,838 tags sold in 2011 with a harvest of 2,005 elk. The 2012 reported elk harvest consisted of 943 bulls and 1,518 antlerless elk. The 2011 reported elk harvest consisted of 836 bulls and 1,169 antlerless elk. Bull quality remains high with 71% of harvested bulls reported as being 6-points-or-better (72% in 2011). Harvest strategies are designed to maintain elk herd numbers within individual unit population objectives. In units where elk populations are below objectives, elk harvest management is designed to allow those populations to increase. The Department's Elk Management on Private Lands Program continued to be a success and benefit to landowners with 89 elk-incentive tags sold for an estimated revenue generation of more than $785,000.00 for private landowners in 2012.

There were 11,473 elk classified during aerial winter composition surveys; yielding statewide ratios of 37 bulls:100 cows:44 calves compared to the previous year when 10,354 animals were classified, yielding ratios of 42 bulls:100 cows:44 calves. Calf recruitment was good in 2012 and resulted in population increases throughout the state. The statewide adult elk population estimate increased from 15,100 last year to 16,600 for 2013. Nevada's elk harvest management continues to be based on meeting population objectives within the guidelines of the state's Elk Species Management Plan. Statewide population increases resulted in a substantial increase in overall recommended tag quotas.

DESERT BIGHORN SHEEP

A large increase occurred in desert bighorn ram tags in 2012. Several herds had been underestimated for the last few years along with building mature ram age classes. Unlike mule deer, bighorn ram harvest is based on recruitment of yearling rams 5 to 9 years ago. The statewide goal of average ram harvest age is 6 years old. Large fluctuations in lamb recruitment from year to year cause both weak and strong age classes to occur over time. So if 5-9 years ago, yearling ram recruitment was weak, quotas will be lowered accordingly, but if past recruitment of young rams was strong and verified by current survey data, quotas will be raised to accommodate the availability of mature rams.

The Department issued 281 tags in 2012, an increase of 59 tags from 2011. Hunter success continued to be strong at 86% compared to 87% in 2011. Hunters averaged 5.7 days in the field compared to the 20-year average of 6.2 days. The 2012 statewide average age of harvested rams was 6.5 years compared to the 20-year average of 6.3. The statewide average unofficial B&C score was 154 points, the second highest average score in 20 years.

The statewide desert bighorn survey in 2012 classified a large number of bighorn at just over 4,000. Unfortunately, a significant drop in lamb recruitment was documented from 41 lambs:100 ewes in 2011 to a ratio of 29 lambs in 2012. Though several mountain ranges experienced late-summer monsoonal rains, it was too late to reverse 6 months of very poor moisture from November – May, the critical months of pregnancy, forage plant germination and green up, birthing, and weaning. But even with low fawn recruitment, the statewide desert bighorn population estimate again rose to almost 9,000 adults.

The bighorn restoration program activity this past season was reduced from the all time high number in 2011 of desert bighorn transplanted in Nevada. To reduce wildlife/human conflicts in Boulder City, 18 rams were captured from Hemenway Park and relocated to the Virginia and Excelsior Ranges where ewe/lamb translocations had occurred in 2011. In late October and early November, 25 bighorn were captured from each of the River and Muddy Mountains for translocation to the Grand Staircase Escalante National Monument, in southern Utah. NDOW has graciously given Utah Division of Wildlife Resources 135

desert bighorn since 1999 to help them in their continued success in restoring desert bighorn to a huge expanse of unoccupied desert bighorn habitat in the Kaiparowits Plateau region of southern Utah. The Lone Mountain herd in Esmeralda County was captured this past fall and 25 ewes and lambs were translocated to the Excelsior Range where extensive water development work has recently occurred.

Water development work continues to be a critical component of Nevada's bighorn management program. Since 2011, there have been 6 upgrades (tanks and apron), 6 rebuilds, 3 major repairs, and 9 new guzzlers constructed for desert bighorn sheep. The majority of the new guzzlers were built in western and central Nevada where opportunities still exist to expand existing herds and for reintroduction of new herds.

Every year, it becomes more and more challenging to: manage the many desert bighorn herds "at risk" to domestic/exotic sheep and goat interaction and irresponsible domestic sheep operators allowing stray animals where deadly virulent pathogens may be transmitted to wild sheep; plan and implement captures and transplants involving wilderness areas; control dozens of herds that have serious seasonal carry capacity issues with insufficient viable release sites; succeed in reducing excessive feral horse and burro numbers that destroy fragile desert habitats; and minimize long-term impacts to bighorn habitat by energy and infrastructure development.

CALIFORNIA BIGHORN SHEEP

During the 2012 California bighorn season a total of 59 tags were issued including 5 nonresident tags, one Heritage tag and one Dream tag. Information gathered from the mandatory check out of harvested bighorn indicates that 53 of the 59 tag holders were successful in taking a ram. The average age of all harvested rams was 7 years with an average Boone and Crockett score of 149 inches.

Biologist's classified 1,023 California bighorn sheep this past year with a ratio of 46 rams: 100 ewes: 42 lambs. The total number of sheep observed during these surveys increased slightly from the previous year and this sample of bighorn represents the highest total ever recorded during these surveys. Both the observed lamb and ram ratios declined slightly from what was observed during 2011 surveys but they remain within acceptable limits.

The statewide California bighorn population is estimated at 2,100 sheep which is an increase of 5 percent over last year. Generally, Nevada's California bighorn populations continue to do well. Capture and transplanting efforts this past year targeted high density bighorn herd in the Pine Forest, Black Rock and Sheep Creek Mountain Ranges. A total of 78 bighorn were removed from these 3 ranges and released into the Jackson, Hays Canyon and Santa Rosa Ranges. The Hays Canyon Range was a reintroduction after the 100% pneumonia dieoff of the bighorn herd that occurred in 2007.

ROCKY MOUNTAIN BIGHORN SHEEP

A total of 8 Rocky Mountain bighorn sheep tags were issued in 2012, an increase from 2011 with Unit 091 back on line with 2 tags and 1 tag increase in Unit 074. Seven of the 8 hunters were successful. The average age of 7.0 was slightly less than the long-term average of 7.2. The average B&C green-score was 158, much lower than the long-term average but to be expected without ram harvest from Units 101 or 102.

Helicopter surveys were conducted in units 074, 091, 114, and 115. A total of 124 bighorns was classified yielding ratios of 59 rams:100 ewes:24 lambs. The low average lamb ratio was primarily due to the Pilot Peak/Leppy Hills herd in Unit 091 that only had 4 lambs:100 ewes, which is to be expected based on past and recent association with domestic sheep that trail within a few miles of the herd and the pneumonia event that occurred in 2010.

The statewide 2012 Rocky Mountain bighorn sheep population is estimated to be 260 sheep which is up from last year's estimate. The 2009 statewide estimate was approximately 550 Rocky Mountain bighorns. Disease events in 2010 decimated the bighorn populations in Unit 101 and Unit 102 (over 90% confirmed losses in each herd) and all but eliminated lamb recruitment in Unit 091. Similar to what was seen during

past disease events, it is anticipated poor lamb recruitment in Units 091 and 102 will likely be realized in the next several years thus suppressing population growth. The Department of Wildlife will continue to conduct monitoring efforts in an attempt to identify causal agents or catalysts that may have been involved.

Unit 101 was depopulated in February 2012 through a aerial capture operation in which 10 ewes and 1 lamb were captured from Unit 101 and released into Unit 102. Four rams were also taken from this unit and transported to the Washington State University's bighorn disease research facility in Pullman. After 3 years of planning, preparation, and removing all surviving bighorn from the East Humboldts, the day finally came to reintroduce bighorn sheep to the mountain. A small group of NDOW biologists, wildlife veterinarian, and sportsmen volunteers travelled to Alberta, Canada in early February 2013. With the approval from the Alberta Fish and Wildlife Division, and assistance from their Wildlife Management Branch, support from Teck Coal Limited who manage coal mine operations on the Luscar Mine, and great support from local Alberta bighorn conservationists, veterinarians, and sportsmen, a drop-net and darting capture operation took place on 12 February. A total of 17 adult ewes and 3 young rams were loaded into NDOW's transport trailer. After a day and a half travel and international border crossing, the bighorn were liberated the morning of 14 February in front of a jubilant crowd of local Elko and Wells sportsmen and bighorn enthusiasts in the foothills of the East Humboldt Range.

We will be sharing 1 tag in Unit 091 in 2013 with the state of Utah as per our cooperative agreement with their Division of Wildlife Resources in co-managing this interstate herd.

MOUNTAIN GOAT

In 2012, there were 4 resident mountain goat tags, 1 PIW tag, and 1 nonresident tag. Hunter success was 100%. Five billies and 1 nanny were harvested. This was the lowest tag number and harvest since 1997, the second season following the major pneumonia event that affected both mountain goats and bighorn sheep in the Ruby Mountains. With only 1 nanny harvested this past year, this is the lowest percent of female mountain goat harvest since 2006. The average age of this small number of harvested goats was 5.5 years in Unit 101, 4.7 in Unit 102, and 6 in Unit 103; all equal or above their unit's 5-year and long-term averages.. Horn length was below the long-term average in Units 101 and 102 while the single billy from Unit 103 had exceptional horn length at 9 7/8 inches.

Helicopter surveys were conducted in January 2013 with 231 mountain goats observed among the 3 units, a sample size increase of 33% from 2012. In Unit 101, no kids were observed from the large sample of 104 goats compared to only 5 kids:100 adults in 2012. In Unit 102, 114 adults and 23 kids were observed for a 20 kids:100 adults ratio, well above last year's ratio of 7 kids:100 adults. Even better kid recruitment was documented in the Pearl Peak area of Unit 103 with 5 kids and 10 adults observed on survey.

It is alarming and perplexing that the East Humboldt Range mountain goat herd the first 2 years after the 2009-2010 pneumonia event showed kid recruitment, albeit lower than average. But in the third and fourth years post-event, essentially no kid recruitment was documented. As with all serious pneumonia events, we always assume the worst the first few years post-event regarding adult survival. With improved surveys in 2013 and more years removed from the event, it seems only limited adult mountain goat mortality occurred during the 2009-2010 event. As part of a multi-year recruitment monitoring and disease surveillance project, 17 mountain goats were captured, collared and sampled in January 2013. We hope to learn more of the causative agents and extent of the recruitment depression in our mountain goat herds and how it may be linked or not with other sympatric bovines in the East Humboldt Range and Ruby Mountains

MOUNTAIN LION

The 2012 cougar hunting season (1 March 2012 – 28 February 2013) resulted in an overall mortality of 227 Nevada lions. Sport hunter harvest accounted for 182 lions or 80% of the total lions killed. The 5 and 10-year average for statewide sport harvest of lions was 137 and 136, respectively. The 2012 sport harvest represented a 75% increase over the 2011 sport harvest (compared to a 29.5% decrease in 2011 from

2010). Favorable late winter and early spring snow conditions accounted for much of the increase in lion harvest over 2011.

Cougars removed for the protection of livestock or human safety (depredation) decreased by 19 from 40 in 2011 to 21 in 2012. Depredating lions represented 9% of the overall 2012 mortalities. During 2012, 15 lions were killed as part of the Predation Management Program, compared to 16 in 2011 and accounted for 7% of the overall 2012 mortalities. Taken together, depredation and predation management mortalities accounted for 16% and 32% of total cougar mortalities in 2012 and 2011, respectively. During 2012, 1 lion may have been killed illegally and the remaining 8 lions (4%) were killed incidentally, either through accidental non-target trap capture in bobcat/coyote traps, vehicle collisions or died of undetermined natural causes.

Sport harvested cougars represented 36% of the statewide harvest limit of 500 mountain lions for 2012, up from 21% in 2011. Total cougar mortality represented 45% of the statewide harvest limit of 500 mountain lions for 2012, up from 35% in 2011.

Eastern, Western and Southern Regions accounted for 59%, 26% and 15% of the total statewide cougar mortality, respectively in 2012 as compared to 43%, 40% and 17% in 2011. Females accounted for 49% of the total mortality in 2012, up from 47% in 2011. Younger age-class cougars (3 and younger) accounted for 45% of the total mortality in 2012, down from 50% in 2011.

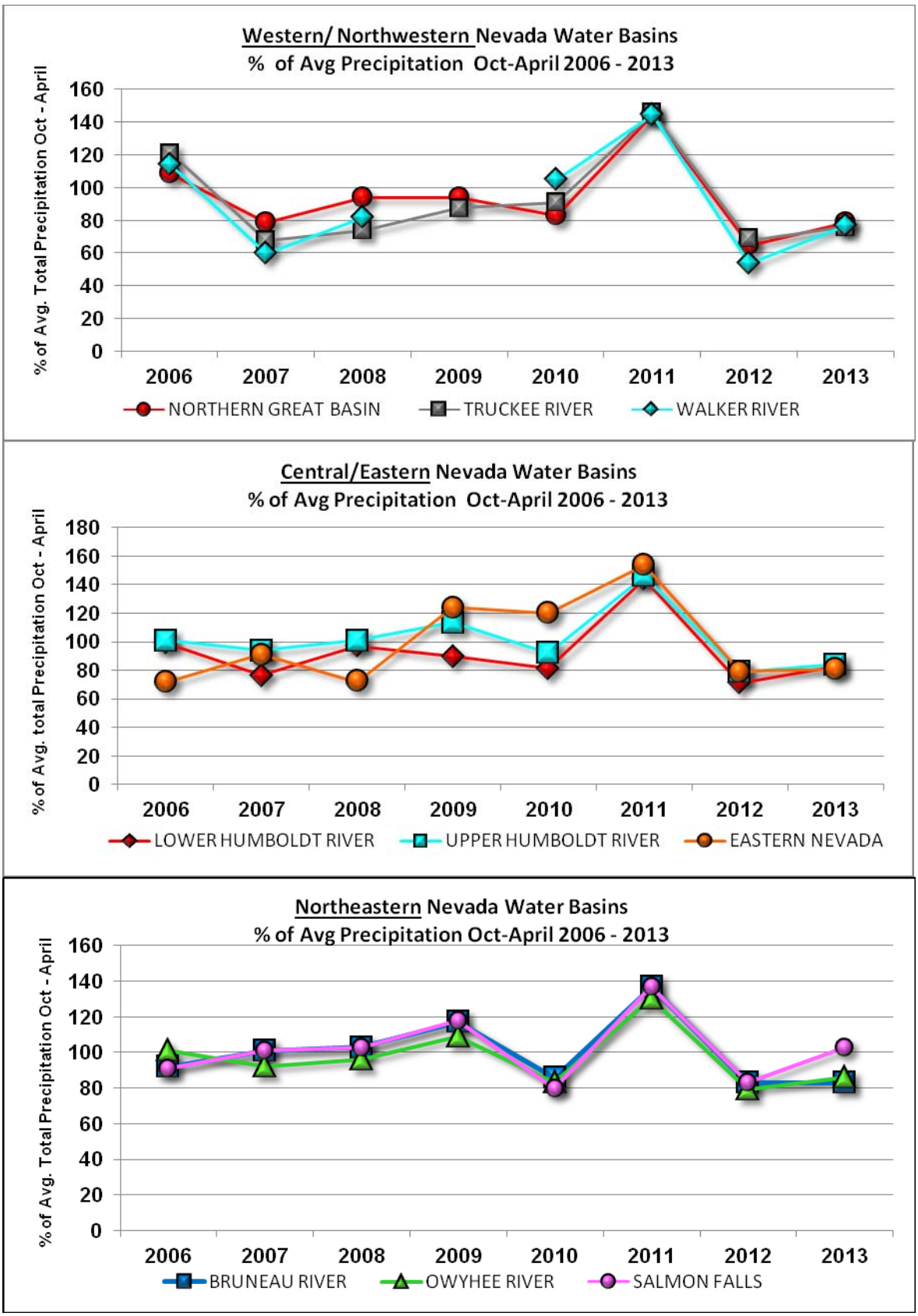
Over 66% of successful lion hunters in 2012 were Nevada residents. Over 18% of successful out-of-state hunters came from 8 foreign countries in 2012, some as distant as Russia, Norway and the Philippines. Remaining out-of state lion hunters came from 21 different states.

WEATHER AND CLIMATE EFFECTS

This year's summary of Nevada weather and climatic data that affected big game herds October 2012 through April 2013 is limited to active SNOTEL sites in Nevada that are located in selected water basins in the northern half of the state. Table 1 displays the snow water equivalent of snowpack and precipitation from October 2012 – April 2013 for select SNOTEL sites located in the following Mountain Ranges/Areas: Carson Range and Sierra Front (Area 19), Sheldon NWR (Unit 033), Trout Creek Mountains (Unit 031), Jarbidge Mountains (Area 7), Independence and Tuscarora Mountains (Area 6), Santa Rosa Range (Area 5), Toiyabe Range (Area 17), East Humboldt Range and Ruby Mountains (Area 10), Diamond Mountains (Area 14), Schell Creek Range (Area 11) and Egan Range (Area 22). October-April precipitation was marginal in most water basins from 71% - 86% of the long-term average, with the Salmon Falls Basin at 103%. This was only a slight improvement from the 2011-2012 values. The snowpack was again poor this past winter and spring with most basins between 40% - 70% of the long-term average. Without snowpack many of Nevada's high elevation summer ranges and streams from July – September will be extremely dry which could have a profound effect on young survival this summer and fall and body condition of our big game animals going into next winter. Figures 1 – 3 depict the trend in total water year precipitation for these same water basins from 2006 – 2012. Though 2010-2011 fall and winter precipitation was close to record setting in most water basins, the last 2 year's values are a dramatic reduction in precipitation and snowpack. These data continue to support the notion that the Great Basin is not about averages but extremes. Low fawn ratios statewide last year in response to low precipitation and snowpack, could occur again this year if we don't see late spring and summer moisture improve from past years.

Table 1. Water basin climate data from SNOTEL monitoring stations throughout Nevada and the Sierra Nevada Mountains for snow water equivalent of snowpack as of 20 April 2013 and total water year precipitation from 1 October 2012 – 20 April 2013 in inches (Natural Resources Conservation Service).

BASIN Data Site Name -elev. ft	Unit(s)	Snow Water Equivalent Current	Average	**% of Avg**	Total Precipitation Current	Average	**% of Avg**
NORTHERN GREAT BASIN				**64**			**79**
Disaster Peak - 6,500	031	0.2	0	*	11.7	16.6	70
Sheldon - 5,800	033	0	0	*	5.9	6.1	97
TRUCKEE RIVER				**53**			**76**
Mt Rose Ski Area - 8,801	194	28	36.1	78	40.2	48.1	84
Big Meadow - 8,249	194	9.4	15.2	62	20.6	26.7	77
CARSON RIVER	192			**55**			**75**
WALKER RIVER	201			**67**			**77**
SALMON FALLS				**106**			**103**
Pole Creek R.S. - 8,330	072	23.2	20	116	12.1	13	93
BRUNEAU RIVER				**30**			**83**
Big Bend - 6,700	061/071	0.4	0.8	50	11.2	11.4	98
Bear Creek - 8,040	071/072	19	17.8	107	25.5	24.4	105
Seventysix Creek - 7,100	071/072	0.7	4	18	12.8	14.8	86
OWYHEE RIVER				**48**			**86**
Fawn Creek - 7,000	062	6.4	14.3	45	21.1	24	88
Jack Creek Upper - 7,250	062	8.6	16	54	18.5	20.9	89
Laurel Draw - 6,697	062	0.1	1.7	6	16.7	19.4	86
Taylor Canyon - 6,200	068/062	0.2	0	*	7.4	8.8	84
LOWER HUMBOLDT RIVER				**73**			**83**
Big Creek Summit - 8,695	173	16.3	17.4	94	14.8	17.9	83
Lewis Peak - 7,400	152	0.9	6.5	14	14.7	19	77
Buckskin Lower - 6,915	051	2.1	3.4	62	16.5	17.4	95
Granite Peak - 8,543	051	14.5	19	76	20.2	25.3	80
Lamance Creek - 6,000	051	0	0	*	18.3	21.6	85
UPPER HUMBOLDT RIVER				**54**			**84**
Draw Creek - 7,200	072	2.6	5.1	51	12.9	14.7	88
Dorsey Basin - 8,100	101/102	7.2	11.1	65	20	23	87
Green Mountain - 8,000	102	1.9	9.4	20	19.3	22.9	84
Lamoille #3 - 7,700	102	1.9	9.2	21	17.5	22.1	79
CLOVER VALLEY				**28**			**71**
Hole-in-Mountain - 7,900	101	3.6	12.8	28	17.9	25.3	71
EASTERN NEVADA				**53**			**81**
Berry Creek - 9,100	111	12.1	16.5	73	15.1	17.5	86
Diamond Peak - 8,033	141	0.2	0	*	13.6	14.8	92
Ward Mountain - 9,200	221	1.5	9.5	16	10.3	15.8	65



Figures 1 – 3. Trend in percent of Average October – April Precipitation for Nevada water basins from 2006 – 2013 (SNOTEL sites, Natural Resources Conservation Service).

BIG GAME HERD STATUS REPORTS

MULE DEER

Units 011 – 015: Northern Washoe and Western Humboldt Counties

Report by: Chris Hampson

Harvest

Hunter success rates for most Washoe County rifle hunts were similar to the previous year. The only exception was in Hunt Unit 015 where success rates fell to 23%. Success rates in this unit can often fluctuate widely depending upon the severity of the winter and snow accumulations.

The Rush Fire that burned in both California and Nevada this past summer also played a major role in reducing hunter success rates. The fire burned over 300,000 acres of critical mule deer summer range in California Hunt Unit X5b and another 50,000 acres on the Nevada side of the line in Hunt Unit 015. The large fire changed deer distribution and migration onto winter range in Nevada.

Despite the significant increase in quotas for most Washoe County hunt units in 2012, the early rifle season hunter success rate in the 011-013 unit group dropped by only 3 percentage points to 42%. The late season success rate also dropped slightly to 53%. Hunt Unit 014 success rates also remained similar to 2011 and were 72% for the early season and 73% for the late.

Survey Data

Post-season composition surveys were scheduled for mid-November in order to fly during the peak of rut. This change in timing was made in an effort to fly when mule deer bucks were most active and easier to observe. No post-season surveys were conducted by California Fish and Game biologists in Hunt Unit X5b/015.

The tradeoff for the later survey period was that it can make it more difficult to locate deer in some hunt units within Washoe County. Mule deer in Hunt Unit 013 for example, generally begin migrating towards their winter range much earlier than other subpopulations of mule deer in Washoe County.

The 2012 post-season survey of Management Area 1 deer herds yielded a sample of 1,397 mule deer with age and sex ratios of 31 bucks:100 does:59 fawns. Surveys were conducted in hunt units 011, 012, 013 and 014.

Spring surveys were conducted in early March 2013 and classified a total of 822 mule deer with a ratio of 40 fawns:100 Adults. Recruitment was similar to that observed during the previous year's survey. Surveys were conducted on deer winter ranges and most mule deer were located between 5300 and 6000 feet in elevation.

Habitat

Two large wildfires burned within Management Area 1 during the summer of 2012. The Lost Fire burned approximately 50,000 acres of important mule deer habitat in portions of hunt units 012 and 013. The fire burned in upper elevation habitats between the eastern portions of Cherry Mountain to the confluence of Mahogany Creek and High Rock Canyon.

Reseeding efforts were initiated by the Surprise District of the BLM during the winter of 2012-13 but were hampered by the lack of sagebrush seed that was available this past year. Bureau of Land Management and NDOW also planted bitterbrush seedlings within portions of the burn. A second year of restoration efforts is planned for this burn with the hope that more sagebrush seed will become available in 2013-14.

The second large fire was the Rush Fire that burned over 300,000 acres of important mule deer summer and transitional range in California. In Nevada the fire burned another 50,000 acres of important winter and transitional range. The negative impacts to the East Lassen deer herd are expected to be substantial due to the tremendous amount of important habitat that was burned and lost this past summer.

Restoration efforts will be critical to the long-term health and sustainability of this mule deer herd. However, the mid to lower elevations within the burned area are prone to cheatgrass and medussahead infestation. Native species have difficulty competing with invading annuals and successful restoration of these areas may be challenging.

The winter of 2012-13 looks to be another below-average water year. Despite excellent precipitation receipts early in the winter, the critical months of January thru March were well-below average for both total precipitation and snowfall. It is now highly unlikely that sufficient precipitation will be received this coming spring to offset the very dry winter. Impacts from the dry winter on forage quality and water availability will be significant. Habitat conditions are expected to be poor this coming summer.

Population Status and Trend

Mule deer populations within Management Area 1 are generally experiencing stable to increasing trends. However, the effects of back to back dry winters will reduce the quality of mule deer habitat throughout northwestern Nevada.

Recent wildfires within the Management Area have also negatively affected mule deer habitat and the loss of important browse communities in those areas will affect the herds in the long-term. Restoration of these burned areas may be challenging due to the lack of sagebrush seed and the fact that some areas of the burns are prone to cheatgrass and medussahead infestation.

Wildlife Services removed 4 lions (2 males and 2 females) this past year from Project 18. NDOW continues to conduct both post-season and spring helicopter surveys in the Granite Range. The project will be in its 10th and final year in 2014.

The 2013-14 quota recommendations are expected to mimic trend.

Units 021, 022: Southern Washoe County

Report by: Chris Hampson

Harvest

Hunter success rates for resident rifle hunters within hunt units 021 and 022 remained very strong with both having a 60% success rate. The 4pt or better for Unit 022 was very impressive with 77% of hunters reported having killed a buck with a minimum of 4 points. The 4pt or better for Unit 021 dropped by 9% in 2012 from 50% to 41%.

The two hunt units have vastly different rifle hunting seasons, with the rifle hunt in Unit 021 being a 12-day hunt from December 21 thru January 1. The rifle season in Unit 022 is a 26 day season that runs from October 5th thru the 31st.

Mule deer that are hunted within Unit 021 are mostly California deer that migrate into Nevada to spend the winter. Mule deer in Unit 022 just to the east of Hunt Unit 021 are resident deer that generally do not migrate outside of the hunt unit in the winter. Both herds have been doing very well in recent years and hunters have enjoyed good success.

Survey Data

No fall surveys were conducted by California Fish and Game biologists in California hunt units X6B or X7A in 2012. Helicopter surveys in many areas of California have been canceled due to a fatal helicopter crash that occurred in 2010. Post-season surveys are not conducted in Hunt Unit 022 in Nevada due to the low densities of mule deer in the unit.

Spring mule deer surveys were conducted by NDOW biologists during early March 2013. Surveys in Hunt Unit 021 classified a total of 364 mule deer with a fawn:adult ratio of 34. Mule deer were once again concentrated on the southern end of the Petersen Mountains. Due to dry conditions and mild temperatures, mule deer were located at higher elevations.

The early March mule deer surveys in Hunt Unit 022 provided a sample of 118 mule deer with an identical 34 fawns:100 adult ratio as that observed in Hunt Unit 021. In contrast to Hunt Unit 021, deer were located on typical winter range and were lower in elevation.

In recent years, wintering deer in this unit have been observed to be concentrated further to the east in the foothills that lie just to the west of the mouth of Cottonwood Canyon. In previous years, deer could be found scattered out over the entire northern portions of the Virginia Mountains.

Habitat

The winter of 2012-13 will be the 2nd consecutive dry winter. Snowfall and precipitation totals are well-below average as of April 1, 2013. The months of January thru March were especially dry and have lowered both overall precipitation totals and snowpack. Stream flows are predicted to be well-below average and springs and seeps throughout Washoe County are expected to suffer from reduced flows.

Impacts from drought conditions on mule deer will be fairly significant as forage and water availability will be significantly reduced. Numerous spring sources have already been observed to have lower flows and many of them may be dry by mid to late summer.

Fortunately, no major wildfires occurred within Management Area 2 this past year. However, previous wildfires have severely impacted mule deer habitat in this Management Area. Both of the hunt units within the Management Area have suffered the loss of a significant amount of critical winter range because of large scale fires. Due to the prevalence of cheatgrass at the lower elevations, the fire cycle throughout much of Management Area 2 has been shortened considerably.

Maintaining the remaining stands of sagebrush and bitterbrush will be critical to the future of this deer herd. The Carson City District of the BLM and NDOW are currently planning additional restoration efforts to try and restore brush species for both mule deer and sage grouse in the Virginia Mountains. Restoration efforts in the Petersen Mountains have met with limited success due to competition with cheatgrass and very poor precipitation that was received following restoration efforts.

Population Status and Trend

Fawn recruitment was lower this past year but will allow for continued growth. In recent years, mule deer herds within units 021 and 022 have been on an upward trend, however, the deer herds within Management Area 2 are limited in the long-term by numerous factors including expansive areas of burned habitat, housing development, proposed energy development, and other forms of human encroachment such as motorcycle and ATV recreational use. Many of

these limitations are due to the fact that these deer herds live in close proximity to the Reno/Sparks area.

Quota recommendations for the Management Area 2 deer herds for the 2013 hunting season are expected to be slightly higher than 2012 quotas. Hunter success rates for these two hunt units have been very good over the past few years and are expected to remain so in 2013.

However, over the long-term, the hunting public will continue to be challenged by access issues and ever increasing human encroachment. Areas to hunt mule deer will continue to shrink into the future as more development and encroachment occur. The future of these deer herds relies on the ability to protect and/or prevent loss of remaining deer habitat from catastrophic wildfires.

Units 031, 032, 034, 035: Western Humboldt County
Reported by: Ed Partee

Survey Data

Post-season surveys were conducted during mid November 2012 over the course of three days. During these flights, there were 1,416 deer classified, which was up from last year's observation of 1,342 deer. Sex and age ratios obtained from these surveys were 45 bucks:100 does:48 fawns. The past 5-year average was 34 bucks:100 does:54 fawns.

Spring deer surveys were conducted during mid March 2013. These flights were conducted over a two-day period. There were 1,588 deer classified, which was up from the 2012 spring sample of 1,205 deer. This year's survey yielded a ratio of 31 fawns:100 adults. This ratio was down significantly from last year's ratio of 46 fawns:100 adults and also below the past 5-year average of 39 fawns:100 adults.

Habitat

Management Area 3 has seen some changes within this last year in the amount of precipitation that has been received. The year started off fairly wet with good snow conditions in December. Following the snows, extremely cold temperatures set in and stayed well-below freezing for over a month. During this cold period no additional moisture was received. As of April 1st, conditions were well below the average for the water year.

In August, Unit 031 was affected by a major wild-land fire that destroyed approximately 215,000 acres of mule deer habitat. This fire affected the Bilk Creek Range, Trout Creeks and part of the Montana Mountains. The damage from this fire was very extensive affecting the majority of quality deer habitat within this unit. Due to an extensive fire season that increased demand for seed west-wide, rehab efforts were hampered by the lack of seed availability.

Several sagebrush plantings have occurred in an attempt to reestablish areas of sagebrush that were lost in past fires. Currently projects are being analyzed to protect existing habitats and to enhance those areas in need or rehabilitation.

Population Status and Trend

The population estimate for Unit 031 has declined only slightly over the last two years. Unit 031 has gone through some major habitat changes due to fire over the last year which will have a major impact on deer in this unit. Fawn recruitment dropped nearly in half from last year's survey with a slightly higher winter loss than the previous two years. Fawn recruitment in most of the other units in Management Area 3 remained similar to the last two years. In most of

these units, winter ranges remain the limiting factor. Many traditional winter use areas have been converted to annual grass by fires.

Unit 033: Sheldon National Wildlife Refuge: Washoe and Humboldt Counties

Report by: Chris Hampson

Harvest

A decision by the USFWS to close a majority of the access roads on the Sheldon Wildlife Refuge to vehicle traffic from early August thru mid October made it much more difficult for most hunters to access their hunting areas. The decision was based upon the potential for increased fire risk due to vehicles driving on or parking along the secondary roads on the refuge.

NDOW challenged the decision because vehicle-caused fires are relatively uncommon and no other public hunting areas on either BLM or Forest Service lands in Nevada were being closed due to fire danger. The road closures prevented most hunters from accessing many of the major deer ranges on the Sheldon. Hunters who were unable or unwilling to walk long distances into their typical hunting areas were forced to concentrate in those areas closer to major roads or parking areas.

The harvest of 4pt or better bucks on the Sheldon decreased significantly this past year. The decrease was partially due to road closures and partially due to the fact that younger bucks were more prevalent this year because of improved recruitment in 2011 and 2012.

Youth hunters had the most success and also enjoyed a higher 4pt or better average. However, success rates for youth were below that of the previous year. Youth tag holders harvested 14 bucks in 2012. No doe harvest was reported.

Survey Data

Fall surveys were conducted in mid-November 2012. Surveys classified a total of 229 mule deer with a ratio of 43 bucks:100 does:46 fawns. Buck ratios increased this past year due to reduced harvest in the 2012 hunting season, as well as improved recruitment that occurred over the past two years. The male segment of the survey sample was made up of 65% 2 or 3 point bucks. Good recruitment over the past two years also showed up in the harvest as a higher percentage of young bucks taken during the 2012 hunting season.

Spring surveys were difficult due to warm temperatures and lack of snow. Deer were scattered over a large portion of their winter range and found to be in much smaller groups. This made locating and classifying deer more difficult. Surveys were conducted in Virgin Creek, Sagebrush Creek and on the western slopes of Big Mountain. Surveys also located deer in Unit 012 known to be associated with the Badger Mountain area on the Sheldon.

NDOW biologists classified a total of 152 deer with a computed ratio of 37 fawns:100 adults. Deer were located on traditional winter range but were scattered out over wider areas due to the warm conditions.

Habitat

Mule deer habitat on the Sheldon has suffered for a number of years due to almost continuous drought conditions that have occurred since the record dry year of 2007. Finally, the 2010-11 water year resulted in above average precipitation receipts and helped to create much improved forage conditions and water availability on the Sheldon. Mule deer responded to improvements in habitat conditions and fawn recruitment and survival was observed to be very

good. Good recruitment was obvious this past year, as younger age class bucks were prevalent in the survey.

Unfortunately, the past two water years have once again been well-below average for both snowpack and total precipitation. Habitat conditions this past summer and fall were poor due to the extremely dry conditions. Upper elevation lakes and reservoirs were observed to be dry once again. Water availability and forage conditions were only fair to poor.

The winter of 2012-13 remains well-below average and precipitation so far this spring has not been significant enough to moderate the dry winter. Stream flow and habitat conditions this coming summer and fall are expected to be fair to poor.

Previous prescribed and lightning caused fires have destroyed important mule deer habitat on the Sheldon. It was estimate a minimum of 50% of the best mule deer summer range on the Sheldon has been impacted by fire. Sagebrush and bitterbrush are returning to portions of some of these burns but many other areas appear to have lost the brush component necessary to provide mule deer with good quality habitat.

The lack of escape and thermal cover has forced mule deer into those unburned areas that still have mountain mahogany and intact browse communities. Mountain mahogany stands that survived numerous fires do not appear to be expanding.

Population Status and Trend

Dry conditions have once again returned to the Sheldon. Habitat conditions on the Sheldon are expected to deteriorate through the upcoming summer and fall. Water availability will once again be limited. Upper elevation lakes and reservoirs will more than likely be completely dry by mid to late summer.

Mule deer populations on the Sheldon have increased over the past two years and a good number of bucks are available. The population estimate is expected to show an increasing trend. Quota recommendations are expected to increase for the coming year.

Units 041, 042: Western Pershing and Southern Humboldt Counties

Report by: Kyle Neill

Survey Data

Post-season surveys were not conducted in 2012. Spring surveys were conducted from the ground in mid-March n the Selenite, Kamma, Seven Troughs, Majuba and Trinity Ranges. A brief aerial survey was performed on March 15 in the Eugene Mountains. Mule deer were observed in every mountain range surveyed. There were 86 animals classified and this sample yielded a ratio of 26 fawns:100 adults. The 2013 spring fawn ratio was approximately 26% below the long-term average of 35 fawns:100 adults.

Population Status and Trend

Western Pershing County's mule deer population continues to demonstrate a stable trend. Field trip observations of mule deer within the unit group continue to be documented in the following mountain ranges: Nightingale, Sahwave, Selenite, Lava Beds, Seven Troughs, Kamma, Trinity, Majuba, Antelope and Eugene. Overall, this herd is expected to remain stable due to significant conversion of habitat from wildfires and limited annual moisture receipts.

Units 043 - 046: Eastern Pershing and Southern Humboldt Counties
Report by: Kyle Neill

Survey Data

Post-season aerial mule deer surveys occurred in mid-November and were conducted in every unit. Biologists classified a record 1,201 deer. This represents the most mule deer ever observed during fall or spring surveys in Units 043-046. Calculated age and sex ratios were 44 bucks:100 does:32 fawns. The 2012 buck ratio of 44 bucks:100 does was the highest buck ratio ever obtained from these unit groups. Conversely, the fall fawn ratio was the lowest observed since 1990. Spring aerial surveys were performed for two days in mid-March and resulted in 781 mule deer being classified with a ratio of 21 fawns:100 adults. The 2013 spring fawn ratio indicates a 5% winter fawn loss and was the lowest observed fawn ratio since 1995. Sample sizes obtained from the post-season and spring surveys of 2012/2013 are new fall and spring records.

Habitat

Past wildfires that occurred in 2000 and 2001 converted shrubs that encompassed winter range into annual grasslands. Domestic sheep grazing in Unit 043 occurs on a yearly basis from April 25 to September 30 and continues to leave winter range in less than optimal condition. Also, much of the southern portion of Unit 046, Sonoma Range is still considered unfavorable. Poor moisture received over the last two years coupled with less than prime winter range has left mule deer habitat in a degraded state.

Population Status and Trend

Eastern Pershing County's mule deer population reached an all time high estimate last year. The 2013 estimate shows a reduction of approximately 3% from last year. Prior to 2013, this herd had been growing at an annual rate of 8% since 2005. Biologists believe this population is at or near carrying capacity given herd size in relation to current habitat conditions. Indicators of carrying capacity can be correlated to declining fawn ratios, which research has consistently shown to be due to poor body condition from increased competition and (or) lack of forage resources. Additionally, percent 4 point or better bucks harvested have declined over the last two years to 32% (10 year average 41%). Furthermore, conservative quotas that have been adopted over the last two years have not resulted in larger bucks harvested. Data and literature suggest maintaining high buck ratios may actually limit antler growth. In conclusion, data collected in 2012/2013 from harvest and composition surveys in Units 043-046 infer this mule deer population is at or near an all-time high and is also maintaining high post-season buck ratios. Short-term management objectives include doe hunts and increased buck harvest to reduce the overall population and take advantage of high buck ratios.

Unit 051: Santa Rosa Mountains; Eastern Humboldt County
Report by: Ed Partee

Survey Data

Post-season helicopter surveys were conducted during mid November 2012. A total of 590 deer was classified with sex and age ratios of 32 bucks:100 does:55 fawns. Resulting composition ratios were near the five-year average while the sample size was almost twice that observed last year.

Spring surveys were conducted in mid March 2013. Survey conditions were good. The observation of 496 deer in 2013 was approximately four times more than observed the previous

spring in 2012. The spring fawn ratio for this survey was 32 fawns:100 adults. This recruitment rate is below the past 5-year average of 43 fawns:100 adults.

Habitat

Wild-land fires that burned in August resulted in another year of habitat loss for this unit. The southeast side of the Santa Rosa Range was affected by a fire that consumed a little over 10,000 acres of important summer and fall habitat. Over the course of the last two years, this unit has lost nearly 100,000 acres of important mule deer habitat. Major portions of these fires have had some sort of rehabilitation effort. Work on both past and present fires continues with a variety of plantings. The success of all the rehab work that has taken place to this point will depend on precipitation receipts this spring and summer.

Much of the summer range was in good condition with exception of approximately 10,000 acres that was lost during the summer of 2012. However, winter range in this unit has been severely impacted by past wild fires. Rehabilitation efforts have been ongoing but a lack of timely precipitation has hampered much of the rehabilitation efforts.

Population Status and Trend

Fawn recruitment declined this past year due in part to severe conditions that were experienced over the course of the winter. The Unit 051 population estimate for 2013 was similar to last year.

Units 061 - 062, 064, 066 – 068: Independence and Tuscarora Ranges; Elko County

Report by: Matthew Jeffress

Harvest Results

There were 2,077 rifle buck tags (resident and nonresident) available in 2012. This represented a 173% increase from the 2011 quota. The increase was a result of several factors including the 2011 Commission action to cut recommended buck tags by 25%, phenomenal precipitation received in early 2011, and a mild winter that led to a 21% increase of the population estimate from 2011 to 2012. The average hunter success rate for all rifle buck hunters was 45%, which represents a 4% decrease from 2011. Forty-two percent of the bucks harvested in the general season supported antlers with 4-points or better. For more specific hunting results, please refer to 2012 Harvest Tables in the Appendix.

Survey Data

A fall helicopter survey was conducted in November 2012. A total of 3,922 deer was classified; yielding ratios of 37 bucks:100 does:74 fawns. The buck ratio was the 2nd highest on record. The fawn ratio was the 2nd highest observed since 1995.

A spring helicopter survey was conducted in March 2013. A total of 4,208 deer was classified; yielding a fawn:adult ratio of 37 fawns:100 adults. The spring ratio represented a 34% winter fawn loss.

Habitat

Below-average snowpack for the winter of 2011-2012 and a lack of spring precipitation made for a dry summer. Range conditions remained dry through October. A combination of drought and excessive cattle grazing across much of the southern winter ranges likely attributed to over-winter fawn mortality and stress on adults. Of great concern was the high utilization of seedings in the Izzenhood and Sheep Creek Ranges. As of March 1, 2013, the snowpack for

northern Elko County was approximately 80% of normal. Several fires burned within the unit group during the spring and summer months of 2012. The 5 largest fires, Willow, Browns Gulch, Mustang, Lime and Homer primarily burned summer and transitional mountain brush communities. Deer rely heavily on these mountain brush communities for building fat reserves prior to being forced onto degraded winter range. The 5 fires combined burned over 91,000 acres. Portions of each fire will negatively impact mule deer. Mountain brush communities lost to the Willow Fire and Mustang Fire represented the last large intact blocks of habitat remaining for mule deer as they transition from summer range to degraded winter ranges.

Between the years of 1999 and 2011, over 1.5 million acres of rangeland burned in Area 6, much of which was important deer habitat. In response to the significant amount of habitat loss, tens of thousands of acres of winter range has been reseeded with desirable forage species. Success of these seedings is heavily reliant on timely moisture, proper grazing practices, and prevention from additional fires. While positive recovery has been observed at mid to upper elevations, recovery of critical low-elevation winter range continues to be a struggle in Area 6.

In spite of the challenges with range rehabilitation, Elko BLM, NDOW, Barrick Mining Corporation, private landowners and sportsman's organizations seeded thousands of acres of scorched public and private land in late 2012 and early 2013. Dry conditions and delays in applying seed prior to the end of January may limit the success of the seeding efforts. In addition to the above mentioned aerial seeding, BLM, Nevada Muleys and NDOW conducted a volunteer sagebrush and bitterbrush seedling planting within the Willow Fire perimeter in April 2013. The 1,300 sagebrush seedlings and 3,000 bitterbrush seedlings will benefit a myriad of species, including mule deer and sage-grouse.

With gold prices above $1,600 per ounce, mining activity continues to increase throughout Area 6. Direct and indirect impacts to mule deer migration corridors remain the highest concern with increased mining and exploration. NDOW and BLM Elko continue to work with mining companies towards minimizing impacts to mule deer migration corridors. NDOW is hopeful mining companies will continue to follow recommendations of the January 2012 Area 6 Mule Deer Working Coalition publication on habitat management practices. In an effort to better delineate mule deer migration corridors through the Carlin Trend, 40 adult mule deer does were fitted with GPS collars between December 2012 and January 2013. Data obtained from the collars should help support management recommendations for maintaining suitable corridors for migrating deer.

No additional predator management activities above existing normal levels occurred in Area 6 this past year.

Population Status and Trend

The Area 6 deer herd population estimate decreased slightly over last year. The decrease was planned with harvest objectives for last season's hunts designed to maintain the population within the confines of the Area 6 winter range carrying capacity. Given the limited available winter habitat during prolonged periods of snow and below-zero temperatures, it is imperative to structure harvest towards maintaining a buck ratio of 30 bucks:100 does and an overall population between 8,000 & 9,000 adults. Post-season buck ratios above 30 introduce extra competition for limited forage, likely leading to high over-winter fawn loss and overall decreased body condition of all deer. The same can be said for allowing the overall population to outgrow the winter range carrying capacity. Too many deer competing for limited forage can decrease overall body condition of all deer and under unfavorable environmental conditions, can lead to all age die-offs.

This deer herd is capable of increasing rapidly due to the excellent summer habitat and high fawn producing capabilities associated with Area 6. This has been the case recently, with the herd increasing by 13% in 2009-2010, 10% in 2010-2011 and 21% in 2011-2012. Given the increases, it is imperative to remember poor winter range conditions in Area 6 will dictate long-term population levels as it has done since the 1960's.

With successful restoration efforts realized on the Marsh Creek Bench, the Izzenhood Range and the north Tuscarora Range, it is believed the capacity of the winter range has increased over the past decade. However, continued aggressive habitat restoration efforts are needed to increase the winter habitat carrying capacity for deer in this management area. If fire suppression priorities and techniques are not addressed and fires continue to burn out of control in this area as was observed this year, no level of habitat restoration will be enough to maintain the current population, much less provide for a population increase. The same can be said for livestock utilization. Several past fire restoration sites have been compromised by improper livestock grazing. Utilization criteria need to be implemented to ensure the success of seedings for the benefit of both wildlife and livestock.

Recommended buck quotas for 2013 will be slightly lower than 2012. As was the case last year, doe harvest is necessary to maintain the deer population within the confines of the carrying capacity of the winter range. Population management through the implementation of doe harvest will alleviate competition among deer for limited resources during moderate to severe winters. Doe harvest is the best way to control populations and could prevent catastrophic winter die-offs observed in years past. Currently, doe harvest is the best available tool for properly managing populations; particularly those at or above the carrying capacity of seasonal habitats. The recommended doe harvest for 2013 will be slightly higher than the 2012 quota.

Unit 065: Pinyon Range, Southwestern Elko County

Report by: Scott Roberts

Harvest Results

There were 112 tags issued in 2012 across all weapon classes for both residents and nonresidents, with 55% of all tag holders being successful in harvesting deer. Fifty-seven percent of the harvested bucks were 4 points or better, which was slightly below the previous 10-year average of 60%. For more specific harvest results please refer to Harvest Tables in the Appendix Section.

Survey Data

There was no post-season deer survey conducted in Unit 065 in the fall of 2012. An aerial spring survey was conducted in April 2013 that proved to be very unproductive. A total of only 52 deer was classified. While the small sample size makes observed ratios statistically suspect, the age ratio was calculated as 27 fawns:100 adults, similar to that measured in adjacent Area 10.

Habitat

The dry winter of 2011-12 and lack of any significant spring precipitation led to very poor range conditions in Unit 065 during 2012 growing season. The poor conditions resulted in increased competition for forage and water resources with wild horses and domestic livestock. At the time of writing, range conditions appear to have improved greatly when compared to last year but spring and summer precipitation will dictate if the area can rebound. Increased mineral exploration throughout the area has led to increases in ground disturbance as well as traffic. Most of the areas with increased drilling represent some of the most productive summer range in Unit 065.

Units 071 – 079, 091: Northeastern Elko County
Report by: Kari Huebner

Harvest Results

The 2012 hunter success for the early season was 51%, well above last year's 39%. Late-season hunter success was 63% compared to 70% in 2011. In 2011, harvest of 4-point or better bucks was 30% early and 46% late. This year harvest of 4-point or better bucks was higher with 34% in the early season and 54% late.

The 2011 archery success was 11% for the early season. This year it was up to 14%. Late season success increased from 21% in 2011 to 35% in 2012.

Survey Data

Post-season helicopter surveys were flown in this unit group in December 2012. A total of 4,243 deer was classified; yielding ratios of 25 bucks:100 does:54 fawns. Spring surveys were flown in late March of 2013. A total of 2,949 mule deer was classified; yielding a ratio of 31 fawns:100 adults. This year's recruitment rate is slightly lower than the previous 5-year-average of 35 fawns:100 adults. Sample size for the post-season survey was the highest total since 1997 and sample size for the spring survey was the highest total since 2000.

Habitat

Deer habitat in this unit group has been reduced following the large wildfires that occurred in the area since 1999. Invasive weeds such as cheatgrass and mustard have invaded deer habitat and now dominate many of the lower elevations. Even in areas where perennial grasses and forbs are found, it is taking years for shrubs such as sagebrush and bitterbrush to return to these burned areas.

The majority of the Area 7 deer herd winters south of Interstate 80 in the Pequop and Toano Mountains. Unfortunately, as these deer attempt to make their way to winter range from Jarbidge and other summer ranges, they are often struck by vehicles either on Highway 93 or Interstate 80. During the fall of 2010, 1 overpass and 2 under-crossings near Ten Mile Summit on Highway 93 were functional for the fall deer migration. By the fall of 2011, another overpass and 1 under-crossing were completed on HD Summit on Highway 93. So far over 16,000 individual deer crossings have been recorded on cameras at the 5 crossings on Highway 93. It has also been noted that deer/vehicle collisions have been reduced each year the crossings have been in place, making the road safer for motorists as well as deer.

Thirty deer were radio collared during the 2011-12 winter in a collaborative effort between NDOW, Newmont Mining Corp., and UNR. An additional 15 collars were deployed this past winter. As of the spring of 2013, there were 35 collars still active. The collar data has and will continue to be used to assess impacts from exploration and potential mine development in Long Canyon on wintering and migrating deer and to better define migration corridors and winter use areas.

Population Status and Trend

Despite the fairly severe winter conditions this past winter and dry conditions on summer range last summer and fall, the over-winter fawn loss was 31%. This was slightly above average for this deer herd. Data indicate the Area 7 deer herd experienced a significant set-back during the winter of 2001-02. Since then this deer herd appears to have been stable to slightly increasing. Due to a combination of recent fires, drought conditions, and possible plant

senescence, it is highly likely deer habitat in Area 7 cannot support the high numbers of deer documented in past decades.

Recent deer collaring has been instrumental in better understanding migration triggers, timing, paths, length of migrations (some deer are moving more than 100 miles to winter range) and seasonal use patterns for the Area 7 Deer Herd. The information garnered through the collars may also help identify potential habitat projects to address limiting factors for this deer herd.

Unit 081: Goose Creek Area; Northeastern Elko County
Report by: Kari Huebner

Survey Data

A limited spring survey was conducted for this herd. A total of 28 mule deer was classified; yielding a ratio of 33 fawns:100 adults.

Habitat

The 081 deer herd's winter range and some summer range were significantly impacted by the West Fork Fire in 2007. The fire burned 154,943 acres of prime winter range. The fire burned very hot and left few islands of habitat. Although the area was intensely seeded the first winter following the fire, it will be several years, if ever, until the brush community fully recovers in this area.

Population Status and Trend

Overall this is a relatively small deer resource in terms of resident deer populations with some migration from both Idaho and Utah. The magnitude of this migration is dependent on weather conditions during the hunting season and timing of the hunt. In an attempt to take advantage of these later migrations, the muzzleloader and any legal weapon hunts have been scheduled later than in previous years. The intended result was to harvest more of the migratory herd and lessen the harvest on the small resident deer populations in the area. Hunter success decreased this past year during the any legal weapon season. This herd has been managed as a trophy area in the past and with current challenges such as the reduction of winter range, the recommended tag quota will remain conservative.

Units 101 - 109: Southern Elko and Northwestern White Pine Counties
Report by: Caleb McAdoo

Harvest Results

The long-term average hunter success for the early any-legal-weapon season was approximately 25%. For 2012, hunter success was 31%, up from 24% in 2011 and significantly greater than the long-term average. The mid-season success rate was also excellent at 33%. Late season hunter success typically varies with weather conditions but is typically over 50%. The 2012 late season hunter success was only 43%, down slightly from 48% in 2011, but almost identical to the success of 44% in 2010. Dry conditions and lack of snowfall were most likely the largest contributing factors to the lower success rate in the late season this year. Additionally, 923 antlerless tags were issued and yielded success rates of 52%. For specific 2012 hunting season results, please refer to Harvest Tables in the Appendix Section.

Survey Data

An aerial post-season herd composition survey was conducted in late November and early December, 2012 which resulted in 6,907 deer being classified. The age and sex ratios were 29

bucks:100 does:56 fawns. A spring helicopter survey was conducted in late March 2013. During this survey, 7,793 deer were classified, yielding a ratio of 28 fawns:100 adults. This was up 4 fawns:100 adults from last year's spring survey and down 15 fawns:100 adults from the November/December 2012 survey, which equated to a 36% over-winter fawn loss.

Habitat

The single biggest potential threat to the Area 10 deer herd at this time is the proposed expansion of Bald Mountain Mine. While past mining operations in the area have afforded the necessary movement corridors for migrating deer through the mine site, the potential for cumulative impacts from the currently proposed activities to mule deer are anticipated to be potentially devastating by curtailing the life-history strategy of mule deer migration.

Area 10 was again spared from large catastrophic wildfires in the summer of 2012; however, some relatively small acreage (less than 2000) fires did occur most of which were in Unit 102 on both a mixture of public and private land. The Lutts and Chimney Creek fires were the largest. Smaller fires occurred around the mouth of Lamoille Canyon and Cold Creek. In addition to fires, there were some relatively significant habitat alterations on the east side of Unit 102 in the vicinity of Shorty Creek. These treatments were mosaic mowing of bitterbrush and sagebrush. Both long-term and short-term benefits will likely result from these treatments. Large components of young sagebrush and bitterbrush are responding to the treatments.

The entire calendar year of 2012 and the winter of 2011 were extremely dry, even in the upper elevations of the Ruby Mountains. The lack of moisture certainly impacted overall forage production, especially in the more arid units such as 103-109. While summer range suffered, the largest impacts were on the habitat on the southern winter ranges. While snow accumulation during the 2012-2013 winter was still below average, it was a significant increase over 2011 and provided a much needed reprieve for the drought stressed flora and fauna. Several weeks of cold temperatures and deep snow during the 2012/2013 winter had negative impacts on over-winter survival, especially for the fawn segment of the population. Snow pack levels and moisture content for the winter of 2012-2013 are still below average and are currently sitting at around 80% of normal as of April 1, 2012. Late spring storms continue to add much needed moisture to the relatively dry soil and snowpack.

The Department of Wildlife, along with land management agencies, continue to work on several large-scale mule deer habitat enhancement projects in Area 10 such as the Overland\Big Wash pinyon-juniper thinning project and the Spruce Mountain Restoration Project. These Projects were initiated to improve mule deer winter and transitional range by setting back the successional stage of the area to a more browse dominated site. These efforts will also increase wildlife diversity and reduce the potential of catastrophic wildfires by reducing the fuel load. These areas are, and have been, extremely important winter and transitional range for thousands of mule deer that reside in Management Area 10. Both Projects still remain in the NEPA process.

Population Status and Trend

The Area 10 population is the largest deer herd in the state, accounting for over 20% of the statewide mule deer population and is considered a stronghold for Nevada's deer population. The Area 10 deer herd has been stable with the exception of 2 winter-related loss events, 1 in the mid 1980's and the other in the winter of 1992-1993. Additionally, an unprecedented growth period occurred in the late 1980's and was likely a density-dependent response to the winter loss in the mid-80's coupled with ideal weather conditions. While recovering from 1992-1993 winter mortality losses, the Area 10 deer population showed an upward growth trend from 1997 through 2007. In 2008, the herd began to stabilize near the current population level.

Fawn recruitment continues to be repressed in spite of relatively ideal weather conditions and good production. While carrying capacity is illusive in definition and dynamic in nature, the observed fawn recruitment values provide further evidence that the population has stabilized to current limiting factors (carrying capacity). This year's population estimate is within 3% of last year's estimate and therefore considered stable. Post-season buck ratio objectives remain high (30 bucks:100 does) in Area 10 and subsequently older age class representation continues to be well represented throughout the buck segment of the population. In 2012, even with a significant increase in quotas, 30% of the buck harvest was reported as having 4 points or better. It is anticipated that fawn recruitment will remain repressed until a density-dependent event occurs or until limiting factors are addressed that increase the carrying capacity of the range.

The Department of Wildlife continues to place a large emphasis on mule deer populations by investing time and resources into beneficial projects and scientifically sound research to increase understanding of the population dynamics of mule deer resources. From 2010 through the present, the Department of Wildlife, in cooperation with the University of Nevada, Reno, initiated mule deer migration and survivorship studies in areas, 10, 15, and 19, with goals of identifying age and sex specific mortality rates; defining summer, winter, and transitional ranges to help prioritize population enhancement projects; and to determine costs and benefits of various mule deer migration strategies. For Area 10, over 325 radio-telemetry collars have been deployed. This ongoing study should provide valuable insight to the population dynamics of these herds.

Units 111 – 113: Eastern White Pine County

Report by: Curt Baughman

Survey Data

A post-season herd composition survey was flown for the first time since the fall of 2009. The survey was very effective thanks to ample flight time and 100% fresh snow cover on most days flown. A sample of 2,234 deer yielded ratios of 29 bucks:100 does:52 fawns. This was the largest fall sample since 2000 and the highest observed post-season buck ratio since 1977. The spring 2013 survey was completed in conjunction with the winter elk survey in early March. A sample of 2,009 deer yielded a ratio of 30 fawns:100 adults, which translates to 39 fawns:100 does. Over-winter fawn loss was 25%. Conditions were much worse during the spring 2012 survey, when a sample of 980 deer was classified with a ratio of 31 fawns:100 adults. The long-term (1979-2011) average observed fawn recruitment was 32 fawns:100 adults.

Habitat

Habitat and climatic conditions have been mostly negative for mule deer since 2007. Years that featured severe drought, dry summers and severe winters resulted in below-average fawn recruitment including two of the lowest years on record. On a positive note, the 2010-11 water year delivered over 150% of average moisture to much of this unit group. This outstanding moisture brought substantial short-term habitat improvements in the summer of 2011 that allowed deer to rebuild body condition. Hopes for above-average production and recruitment over the past year were high. The 2011-12 winter was extremely warm and dry. The early spring of 2012 brought welcome precipitation, but this was followed by a May-June period with above-average temperatures and 7% of average precipitation. Habitat conditions suffered and undoubtedly had an effect on the condition of does prior to and after parturition, as well as on early summer fawn survival. Late summer and fall precipitation was substantial and produced a tremendous fall green-up. This enabled deer to improve body condition and handle the subsequent severe winter weather relatively well. As of early April, Weather Service measurements at the Ely Airport show water-year precipitation near average; however local NRCS Snotel sites have recorded only 60% to 72% of average water-year precipitation. A warm

March has produced good spring conditions for mule deer, but habitat conditions in 2013 may be challenging unless favorable weather patterns develop throughout the balance of the spring and summer.

Long-term habitat potential for mule deer is slowly declining due to the encroachment of pinyon and juniper trees (P/J) upward into mountain brush zones and downward onto bench areas. The threat of wind farm development on top of the north Antelope Range (Unit 112) has been downgraded. Over the past several years, habitat enhancement projects have included two new water developments and several thousand acres of chaining and other P/J removal in north Unit 112 and a 5,700 acre chaining (seeded) on the east side of northern Unit 111. Numerous other projects with potential benefits to mule deer are in the planning stage. These include a large USFS project in northern Unit 111 to reduce P/J and conduct burning in white fir/aspen mixes, substantial removal of P/J and green-stripping in Duck Creek Basin (Unit 111) and a large BLM/USFS project on the east Schell Bench of Unit 111 to reestablish native shrubs, forbs and grasses in crucial deer winter range. In June 2012, the Range and North Schell fires burned approximately 15,000 acres on the west side of the Duck Creek Range and from the Muncy Creek drainage north on the east side of the Schell Creek Range. Some valuable deer habitat was lost, however much of the North Schell fire occurred in areas forested with P/J. Mule deer should benefit in the long term.

Population Status and Trend

Population trend has been downward most years since 2007 due to negative effects of climatic conditions on habitat, mule deer body condition, productivity and fawn recruitment. This herd is considered to be below carrying capacity, outside of recent climate-related limiting factors. The near-average fawn recruitment observed the past two years has resulted in a static to slightly upward trend. The 2012 postseason buck ratio was high, but slightly lower than expected. This suggests that last year's population may have been slightly overestimated. After making the appropriate adjustments, population modeling predicts a slightly lower estimate for 2013. Quota recommendations will be similar to last year's quotas.

Units 114 – 115: Snake Range; Southeastern White Pine County

Report by: Curt Baughman

Survey Data

In late December 2012 a post-season herd composition survey was flown for the first time since the fall of 2009. Survey conditions were outstanding. Liberal flight time allowed for excellent area coverage. A sample of 658 deer yielded ratios of 39 bucks:100 does:48 fawns. This was the largest fall sample since 2000. The spring 2013 survey took place along with the winter elk survey in late February and early March 2013. Survey conditions were far superior to those encountered in the spring of 2012. The sample of 421 deer yielded a ratio of 23 fawns:100 adults, which equates to 32 fawns:100 does. Over-winter fawn loss was 33%. During the spring 2012 survey a sample of 121 deer yielded a ratio of 39 fawns:100 adults. The previous 10-year-average recruitment (2002-2011) was 27 fawns:100 adults.

Habitat

Please see the discussion of climatic conditions above for Unit-Group 111-113.

Long-term habitat potential for mule deer is slowly declining due to encroachment of pinyon and juniper trees upward into mountain brush zones and downward onto bench areas. In some areas, recurrent drought has resulted in loss of native vegetation and expansion of cheatgrass and noxious weeds. Large-scale projects designed to control the encroachment of trees without imposing long-term impacts to shrub communities will be needed to reverse this trend.

Great Basin National Park is developing plans to utilize prescribed fire to create openings in expansive areas of conifers, many of which hold the remnants of aspen stands that are being out-competed by conifers such as white fir. These actions could benefit mule-deer far into the future.

Population Status and Trend

This unit-group has experienced below-average fawn recruitment in all but 4 years since 1999. The population trend was downward from 2001 to 2005 followed by some recovery between 2005 and 2007 and then another decline since that time. The negative climatic conditions described above were detrimental to mule deer survival and productivity, resulting in below-average fawn recruitment in 2008 through 2011. Two of these years witnessed recruitment rates among the lowest on record. Although recruitment was better in 2012, the higher production that was anticipated for 2012 did not occur. Recruitment was again below-average in 2013 resulting in a stable to slightly decreasing population trend. The combination of conservative tag quotas and the presence of the National Park in Unit 115 have resulted in a very high buck ratio in both Units 114 and 115. Even at 39 bucks:100 does, the observed 2012 postseason ratio fell short of where it should have been based on the approved 2012 quota and actual harvest. This indicates that the 2012 population was overestimated. The 2013 estimate reflects a substantial downward adjustment. This unit-group is scheduled to be surveyed again this year postseason, which should help improve future estimates. Apart from the climate-related limiting factors of the past 6 years, this population is considered well below carrying capacity. The prospects for population expansion in the short-term are not bright unless weather patterns become favorable. In addition, approximately 47 mountain lions have been removed from the Snake Range by sportsmen and Wildlife Services since the beginning of 2009. This is a high rate of removal for this unit-group and should be achieving a better balance between the Snake Range lion population and ungulate resources.

Unit 121: North Egan, Cherry Creek Ranges; White Pine and Elko Counties

Report by: Scott Roberts

Survey Data

There was no post-season deer survey conducted in 2012. An aerial spring mule deer survey was conducted during March 2013. A record sample of 2,053 deer was classified in Unit 121, yielding a ratio of 32 fawns:100 adults.

Habitat

The winter of 2011-12 produced well-below average precipitation in Eastern Nevada (National Weather and Climate Center website). The dry winter produced poor early summer conditions throughout Unit 121. Perennial water sources in the area received increased pressure from wildlife, horses, and domestic livestock as seasonal sources dried up early in the growing season. The exceptional precipitation that was received in late summer/early fall of 2012 produced spring-like conditions with significant forage production. The deer that made it through the dry early summer benefitted from the improved conditions and entered winter in excellent shape.

Proposed wind-energy projects within Unit 121 have the potential to negatively affect the deer herd and other wildlife. These projects will likely increase the human presence in much of Unit 121's most productive summer range, as well as increase traffic in and out the area. Pinyon/Juniper encroachment continues to plague a significant portion of Unit 121. Habitat improvement projects and small fires in the unit continue to provide excellent micro-habitats.

Population Status and Trend

Unit 121 experienced significant population growth last year with well-above average recruitment levels. This spring's fawn ratio was slightly below the previous 10-year average and resulted in a maintenance level recruitment rate that produced a very similar estimate as last year.

Units 131 - 134: Southern White Pine, Eastern Nye and Western Lincoln Counties

Report by: Mike Podborny

Survey Data

In March 2013, the spring herd composition survey was conducted by helicopter. There were 1,711 deer classified; yielding a ratio of 31 fawns:100 adults. There was abundant snow with some green-up that had deer concentrated along the migration trail making them readily accessible for survey. The spring sample was the highest since 1984 when 2,643 deer were classified. This was opposite of the 2012 spring survey which found deer scattered at varying elevations due to the lack of snow and resulted in only 702 deer classified with a ratio of 38 fawns:100 adults.

Habitat

Habitat conditions improved between 2009 and 2011 with above-average precipitation resulting in increased forage production and water availability for wildlife following the drought of 2007 and 2008. A drought returned in the first half of 2012 with extremely dry conditions until August rains began in White Pine and Eastern Nye counties. At one local ranch in the White Pine Range over 6 inches of rain was recorded from August thru October 2012. Heavy rains filled guzzlers and stock tanks and resulted in lush green grass and forbs in the fall. Thus habitat conditions for deer improved before winter throughout this unit group. The long-term quality and quantity of summer ranges are slowly being reduced by pinyon/juniper forests taking over brush zones thereby lowering the carrying capacity for mule deer. Since the summer of 2010, the Forest Service has hired contract crews with chainsaws to cut small pinyon and juniper trees encroaching into open grass and brush zones of the White Pine, Grant and Quinn Canyon Ranges. This project will be ongoing for several years and will prevent tree domination of some brush communities, maintaining their value for deer and other wildlife.

Population Status and Trend

The excellent range conditions during the fall of 2012 resulted in better than expected winter fawn survival following the extreme cold and snow during January 2013. Fawn recruitment resulted in a slightly increasing population in 2013. This deer population has increased for the 4 consecutive years.

Units 141 - 145: Eureka and Eastern White Pine Counties

Report by: Mike Podborny

Survey Data

The post-season herd composition survey was conducted in December 2012 by helicopter. There were 1,386 deer classified; yielding ratios of 30 bucks:100 does:51 fawns. The previous post-season survey was conducted in December 2011 with 1,456 deer classified; yielding ratios of 36 bucks:100 does:63 fawns. In March 2013, a helicopter spring deer survey was conducted with 1,323 deer classified; yielding a ratio of 33 fawns:100 adults. The overall winter fawn loss was 17%. The spring 2012 survey resulted in 931 deer classified; yielding a ratio of 44 fawns:100 adults. The increase in the spring sample size from 2012 to 2013 was believed due

to survey conditions between years. The mild winter with little snow and no green-up during the 2012 spring survey resulted in deer being scattered at varying elevations and accounts for the lower sample. In 2013 there was abundant snow that forced deer to lower elevations making them readily accessible for survey. In 2008 and 2009 the spring surveys resulted in near record low fawn to adult ratios of only 19:100 and 21:100 respectfully.

Habitat

Drought returned in 2012 with the Elko and Eureka weather stations reporting only 79% and 77% of normal precipitation for the year respectfully. There were some rains in August and September in southern Eureka County that negated some drought affects. Most of the rains were south and east of Eureka. Ely had 125% of normal for 2012 with the majority of that coming as monsoon rains. The southern portion of the Diamond Mountains and the Fish Creek Range received this monsoon moisture which improved range conditions during the fall of 2012. The Cortez Range (Unit 141) was extremely dry throughout the year. No rains were received during the summer in the Cortez Range. A 12,000 acre wildfire burned a portion of Roberts Mountain (Unit 143) in August 2012. The majority of the fire burned in the mid-elevation pinyon and juniper forest. This fire should improve deer habitat in the future as young plants replace mature trees and provide more succulent forage for deer and other wildlife. The Mt. Hope Mine began construction in January 2013 in Unit 143. The mine will impact deer in the immediate area of the mine site but is not expected to cause a major impact to overall deer habitat. The BLM conducted a horse round-up in the Diamond Mountains in January 2013; removing 792 horses. This should improve range conditions in the future. There were 801 feral horses counted during the spring 2013 deer survey with the majority (567) of those in the Cortez Range of Unit 141. There were only 126 horses in the Diamonds following the recent gather.

Population Status and Trend

Spring fawn recruitment rates increased to moderate levels during the last 3 years and resulted in an increasing population trend in 2012. The removal of a large number of horses from the Diamond Range should improve range conditions there. The severe drought and large number of horses in the Cortez Range has resulted in poor range conditions for deer and other wildlife species.

The extreme cold and moderate snow levels in January 2013 did not result in as severe winter fawn loss as was expected. The 2012 buck harvest should have resulted in a post-season buck ratio of 37:100 but the measured ratio from the post-season survey was 30:100. This was the second year the observed ratio has been 6 to 7 points lower than expected. The population model for 2013 was adjusted downward to account for those lower than expected buck ratios and below-average spring and fall samples.

Units 151, 152, 154, 155: Lander and Western Eureka Counties

Report by: Jeremy Lutz

Harvest Results

There were 923 rifle buck tags (resident and nonresident) available in 2012. This represented a 186% increase from the 2011 quota of 323 buck tags. Hunters harvested 519 bucks from MA 15 last year which was the highest reported buck harvest ever recorded. Four point or better bucks resulted in 32% of the harvest in 2012 with the remainder being in the 2-3 point class.

Field checks were performed throughout the 2012 rifle season in units 151,152,154 and 155. The majority of harvested bucks checked had limited fat deposits. Mature bucks supported antlers lacking in tine length and/or mass. Several hunters reported antlers breaking off during harvest.

Survey Data

A fall helicopter survey was conducted in November 2012. A total of 1,294 deer was classified; yielding ratios of 37 bucks:100 does:56 fawns. This year's buck ratio was 2 points lower than last year's ratio of 39 bucks:100 does. Total bucks observed differed by only 8 males compared to the previous year despite the removal of 519 males from the population.

A spring helicopter survey was conducted in March 2013. A total of 1,157 deer was classified; yielding a ratio of 18 fawns:100 adults. This was the lowest observed fawn ratio since 1982. The resulting fawn loss was 60%. Many of the deer observed during this survey were visibly in poor body condition.

Habitat

Drought like conditions plagued much of Area 15 throughout 2012 and resulted in limited growth of essential mule deer forage. Forbs, grasses, and liter growth on mountain shrubs were essentially nonexistent. Deer were utilizing stream and riparian habitat by early summer because these areas offered the only succulent vegetation available. Springs and perennial streams were dry by August. These poor range conditions caused livestock to concentrate within riparian areas and aspen stands and resulted in heavy utilization and resource degradation.

In June of 2012, the Battle Mountain BLM signed a drought management EA that was presented to every permitee within the district. To date most of the permitees agreed to take voluntary non-use in important habitats.

According to the National Drought Monitoring Index, Lander and Eureka Counties are within the severe to moderate drought category. Last year Battle Mountain received less than 3.5 inches of precipitation. On average Battle Mountain receives 8-9 inches annually. The long range drought monitoring forecast indicates north central Nevada will remain in this dry pattern.

Population Status and Trend

Deer went into the winter of 2012-2013 in poor condition. Heavy snow fell towards the end of December and remained until mid March of 2013. In addition, 3 weeks of below freezing temperatures were experienced in January, often resulting in crusted snow. The combination of these conditions, combined with poor winter forage, resulted in the loss of 60% of the Area 15 fawn segment.

This year will mark the 3rd and final year of an extensive radio-collaring project within the Simpson Park range conducted by NDOW and UNR. A total of 35 collars were deployed this past year in Unit 155. In addition, mule deer weight and body measurements were obtained. Adults weighed 4% less this year compared to 2011 and fawns weighed 11% less than in 2011.

Through harvest and winter mortality it is estimated that over 1,000 deer were removed from the Area 15 deer population this past year. This decrease in the deer population should help alleviate competition for the limited resources that are available this year due to the severe drought that has plagued this region. A doe hunt has been adopted in hopes of further reducing this deer population to levels that are within the current limited carrying capacity.

Units 161 - 164: North-Central Nye and Southern Lander and Eureka Counties
Report by: Tom Donham

Harvest Results

In 2007, the season changed from a single 23-day season to a split 16-day Early/Late season for both Management Area (MA) 16 and 17. The 2012 season was the sixth consecutive year with that season structure. The split season was intended to allow those willing to deal with larger crowds and comparatively more difficult hunting conditions a greater chance of obtaining a deer tag on a regular basis, while at the same time offering a hunt later in the fall with significantly smaller crowds, and cooler temperatures for those sportsmen willing to wait longer between deer tags.

Since the inception of the split hunt, the MA 16 Early Resident Any Legal Weapon season success has averaged 42%, while the Late Resident Any Legal Weapon season success has averaged 62%. During the same 6-year period, the average harvest percentage of 4-points or better during the early and late seasons has been 32% and 55%, respectively.

Survey Data

Aerial post-season composition surveys were conducted in MA 16 during December 2012. During the survey, a total sample of 1,163 mule deer was classified as 225 bucks, 631 does, and 307 fawns. The sample of 1,163 mule deer represents the largest sample obtained during post-season composition surveys in MA 16 since 2000. The observed buck ratio (36 bucks:100 does) indicates that the male segment of the MA 16 population remains strong. The observed fawn ratio (49 fawns:100 does) indicates the herd experienced fair production in 2012.

Due to inclement weather and time constraints, the 2013 spring aerial composition survey was somewhat shortened in MA 16. Despite the shortened survey, a large enough sample of deer was obtained to provide reliable data. The spring survey was accomplished during early-April, 2013. During the survey, a total of 734 animals was classified as 594 adults, and 140 fawns. The low observed fawn ratio (24 fawns:100 adults) indicates that following a moderate level of production in 2012, a higher than normal overwinter loss of fawns occurred in MA 16.

Population Status and Trend

The MA 16 mule deer population has remained relatively static for most of the past decade. Regularly occurring periods of drought, excessive feral horse numbers, aging of browse species, and increasing P/J densities have collectively managed to keep mule deer populations in central Nevada from experiencing any significant growth. However, favorable conditions experienced from the fall of 2010 through the summer of 2011 greatly improved habitat conditions in central Nevada and resulted in an increase in fawn production in MA 16 during 2011. In addition, overwinter fawn mortality was very light during the mild 2011-12 winter, which allowed the MA 16 mule deer population to experience moderate growth for 2012.

Unfortunately, a return to severe drought conditions through the winter of 2011-2012, which continued into the spring/early summer period of 2012, once again impacted wildlife populations in central Nevada. While these conditions did not impact overall fawn production significantly, more than likely it did impact the overall size and vigor of fawns. A very wet July and August resulted in a flush of green-up during the late summer and fall of 2012, which should have helped improve body condition of adult and juvenile mule deer entering the winter period. Over a period of several weeks, central Nevada experienced moderate snow accumulations in conjunction with very cold temperatures during the winter of 2012-13. These conditions, in conjunction with a fawn crop that was likely under weight and less robust than

usual to begin with, resulted in higher than average overwinter fawn loss in much of central Nevada.

The MA 16 mule deer population is believed to be static to slightly decreasing due to recent reductions in fawn production and recruitment. Please note however, that this reduction in the herd is not reflected in the current published population estimate. This is due to the fact that data indicates the previous population estimate was low, and an adjustment to the previous published population estimate was necessary.

Units 171 - 173: Northwestern Nye and Southern Lander Counties

Report by: Tom Donham

Harvest Results

In 2007, the season changed from a single 23-day season to a split 16-day Early/Late season in Management Area (MA) 17. The 2012 season was the sixth consecutive year with that season structure. The split season was intended to allow those willing to deal with larger crowds and comparatively more difficult hunting conditions a greater chance of obtaining a deer tag on a regular basis, while at the same time offering a hunt later in the fall with significantly smaller crowds, and cooler temperatures for those sportsmen willing to wait longer between deer tags.

Since the inception the split hunt, the Early Resident Any Legal Weapon season success has averaged 28%, while the Late Resident Any Legal Weapon season success has averaged 41%. During the same 6-year period, the average harvest percentage of 4-points or better during the early and late seasons has been 29% and 45%, respectively.

Survey Data

An aerial post-season composition survey was conducted in MA 17 during December 2012. During the survey, a total of 1,611 mule deer was classified as 313 bucks, 855 does, and 443 fawns. The 2012 survey results were very similar to the 2011 post-season survey results when a total of 1,643 mule deer was classified as 300 bucks, 887 does, and 466 fawns. The 2012 observed buck ratio (37 bucks:100 does) indicates that the male segment of the MA 17 population remains strong, and the observed fawn ratio (52 fawns:100 does) indicates the herd experienced fair production in 2012.

The 2013 spring aerial composition survey was conducted in early-April 2013. The survey was shortened due to inclement weather and time constraints. During the survey, a total sample of 576 mule deer was classified as 456 adults, and 120 fawns. Similarly to MA 16, the observed fawn ratio (26 fawns:100 adults) obtained during the spring survey effort indicates MA 17 experienced higher than average overwinter fawn loss.

Population Status and Trend

Consistent periods of drought have plagued central Nevada during most years over the past decade or more. This, along with various other factors, resulted in very little overall growth of mule deer populations and a relatively static trend. However, from the summer of 2010 through the early summer of 2011, central Nevada saw a much needed improvement in climatic conditions. The resultant positive effects to habitat quality allowed the MA 17 mule deer herd to experience very good production during 2011. A very mild 2011-12 winter with nominal overwinter mortality allowed for a noticeable increase in the deer population over 2010 levels.

Unfortunately, severe drought returned to central Nevada during the 2011-12 winter and continued through the spring of 2012. While overall fawn production was not significantly affected, the poor body condition of does during this period likely resulted in underweight and

less robust than normal fawns. A wetter than normal July and August created a flush of green-up during the late summer and fall period, which should have helped animals enter the winter in improved condition. However, this was not enough to avoid higher than average overwinter fawn loss due to a period of several weeks in which moderate snow accumulations and freezing temperatures were experienced during the early part of the 2012-13 winter.

Due to reduced fawn recruitment, the MA 17 mule deer population estimate reflects a decrease from 2012 numbers.

Units 181 - 184: Churchill, Southern Pershing, and Western Lander Counties

Report by: Jason Salisbury

Survey Data

Post-season aerial composition surveys were conducted in January of 2013. A total of 165 mule deer was classified as 40 bucks, 83 does, and 42 fawns yielding ratios of 48 bucks:100 does:51 fawns. Three hours were expended obtaining the above survey numbers. The last post-season survey for these unit groups was conducted in 2007.

A ground survey was conducted in March of 2013, resulting in the classification of 110 mule deer. This sample consisted of 82 adults and 28 fawns yielding a ratio of 34 fawns:100 adults.

Habitat

In the early fall of 2012, the BLM removed 433 feral horses out of the Desatoya Horse Management Area (HMA). The removal of the horses, especially on the top of the Desatoya Mountains, will help alleviate some long-term conflict between mule deer and feral horses for available water and forage.

In 2012, the Gilbert fire consumed more than 29,000 acres of the New Pass Range located in Unit 183. Most of the burn occurred in an old fire scar and will most likely recover on its own with perennial bunch grasses surviving the fire. On a positive note, the eastern side of Gilbert Creek burn was covered in a pinyon juniper canopy with strong bunch grass prevalence. The area was seeded by NDOW with four-wing salt brush strips. Additionally, the BLM seeded 2,500 acres in the Gilbert Creek Basin. Following post fire these areas will provide new habitat for mule deer to occupy where previously pinyon canopy hampered occupancy.

A pinyon juniper removal project in the Big Dens area was completed in 2012. This project utilized a mechanical masticator machine, as well as ground crews to remove individual trees encompassing 2,700 acres of habitat. The project will enable the browse component to reestablish on the western slopes of the Desatoya Mountains. A follow up project entailing removal of small trees will be necessary in the future to insure the success of the project.

Population Status and Trend

The Area 18 mule deer herd is stable and the population estimate is similar last year. The mule deer herd has had to deal with extended periods of drought in 2012. Higher elevational riparian areas dried and cured out as early as mid- June. During normal precipitation years these important fawning areas would stay lush well into July.

The mule deer herd experienced extreme cold temperatures in the winter of 2012-13. Inversions of fog plagued many valley bottoms. As a result, many deer in Area 18 wintered at the highest elevations to utilize warmth from the sun. The temperature variance between the valley floor (colder) and mountain tops (warmer) varied from 15 -20 degrees. Despite the cold temperatures experienced this past winter, mule deer seemed to fare quite well.

The 10-year average for harvested bucks of 4-points or better is 37%. This year's harvest was 5% below the long-term average. The 2012 fall survey shows a high buck to doe ratio. A subsequent follow-up flight in 2013 could prove valuable in verifying the buck ratio. This year's spring fawn ratio should allow for maintenance level recruitment resulting in a stable population trend.

Unit 192: Carson River Interstate Herd; Douglas County

Report by: Carl Lackey

Survey Data

Post-season survey flights were conducted in January 2013. Survey conditions were optimal resulting in the highest sample size in this unit since 1999. Biologists classified 381 deer with a ratio of 27 bucks:100 does:45 fawns. A spring flight in early April resulted in the classification of 143 deer with a ratio of 43 fawns:100 adults. Most of the deer found on survey were in the northern parts of the unit.

Habitat

There were no significant changes to the habitat in 2012 occupied by this deer herd. The majority of this herd uses the eastern slopes of the Carson Range as critical winter range, migrating from the Tahoe basin and Hope Valley summer range. Dry conditions persisted in 2012 and throughout this last winter, other than record snowfall in December 2012. Without spring precipitation in early 2013 the outlook for range conditions is not favorable.

Population Status and Trend

The modeled pre-hunt population estimate for 2013 was comparable to the last several years indicating the population trend is stable. Survey and harvest data indicate this deer herd has probably maintained itself over the last few years, with adequate fawn recruitment rates and generally good age cohort distribution. The University of Nevada, Reno continues to study this deer herd, providing survival rates, mortality data and migration information from over 100 collared deer.

Unit 194, 196: Carson Range and Peavine Mountain Interstate Herd; Washoe and Carson City Counties

Report by: Carl Lackey

Survey Data

Biologists completed a late post-season composition survey flight in early January 2013 and classified 549 deer with a ratio of 41 bucks:100 does:48 fawns. Survey conditions were excellent with clear skies, no wind, and good snow cover. Spring flights were flown in April and resulted in the classification of 421 deer with a ratio of 47 fawns:100 adults.

Habitat

Housing development and the accompanying human recreation associated with it are the most important issues facing the Carson Front deer herds. There were no noteworthy fires or other catastrophic habitat changes in 2012 which would have had significant impacts on the landscape. However, if drought conditions persist through the spring and summer of 2013 it will likely effect fawn recruitment and body condition of deer entering the winter of 2013. The majority of this herd uses the eastern slopes of the Carson Range as critical winter range, migrating from their Tahoe basin summer range.

Population Status and Trend

The 2013 modeled pre-hunt population estimate was comparable to estimates for the last few years. Based on preliminary telemetry data it appears many more of the deer belonging to the two Carson Front deer herds reside in Nevada on a year-round basis than previously thought. Over the last few years, this deer herd has appeared healthy with adequate fawn recruitment rates and generally good age cohort distribution. Despite this, the long-term trend is downward, mostly due to habitat loss and fragmentation. This unit remains a much desired area to hunt deer for locals and non-residents, with high success rates and good point-class distribution.

Unit 195: Virginia Range Herd; Storey, Washoe and Lyon Counties

Report by: Carl Lackey

Survey Data

Formal post-season and spring surveys have not been completed for Unit 195 since 2002.

Habitat

The majority of land in this unit is privately owned and a significant portion is being developed, commercially and residentially. The resulting fragmentation and loss of habitat, along with increased traffic on U.S 395 has decreased this once migratory herd to a resident herd.

Population Status and Trend

There is no modeled population estimate for this herd. The population estimate of approximately 500 adult deer for this herd is derived from harvest statistics and is based upon total buck harvest. Deer are fairly common along the Truckee River corridor on mostly private lands. Significant portions of the unit contain monocultures of pinion-juniper and the deer in this unit spend a considerable amount of time in these pinion-juniper forests, making them hard to detect. Deer also seem to be fairly well distributed in the southern part of the unit near Jumbo Grade. Hunter success indicates an adequate number of deer for the tags sold.

Units 201, 202, 204 – 208: Walker / Mono Interstate Deer Herd; Douglas, Lyon, and Mineral Counties

Report by: Jason Salisbury

Survey Data

Post-season aerial surveys were completed by the Nevada Department of Wildlife in early January 2013 and resulted in the classification of 1,187 mule deer. This sample consisted of 139 bucks, 791 does, and 257 fawns, yielding sex and age ratios of 18 bucks:100 does:33 fawns.

A spring ground survey was conducted by California Fish and Game in late March 2013 and resulted in the classification of 845 deer. This sample consisted of 707 adults and 138 fawns, yielding a ratio of 20 fawns:100 adults. This is a 29% loss of fawns from January through late March 2013.

Habitat

Mule deer in Management Area 20 face a multitude of problems and challenges. The winter of 2012-2013 received 50% of normal precipitation along the Sierra Front. The current drought has persisted for the past two years.

This mule deer herd occupies the West Walker and East Walker river corridors during the winter months. The West Walker area, consisting of the Pine Grove Hills, often experiences persistent drought which results in a reduction in the quality and quantity of the shrub component utilized by this deer herd. The East Walker herd's winter range receives increased precipitation allowing the brush component to be more productive therefore providing a higher nutritional value to the mule deer herd.

The Jackass fire has recovered well and has shown remarkable progress. This fire burned in a pinyon-pine dominated landscape and post-fire recovery is showing a mix of shrubs and grasses that will benefit the Area 20 herd.

Population Status and Trend

The Area 20 herd is presently experiencing a declining population trend. The herd is consistently plagued with drought conditions and low recruitment rates. This suggests the herd could be exhibiting a density-dependent response due to limited resources. Mule deer are thought to be in poor body condition. This assumption is based on continued low fawn ratios. Biologists also believe degraded summer range in California leaves mule deer in meager condition when entering winter. Research suggests reducing competition for limited resources may enable this population to experience an upward growth trend following positive climatic conditions. One way to reduce competition is to introduce a management doe hunt. This would also provide biologists access to body condition data. Body condition scoring information could then be utilized to evaluate carrying capacity of this interstate herd.

Future habitat projects that address pinyon-juniper encroachment should allow for brush communities to establish, improving the overall health of winter range. Improvements on winter range are important, but addressing habitat conditions on the California side is also needed to allow for a positive growth into the future.

Unit 203: Mason and Smith Valley Resident Herds; Lyon County

Report by: Jason Salisbury

Survey data

No formal surveys were conducted in this unit group. Harvest is dictated by hunter demand and success. Most past surveys have been conducted on the Mason Valley Wildlife Management Area (MVWMA).

Population Status and Trend

The Mason and Smith Valley mule deer herds are believed to be stable at this time. The 1331 any legal weapon hunt can be an indicator of stability. The 2012 overall hunter success rate was 57% respectively with 33% of the bucks with 4-point or better racks. The percentage of 4-point bucks is 8% below last year's reported harvest but well within the 15-year average of 36%.

The Unit 203 herd occupies rural farm areas interspaced with housing tracts and single dwelling homes. The Mason Valley area over the last several years has converted many alfalfa farms into garlic and onion farms. The increase in onion farms contributes little to the mule deer herd within Mason Valley.

The best mule deer habitat within Mason Valley consists of alfalfa fields surrounded by buffalo berry and salt desert shrub communities. The MVWMA contributes the most to this mule deer herd in Mason Valley and serves as a sanctuary to the habitat fragmentation that surrounds it in the valley. The highest concentrations of deer exist in and around the Walker River corridor that provides thick stands of willows providing shelter and escape cover. Future plans for a

new copper mine in Mason Valley will convert more brush land and farm land into housing tracts within Mason Valley. Further fragmentation of habitat within Mason Valley will not afford the population the ability to grow or expand.

Units 211, 212: Esmeralda County
Report by: Tom Donham

Survey Data

Currently, no formal surveys are conducted in MA 21. Past survey efforts have not resulted in sufficient sample sizes for use in monitoring population dynamics.

Population Status and Trend

Based upon harvest data, random observations, and informal survey data, the MA 21 mule deer population appears to have remained static at relatively low levels for quite some time. Over the past decade or more, drought conditions have plagued this portion of the state. In addition, conversion of sagebrush habitats to pinyon and juniper woodland, as well as the loss of productivity of browse species due to aging, has impacted the quantity and quality of available habitat.

While favorable climatic conditions from the summer of 2010 through the summer of 2011 gave a temporary boost to mule deer populations in this part of the state, the boon was short-lived. Severe drought returned to this area during the winter of 2011-12 and continued through the spring/early summer period of 2012. These conditions impacted the body condition of does during the fawning period, which likely resulted in many fawns being underweight. Survey data in neighboring Units indicate that overwinter fawn loss was higher than average as the result of a harsh early winter period in conjunction with an undersized and less robust than normal fawn crop. The same phenomenon is expected to have occurred throughout MA 21.

While the MA 21 mule deer population experienced a moderate increase during 2011, recent factors have reversed that trend.

Units 221 - 223: Northern Lincoln and Southern White Pine Counties
Report by: Mike Scott

Survey Data

Post season aerial surveys were completed in December 2012 with a total of 1,788 deer observed. These were classified as 337 bucks, 907 does, and 544 fawns which provided sex and age ratios of 37 bucks:100 does:60 fawns.

Spring deer surveys were completed in March 2013 with a total of 1,065 deer observed. These were classified as 750 adults and 315 fawns which provided a ratio of 42 fawns:100 adults.

Habitat

Habitat conditions were good throughout Area 22 as a result of late summer and fall precipitation. According to BLM rain can and CEMP precipitation data, Lincoln County received just over 100% of the previous ten-year average of precipitation. Year-to-date totals, however, indicate that Lincoln County is only at about 55% of average for 2013.

Mule deer in Area 22 continue to face many habitat challenges. Fire suppression efforts have resulted in expanding pinyon-juniper forests that reduce forage availability over much of the mid-elevations of Area 22. The Egan Fire, however, burned over 7,000 acres of mostly dense

PJ during 2012 and should eventually result in improved habitat for mule deer, as well as other wildlife species. Wilderness designation throughout much of the mule deer summer range means very little can be done to improve habitat for their benefit. A large new power line is nearly completed through crucial deer winter range and migration corridors that will mean increased traffic through these areas. Shed hunters continue to harass mule deer on almost a daily basis while gridding winter ranges on ATV's. The Silver State Trail also increases motorized use of these winter ranges. There are still proposals to transfer water from parts of Area 22 to Southern Nevada. Feral horses continue to be managed over AML in the southern part of Area 22.

Population Status and Trend

The 2013 population estimate is within 2% of last year's estimate.

Unit 231: Wilson Creek Range; Northeastern Lincoln County

Report by: Mike Scott

Survey Data

Post-season aerial surveys were completed in December 2012 and resulted in a total of 1,184 deer observed. These were classified as 164 bucks, 660 does, and 360 fawns which provided age and sex ratios of 25 bucks:100 does:55 fawns.

Spring deer surveys were completed in March 2012 and resulted in a total of 1,123 deer observed. These were classified as 869 adults and 354 fawns which provided a ratio of 40 fawns:100 adults.

Habitat

Habitat conditions have been reasonably good in Area 23 due to late summer and fall precipitation. According to BLM rain can and CEMP precipitation data, approximately 100% of the previous ten-year average precipitation was received during 2012. Year-to-date totals for 2013, however, show that Lincoln County has received only about 55% of average precipitation thus far.

A major threat to Mule deer habitat has been stopped with the elimination of the Table Mountain Wind Energy project proposal. Shed antler hunting continues to increase harassment of deer and other wildlife during the late winter and early spring. People continue to ride ATV's around winter ranges in search of shed antlers from early January until late May. It's hard to tell what the effects are on the mule deer population, but safe to say that the effects are probably not beneficial. Other threats to mule deer habitat include continued pinyon-juniper invasion, drastically high numbers of feral horses, shrub senescence, water transfer proposals, and development in crucial deer winter range.

Population Estimates and Trend

The 2013 population estimate was similar to last year.

Units 241 – 245: Clover, Delamar, and Meadow Valley Mountain Ranges; Lincoln County

Report by: Mike Scott

Survey Data

Post-season aerial surveys were completed in December 2012 and resulted in a total of 382 deer observed. These were classified as 61 bucks, 214 does, and 107 fawns which provided age and sex ratios of 29 bucks:100 does:50 fawns.

Spring surveys were completed in March 2013 and resulted in a total of 118 deer observed. These were classified as 87 adults and 31 fawns which provided a ratio of 36 fawns:100 adults.

Habitat

Habitat conditions should be good during the spring of 2013 due to average precipitation during 2012. According to BLM rain can and CEMP precipitation data, approximately 100% of the previous ten-year average precipitation was received during 2012. A large portion of that fell during the late summer and fall, leading to good conditions during the latter part of the year. Dense pinyon-juniper forest throughout much of this area limits the amount of forage available for mule deer. Feral horses in unit 241 are extremely high which results in degraded mule deer habitat, despite BLM reducing the AML to zero. Five new water developments have been built that should benefit mule deer and other wildlife.

Population Estimates and Trend

The 2013 population estimate shows a 29% decrease from the previous year.

Units 251-253: South Central Nye County

Report by: Angelique Curtis

Survey Data

Presently, neither post-season nor spring surveys are conducted in these units. The last survey conducted was in 1998 and failed to yield a sufficient sample for analysis.

Habitat

In 2011 a increase in precipitation in northern Nye County improved habitat conditions thus improving production and recruitment in the mule deer populations. The Unit 251 mule deer population likely benefited from improved habitat conditions; however, due to severe drought throughout 2012, the moderate population increase will mostly likely not be sustained.

Population Status and Trend

Management Area 25 (MA 25) has limited good quality mule deer habitat. The majority of the MA 25 deer population occurs in Unit 251 due to the greatest extent and the best quality of habitat available. Due to the poor quality browse species, pinyon and juniper expansion, impacts from feral horses and regular movements of mule deer groups occurring across this unit and from adjacent units, the mule deer population in Unit 251 has remained stable at relatively low numbers.

Units 261 – 268: Clark and Southern Nye Counties
Report by: Patrick Cummings

Survey Data

Mule deer occur in low densities in the Newberry Mountains, Crescent Peak, southern portion of the McCullough Range and the Spring Mountains. The majority of the mule deer in the management area inhabit the Spring Mountains. Mule deer habitat in Area 26 is marginal; consequently, deer densities are low and below levels that warrant annual or periodic aerial surveys. The lack of composition data precludes development of a useful model that would demonstrate herd population dynamics and generate population estimates.

Habitat

Area 26 is in proximity to Las Vegas and other growing cities. Recreational pursuits that include OHV and mountain bike use and the resultant proliferation of roads and trails coupled with suburban sprawl, serve to degrade mule deer habitat. In the Spring Mountains, mule deer habitat is also impacted by feral horses and burros.

In June 2004, the Humboldt-Toiyabe National Forest issued a Decision Notice and Finding of No Significant Impact for Spring Mountains National Recreation Area Motorized Trails Designation Project. The decision to implement alternative 5 (with modifications) as summarized in the respective Environmental Assessment involves minimal closure of newly established roads. Thus, the recently authorized management prescription for motorized trails ensures the status quo for the foreseeable future.

Population Status and Trend

In 2010, high precipitation receipts in winter and subsequent spring months resulted in increased availability of nutrient-rich forbs, browse tips, and grasses. However, in the absence of monsoonal storms, summer months in 2010 were notably dry.

In 2011, although overall precipitation receipts were lower than in 2010, storm development was well distributed throughout much of the year and involved summer monsoonal activity. Subsequently, the winter of 2011-12 was notably dry. In general, precipitation receipts in 2012 exceeded normal due to an active monsoon season. However, as of this writing in April 2013, environmental conditions range from fair to good due to limited winter and spring storms. Moisture receipts in the first quarter of 2013 were below average, and the likelihood for an overall dry year appears high. In the seasonal drought outlook valid for April 4 – June 30, 2013, the National Weather Service forecasted likely development of drought. Based on environmental conditions, it is reasoned mule deer populations in Management Area 26 are stable.

Units 271, 272: Southern Lincoln and Northeastern Clark Counties
Report by: Mike Scott

Survey Data

No mule deer surveys were conducted in Units 271 or 272 during the reporting period. Mule deer densities are low enough that standard surveys do not result in enough data for analysis. The harvest strategy is based on hunter demand and success.

Habitat

Mule deer habitat is limited in Area 27. Better mule deer habitat is found in the Virgin Mountains; however, it is still a low density mule deer area. Both units are within Mojave Desert ecotypes with Pinyon/Juniper found at higher elevations. Water is very limited and mule deer are generally found in areas not far from water, at least during the warmer times of the year. Large-scale wildfires likely opened up some habitat in recent years, which appears to be recovering. Average precipitation during 2012 should result in good habitat conditions in Area 27.

Unit 291: Pinenut Mountain Herd: Douglas County

Report by: Carl Lackey

Survey Data

No formal surveys were conducted in this unit. General observations and anecdotal reports indicate that this herd is stable over the short-term but has declined significantly over the long-term.

Habitat

Loss of habitat over the long-term in this unit continues to keep the deer population at low levels. Expansion of the pinion forest over the past few decades, increased human recreational activity and increased urbanization on the perimeter with corresponding traffic have all contributed to loss of habitat and the decline of mule deer in Unit 291. Significant portions of the unit contain monocultures of pinion-juniper, much of which is dead. Habitat improvement projects have been recommended to reduce the pinion-juniper coverage, yet short of a catastrophic habitat regime change affecting thousands of acres, the deer herd will likely not increase significantly in numbers.

Population Status and Trend

There is no modeled population estimate for this herd. This population is believed to be stable, but has the potential to increase under more ideal habitat conditions. Many of the deer are residents, particularly in the northern part of the management area. Based on buck harvest data, the 2013 population estimate for Area 29 is between 500-700 adult animals and is well-below historic levels recorded for the Pinenut Mountains.

PRONGHORN ANTELOPE

Units 011 - 015, 021, 022: Washoe and Western Humboldt Counties

Report by: Chris Hampson

Harvest Results

There were 350 buck antelope harvested from Management Areas 1 & 2 during the 2012 hunting season. This was an increase of 40 bucks over the 2011 harvest. However, hunter success rates fell in some Washoe County hunt units this past year primarily due to two large wildfires that were actively burning during the pronghorn rifle season. Hunt units affected by the fires were 012, 013, and 015.

The Bureau of Land Management was forced to close a large portion of Hunt Unit 015 during the pronghorn hunting season due to the Rush Fire. The majority of Hunt Unit 015 was closed to vehicle access for 10 of the 14 day rifle season. The Rush Fire that burned along the California-Nevada border resulted in the loss of over 300,000 acres in California and close to 45,000 acres in Hunt Unit 015 in Nevada.

The Lost Fire burned approximately 50,000 acres between the eastern side of Cherry Mountain (Unit 013) and High Rock Canyon (Unit 012). Both of the fires destroyed a significant amount of pronghorn, mule deer and sage grouse habitat.

The two large fires seriously affected pronghorn hunting in northwestern Nevada. A record fifty-two hunters turned their tags back into NDOW prior to their hunt starting. For comparison, only 9 hunters returned their tags before the 2011 season. Also, contributing to the problems this past hunting season was the fact that between 3 and 14% of the tag holders for Management Areas 1 & 2 chose to stay at home and not participate in their hunt.

The 2012 hunting season was the first year for a pronghorn muzzleloader season in Washoe County. A total of 19 tag holders participated in the new hunt. Those hunters reported harvesting 7 buck antelope. The draw odds for this hunt ranged between 2-to-1 and 7-to-1 for the north Washoe hunt units.

Survey Data

Pronghorn composition surveys were conducted in early September using the Department's Bell 206 Jet Ranger helicopter. A total of 1,499 pronghorn was classified by biologists during the three days of helicopter survey. The sample obtained from Management Areas 1 & 2 provided sex and age composition ratios of 34 bucks:100 does:39 fawns and was the highest number of animals classified over the past five years. The sex and age ratios from the 2011 survey was 30 bucks:100 does:41 fawns.

The 2012 buck ratio rose by 4 bucks:100 does when compared with the previous year's. The increase is indicative of the lower hunter success rates this past hunting season and the increase in the number of hunters who chose not to hunt or who turned in their tags.

Fawn ratios in northwestern Nevada ranged from a low of 27 fawns:100 does to a high of 49 fawns:100 does. Hunt units along the Nevada/California border generally have higher fawn ratios than those units further to the east that are normally drier and lower in elevation. Fawn ratios in Northwestern Nevada have been very strong and have averaged 45 fawns:100 does over the past five-year period.

Table 1. 2012 post-season pronghorn composition

Unit/Unit Group	Bucks	Does	Fawns	Total	Bucks/100 Does/Fawns
011	78	262	110	450	30/100/42
012-014	102	357	128	587	29/100/36
015	87	166	81	334	52/100/49
021-022	30	77	21	128	39/100/27
2012 Totals	**297**	**862**	**340**	**1499**	**34/100/39**
2011 Totals	194	653	268	1,115	30/100/41

Habitat

The winter of 2012-13 has thus far been well-above average for precipitation and snowfall. Northwestern Nevada received its fair share of precipitation as well. Most basins reported being between 120-135% of average as of February 1, 2013. However, the last week of January and the first two weeks of February were extremely dry with very warm temperatures. Warm temperatures significantly reduced the snowpack throughout the northwestern portion of the state. This resulted in a significant reduction in the percent-of-average totals. The current forecast heading into the middle of February is for dry conditions to continue.

Population Status and Trend

Population trends for pronghorn in northwestern Nevada have been generally increasing over the past decade. Recruitment values have been strong in most years; especially within those hunt units along the Nevada/California border. Pronghorn populations that exist further to the east in Washoe and western Humboldt Counties generally have been hampered by extended drought conditions that have been prevalent since the record drought year of 2007. Quota recommendations for the 2013 hunting season will mimic population trend.

Units 031, 032, 034, 035, 051: Humboldt County

Report by: Ed Partee

Survey Data

During mid September 2012, post-season aerial composition surveys were conducted in Management Areas 3 and 5. The total number of antelope observed during these surveys was down from last year's survey. The total number of animals observed in Unit 031 was nearly half of the 2011 survey. The sample size did increase in the 032-035 unit group but not enough to make up for low survey numbers in Unit 031. The sample size increased in Unit 051 from what was observed last year.

Table 1. 2012 Post-season pronghorn composition for Humboldt County

Unit	Total	Bucks:100 Does: Fawns
031	196	32:100:32
032-035	393	20:100:38
051	234	34:100:43
2012 Totals	**823**	**27:100:38**
2011 Totals	908	27:100:35

Despite the drop in overall numbers, buck and fawn ratios were very comparable to the last two years. Fawn:100 adult ratios are holding stable in all unit groups, except for Unit 031 where a slight drop was observed. The fawn ratio in Unit 051 increased significantly from last year and is near the past five-year average.

Habitat

The winter of 2012-2013 started with above average precipitation during the fall months. However, a drying trend from January through March reduced yearly precipitation levels to well-below average. Record cold temperatures occurred during the month of January.

Unit 031 suffered a wild-land fire that consumed over 215,000 acres of habitat. Management Area 5 had multiple fires that affected approximately 22,539 acres of habitat. Rehab efforts are underway to restore areas lost to fires. Any moisture received in the early spring of 2013 will benefit the rehabilitation efforts in these areas.

Population Status and Trend

Fawn ratios remained static in Management Area 3 over the last two years. These populations are showing a stable trend at this time. Fawn recruitment in Management Area 5 declined this past year but still remains above maintenance levels. Population estimates for these units remained steady over the last couple of years. Female pronghorn hunts are keeping these herds from increasing and therefore the pronghorn population is staying within habitat carrying capacity.

Unit 033, Sheldon National Wildlife Refuge: Washoe and Humboldt Counties

Report by: Chris Hampson

Harvest Results

Hunter success rates for pronghorn antelope hunting seasons on the Sheldon decreased in 2012, due primarily to emergency road closures instituted by the USFWS. Road closures were put place on the Sheldon from the 9th of August through late October. Active wildfires in other areas of Washoe County during the pronghorn hunting season also discouraged hunters from traveling north and participating in the hunt. A total of 24 Sheldon pronghorn tag holders chose to turn their tags back into NDOW prior to the start of their hunt. Seven additional tag holders held on to their tags but chose not to hunt.

The decrease in the number of participants was also reflected in the total harvest of buck antelope. Sixty-one pronghorn antelope bucks were harvested during the 2012 hunting season. In 2011, eighty-two bucks were taken by hunters. The harvest objective for the Sheldon in 2012 was 78 buck antelope. The reduced harvest can be attributed to road closures enacted by the USFWS during the summer and fall of 2012. Closures affected hunter access to many popular hunting areas. Hunters were forced to park along main roads and then walk in to hunt areas. Parking was limited to parking areas or widened areas along the few major roads that crisscross the Sheldon Refuge.

The quality of bucks taken on the Sheldon also dropped in 2012 and was certainly caused by the difficult hunter had access. In 2012, 36% of buck antelope taken had horn lengths in excess of 15 inches. In 2011, without the road closures 56% of hunters harvested bucks with 15 inch or longer horns.

In 2012, a few lucky hunters enjoyed the first ever pronghorn muzzleloader hunting season on the Sheldon. There were five tags sold for this hunt, however, two hunters turned their tags back into NDOW prior to the start of the hunting season. The season ran from September 25th thru October 4th. The three hunters who participated in the hunt reported killing two buck antelope.

Survey Data

Approximately 2 hours of survey effort were expended in the Department's Bell 206 Ranger helicopter. Post-season composition surveys took place on September 6, 2012 and resulted in the classification of 400 pronghorn. Sex and age ratios of the sample were 30 bucks:100 does:30 fawns.

Due to the extremely dry summer and below-average winter of 2011-12, lakebeds on the major table tops on the Sheldon were once again completely dry. Pronghorn moved off of their typical summer ranges and dispersed into lower elevation habitats where water was available. The lack of pronghorn on these higher elevation summer ranges made it more difficult to locate pronghorn and reduced the number of animals classified during the survey.

Buck ratios were thought to be skewed lower due to the fact that surveys were conducted immediately following the rifle hunting season. The Sheldon pronghorn herd is scattered out over a very large area and some areas are more accessible to hunters than others. Buck ratios tend to be higher in these more remote areas. The overall buck ratio on the Sheldon is believed to be in the upper 30's to low 40's. The current population model for the Sheldon pronghorn herd also estimates a higher buck ratio.

The observed fawn ratio from this September 2012 survey on the Sheldon was equal to the long-term average fawn ratio of 30 fawns:100 does that was classified between 2006 and 2012. The prevalent drought over the past decade resulted in poor habitat conditions and reduced water availability. Fawn ratios for the Sheldon herd have ranged between 22 and 36 fawns:100 does over this time period.

Habitat

Habitat conditions on the Sheldon improved dramatically in 2010-11 following a very wet and productive winter and spring. However, since that time dry conditions have returned and the past two winters have been below normal. The winter of 2012-13 started off with a bang and most areas in northwestern Nevada were well above average for precipitation and snowfall at the end of December. However, two consecutive dry months in January and February reduced average precipitation and snowfall totals. Warm temperatures in February significantly reduced the snowpack in all areas of northwestern Nevada.

Significant moisture is needed in March and April in order to offset the drier than normal winter. Habitat conditions may continue to worsen if precipitation receipts do not improve over the late winter and spring. Fawn recruitment has suffered over the past several years under these types of conditions. Current stream flow projections are forecasting well-below-average runoff for this coming spring.

Horse and burro gathers are once again planned for the summer/fall of 2013. USFWS personnel on the Sheldon plan to remove over 400 horses and burros. Riparian conditions will continue to improve as horse numbers are brought under control. NDOW warns hunters of the pending horse and burro gathers during the online application process.

Population Status and Trend

Pronghorn recruitment ratios on the Sheldon have been near maintenance levels over the past 7 years. The population continues to maintain itself at moderately high numbers and buck quality remains strong. Quotas for pronghorn hunting on the Sheldon will continue to mimic population trend.

Units 041, 042: Western Pershing and Southern Humboldt Counties
Report by: Kyle Neill

Survey Data

Ground surveys were accomplished in late September/early October and resulted in the observation of 730 animals. Results are summarized in Table 1.

Table 1. Pronghorn composition survey results for Units 041 and 042.

Year	Bucks	Does	Fawns	Total	Bucks:100 Does:Fawns
2011	169	532	275	976	32:100:52
2012	**152**	**433**	**145**	**730**	**35:100:33**
5-year average	132	352	147	631	37:100:42

The 2012 fawn ratio was below short and long-term averages and will result in maintaining herd size. The post-season buck ratio of 35 bucks:100 does was near the five-year average and continues to remain near harvest objectives.

Habitat

Similar to previous years, water sources in Unit 041 continue to remain a concern. These include Granite Spring, Sage Hen Spring, Twin Buttes Well and Stonehouse Canyon in the Nightingale Range. This past summer these sources were routinely dry or near dry from low output and continued over utilization from feral horses and burros. It is thought that this occurrence has lead to fewer observations of antelope within this portion of Unit 041. In an attempt to alleviate these problems biologists and sportsmen are identifying areas in which big game guzzlers would facilitate increased antelope use. Also, increased mining activity that took place last year in Stonehouse/Wildcat Canyons of the Seven Troughs Range resulted in fewer animals being observed in traditional summer range. Furthermore, antelope use on C-Punch's alfalfa fields in Granite Springs Valley has increased over that observed last year to approximately 15 to 25 animals all summer.

Population Status and Trend

Since 1990, this herd's population exhibited increasing trends followed by one to three years of stability. Currently, western Pershing County's antelope population is stable and estimated to be near 1,900 animals. Trophy quality continues to be maintained. Since 2007, hunters who harvested antelope bucks were asked to provide horn length as part of their questionnaire data. Units 041,042 have averaged 42% of the bucks harvested with a horn length of 15 inches or longer. Harvest results from 2012 show that of the 158 bucks that were measured, 41% of them had horn lengths of 15 inches or longer. Additionally, the 2012 statewide average was 28%. Overall, this herd's outlook remains positive. It is expected that future population growth will be limited by available water sources supplying enough water for antelope during the July-September timeframe.

Units 043 - 046: Eastern Pershing and Southern Humboldt Counties
Report by: Kyle Neill

Survey Data

This was the third year ground surveys were conducted during the winter months. Eastern Pershing County's antelope survey occurred in early February 2013 and resulted in the observation of 96 animals with age and sex ratios of 57 bucks:100 does:39 fawns. Generally, survey conditions were considered difficult due to roads that were muddy and/or snow covered and impeded travel in portions of the unit group. However, the sample size was near average and buck and fawn ratios were higher than average.

Population Status and Trend

This pioneering herd continues to grow and expand. Numbers of animals encountered during field trips and hunter observations increase every year. Use areas have also expanded and antelope use on agriculture has also increased. In 2012, one compensation tag was given out for Unit 044. This herd's estimated population size has increased over last year based on increased sight records, compensation tag counts & hunter observations.
Core use areas in Unit 043 are near Lovelock Prison/Coal Canyon Road to Dago Pass turnoff, Limerick Canyon and Coyote Canyon north to Creek Hill. Areas of use in Unit 044 are Dun Glen Flat, Table Mountain, Willow, Inskip, Milch, Reed and Spaulding Canyons. Areas of antelope utilization in Unit 045 include the base of Miller Basin north to Pollard Canyon on the west side of the Tobin Range and the base of Morning View Canyon to the base of Flag Canyon, preferring Hog Canyon on the east side of the range. In Unit 046, primary antelope use occurs around Pole Creek/Kramer Hill, east side of Edna Mountains and Smesler Pass. Occasionally, antelope are observed on the west side of the Sonoma Range near the base of Clearwater Canyon. For the 2013 hunting season, a resident archery hunt was added to accompany the resident and non-resident any legal weapon hunts.

Units 061, 062, 064, 071, 073: North Central Elko County

Report by: Matthew Jeffress

Survey Data

A ground survey was conducted in the 061-073 unit group in September 2012. A sample of 848 pronghorn was obtained; yielding ratios of 40 bucks:100 does:42 fawns. The sample size was the 4th largest ever obtained. The fawn ratio was significantly higher than last year, but was below the 10-year average.

Table 1. Observed buck ratios, fawn ratios and sample size for pronghorn in Units 061-073.

Parameter	2012	2011	2002-2011 Average
Bucks:100 does from fall surveys	40	43	42
Fawns:100 does from fall surveys	42	33	48
Sample size from fall surveys	848	604	701

Habitat

Below-average snowpack and below-average spring precipitation made for a dry summer. Range conditions remained dry through October. A combination of drought and excessive cattle grazing across much of the summer and transition range likely attributed to below-average fawn recruitment. Of great concern was the high utilization of riparian areas and herbaceous vegetation on the BLM portion of the Saval Bench. As of March 1, 2013, the snowpack for northern Elko County was approximately 80% of normal. Several fires burned within the unit group during the spring and summer months of 2012. The 2 largest fires, Browns Gulch and Mustang, burned primarily on USFS administered lands within Unit 061. The 2 fires combined burned over 31,000 acres. Portions of each fire will likely negatively impact pronghorn at least in the short-term.

Population Status and Trend

The mild spring experienced in northern Elko County may have contributed to good fawn production observed in early June; however the dry summer and lack of forage likely led to below-average recruitment. A late December storm blanked western Elko County in snow. Cold temperatures persisted through early February, however no major die-offs were observed. Due to a change in grazing along the

I-80 corridor east of Elko, much of the seedings, in particular forage kochia, were available to wintering pronghorn.

The 3 radio-collared does marked in 2011 on winter range north of Carlin in Unit 064 spent the entire year in the Adobe Range. One doe perished this winter. Of the 15 ear-tagged bucks from the January 2011 capture north of Carlin, 1 was observed near Sunflower Flat in Unit 061 during the September fall survey, 1 was observed north of Lone Mountain in September and another buck was observed in August on the South Fork Owyhee River, 63 miles from his original capture location.
Last year the pronghorn population was at the estimated carrying capacity of the winter range. Doe and buck harvest during the 2012 hunting season worked to keep the herd at a sustainable level. Harvest recommendations will remain focused on keeping the pronghorn population within the confines of the unit group's winter carrying capacity of approximately 1,100.

Units 065, 142, portion of 144: Southern Elko County, Northern Eureka County
Report by: Scott Roberts

Survey Data

A combination aerial and ground survey was conducted in January, 2013. The survey concluded with a total of 163 antelope being classified with age and sex ratios of 61 bucks:100 does:26 fawns. The survey was plagued by poor weather and heavy snow loads. Only a small portion of Unit 142 was surveyed and minimal portions of Unit 144. The resulting fawn ratio was the lowest ever recorded for this unit group.

Habitat

Snotel sites located within or near this unit group recorded precipitation receipts that ranged from 66%-86% of average for the 2012 water year (NRCS website). Dry conditions led to significantly lower production of grasses and forbs throughout the unit group. Drought conditions were most evident in lower elevation sites that have burned in the past 14 years. The drastic drop in the observed fawn ratio is a function of the poor habitat conditions that were experienced throughout 2012.

In January, 2013 the BLM began a roundup of wild horses in the Diamond Complex of Units 065 and 144. The goal of the gather was to remove approximately 603 excess horses from the 3 associated HMAs to return the population to the designated appropriate management level (AML) of between 123-210 horses (BLM website). This effort will have immediate effects on the resident pronghorn by reducing the habitat degradation that is realized with so many horses in such a relatively small area and by reducing horse competition for the limited available water resources.

Population Status and Trend

The population estimate in this unit group is slightly lower than the previous year and is a direct result of the low fawn ratio. The 2013 water year shows signs of being considerably better than 2012, and will hopefully return this unit group to the gradual growth that it has exhibited in recent years. The high buck ratio that has been observed in this unit group recently will facilitate recommendation of tag quotas similar to last year.

Unit 066: Owyhee Desert; Northwestern Elko County
Report by: Matthew Jeffress

Survey Data

An August aerial survey of the YP and Owyhee Desert was conducted as was an aerial survey of the Snowstorm Mountains in conjunction with a bighorn survey in August 2012. The 066 Pronghorn Herd has consistently suffered from chronic low fawn ratios with a 10-year average of 25:100 does. The fawn

ratio this year was significantly higher. A sample of 236 pronghorn was obtained; yielding ratios of 66 bucks:100 does:39 fawns. Again the Snowstorm Mountains accounted for the majority of the sample size. The low elevation YP/Owyhee Desert portion of the survey yielded ratios of 7 fawns:100 does. The dynamics between this herd and adjacent Nevada, Oregon, Idaho and Duck Valley Indian Reservation herds is not fully understood. A study to determine limiting factors, including causes of fawn mortality and immigration from adjacent herds, would greatly enhance the ability to manage this population.

Habitat

No large landscape scale changes occurred in 2012. Since 1995, 7 big game water developments have been constructed on the 066 portion of the Owyhee Desert. The addition of perennial water sources has had little effect on increasing the Owyhee Desert portion of the population. Vast expanses of winter range are available on the eastern portion of the unit, however degraded winter range along the southern and western portions of the Snowstorms has limited the winter carrying capacity of this herd. Increases in mining exploration across the Snowstorm Mountains and wintering grounds south of Chimney Reservoir in Humboldt County have been observed in recent years. The impacts of such activities to pronghorn are not fully understood.

A feral horse gather was conducted this past winter in an effort to reduce Owyhee Complex horse numbers in both Elko and Winnemucca BLM districts. A total of 808 horses was removed from the Little Humboldt HMA. The pre gather estimate was 1,097 horses which was well above the AML for the Little Humboldt HMA of 197 to 298 horses. The reduction should alleviate constraints on vegetative resources within the Little Humboldt HMA.

Population Status and Trend

The population estimate for pronghorn within Unit 066 is slightly higher than last year's. The 2012 harvest rates increased from a success rate of 71% for the resident general season in 2011 to 88% in 2012. Given the majority of pronghorn within this unit group reside in the Snowstorm Mountains, the limited availability of winter range on the western portion of the unit and competition for limited resources with the Unit Group 067-068 pronghorn on harsh winters, NDOW initiated a horn shorter than ears hunt for 2013. Quota recommendations for the 2013 buck hunt should be slightly higher than 2012.

Units 067, 068: Western Elko and Northern Lander and Eureka Counties

Report by: Matthew Jeffress

Survey Data

A ground survey was conducted in January and February 2013. A record sample of 1104 pronghorn was obtained; yielding ratios of 38 bucks:100 does:30 fawns (Table 1). Poor range conditions throughout the 25 Allotment forced the majority of wintering pronghorn onto cultivated fields. Of the 879 pronghorn observed on the west side of the Sheep Creek Range, over 600 were associated with the Taylor alfalfa fields.

Table 1. Observed buck ratios, fawn ratios and sample size for pronghorn in Units 067,068.

Parameter	2012	2011	2002-2011 Average
Bucks:100 does from winter surveys	38	40	44
Fawns:100 does from winter surveys	30	46	35
Sample size from winter surveys	1104	504	748

Habitat

Below-average snowpack and spring precipitation made for a dry 2012 summer. Range conditions through October remained dry. A combination of drought and excessive cattle grazing across much of the pronghorn transition/winter range and tough winter conditions in January 2013, likely attributed to below-average fawn recruitment. As of March 1, 2013, the snowpack for northern Elko County was approximately 80% of normal. Given the deficit of soil moisture last year, 80% snowpack is far from what is needed to offset the drought of 2012.

Similar to the Area 6 deer herd, pronghorn have been greatly affected by wildfires and the loss of vital sagebrush communities. In 2011, 212,000 acres of rangeland burned in Unit Group 067-068 including 208,000 acres that were lost the first week of October. In spite of the challenges with range rehabilitation, Elko BLM, Newmont Gold Company, NDOW, private landowners and sportsman's organizations seeded over 39,800 acres of scorched private land and 52,500 acres of scorched public land the fall/winter of 2011. Seed appeared to take well in many of the treatment areas, however much of the burned area remained bare ground through 2012.

This last summer, the Willow Fire consumed over 42,000 acres within the North Tuscarora Range. Several thousand acres re-burned rangeland affected by the 2005 Esmeralda Fire and 2006 Winters Fire; however the majority of what burned was intact mountain shrub community. BLM and Barrick Gold Corporation seeded several thousand acres with desirable forbs, grasses and shrubs in early 2013.

It is important to properly maintain the viability and production of seedings on transitional and winter ranges. If seedings are over-utilized prior to the onset of winter, the survivorship of several hundred pronghorn could be compromised during a moderate to severe winter. This year, poor range conditions on Bobs Flat pushed pronghorn and elk onto the Dunphy Hills in January; forcing pronghorn, mule deer and elk to compete for limited forage. The added competition for limited resources also pushed pronghorn to cross I-80 in search of food and cover. It is recommended that BLM develop a grazing management plans for the TS and for the 25 Allotment and use criteria that protects seedings that are crucial for wildlife survival.

Population Status and Trend

The long-term ramifications of a large number of pronghorn being forced onto fields is not fully understood; however it is expected to increase damage complaints and result in the possible loss of migratory behavior for this segment of the 067-068 herd.

The 067-068 population estimate is slightly higher than last year's. 2012 harvest levels were successful at maintaining the population within the carrying capacity of the winter range and NDOW will attempt to do the same with 2013 quota recommendations.

Units 072, 074, 075: Northeastern Elko County

Report by: Kari Huebner

Survey Data

Ground surveys resulted in 281 antelope classified in Mid-August 2012. The resulting sex and age ratios for the sample were 43 bucks:100 does:64 fawns. The buck ratio was up from 24 bucks:100 does observed last year. Fawn production was also up 64% from the past 10-year average of 39 fawns:100 does. This survey is typically conducted between the archery and rifle season in this unit group due to the migration of antelope out of the northern end of Unit 072 into Idaho during and after the rifle season.

Habitat

This unit group was significantly affected by wildfire in 2007 and 2008 (approximately 700,000 acres). On summer range the effects of these fires have been beneficial with perennial grasses and forbs dominating the recovering burned areas; however on winter range, brush species on which pronghorn depend for winter survival, were negatively impacted. Sagebrush is now beginning to recover and will once again provide forage and cover during the critical winter months.

Population Status and Trend

Overall, this pronghorn herd appears to be stable to slightly increasing. Despite the dry summer months, production was high for this herd. Pronghorn are now taking advantage of the increase in perennial grasses and forbs due to the maturation of the burns. With natural recovery in addition to extensive seeding efforts in Nevada and Idaho within these burned areas, the herd's carrying capacity is expected to increase and expand in future years.

Units 076, 077, 079, 081, 091: Northeastern Elko County

Report by: Kari Huebner

Survey Data

Ground surveys conducted in August 2012 resulted in 98 antelope classified. Sample size was considerably smaller than last year's aerial survey. The resulting sex and age ratios for the sample were 57 bucks:100 does:24 fawns. The buck ratio was higher than last year's ratio of 35 bucks:100 does and the fawn ratio was also up from the previous year's ratio of 16 fawns:100 does.

Habitat

Major fires impacted this herd's habitat in 2007 (approximately 244,000 acres). The long-term effects of these fires are proving to be beneficial to pronghorn as perennial grasses and forbs dominate the recovering burned areas. Sagebrush is beginning to recover and will once again available for forage and cover during the critical winter months.

Population Status and Trend

Overall, this pronghorn herd appears to be stable. Although production was up slightly from last year, it is still lower than surrounding units. This is likely a result of much of the unit group (such as Pilot Valley) experiencing low precipitation and lower forage quality. This herd has been utilizing the northern portions of Unit 076 and Unit 081 more than in previous years. This is a result of the recovering burns, higher precipitation and thus better forage quality. These burned areas will likely facilitate increases in the pronghorn herd in coming years.

Units 078, 105 – 107, 121: Southeastern Elko and Central White Pine Counties

Report by: Scott Roberts

Survey Data

An aerial survey was conducted in this unit group during August 2012 resulting in the classification of 631 antelope with age and sex ratios of 30 bucks:100 does:23 fawns. The goal of this survey was to explore the seasonal use of the resident herd in this unit group. With the exception of the southern portion of Unit 121, the range conditions were quite poor and were illustrated by the low fawn ratio.

A ground survey was conducted in January 2013 resulting in the classification of 378 antelope yielding sex and age ratios of 41 bucks:100 does:27 fawns. This apparent increase in the fawn ratio can be

attributed to the concentration on Unit 121 during the survey and the lack of pronghorn classified in the less productive units.

Habitat

The winter of 2011-12 produced below-average precipitation in Eastern Nevada (National Weather and Climate Center website) which provided antelope with poor spring and summer habitat. The significant moisture received in late summer, and throughout the fall appeared to have mitigated the effects of the below-average start of the 2012 water year. At the time of reporting, eastern Nevada was at 129% of average water year precipitation where at the same time last year it was at 82% (National Water and Climate Center website). Spring and early summer conditions should be considerably better than last year and water availability should be significantly increased. The NDOW guzzler crew constructed 3 new big game guzzlers in Hunt Unit 106 during 2012. These new guzzlers will enable the resident antelope herd to utilize large tracts of suitable habitat that have until recently been lacking in water availability. The goal of these projects is to increase the carrying capacity in an area that has historically supported very few antelope.

Population Status and Trend

The 2012 population estimate of slightly under 1,000 pronghorn is a slight decrease from last year's estimate. The average fawn ratio for the past 5 years has been 25 fawns:100 does. This persistently low recruitment rate is the primary reason for the slightly decreasing trend of this population. The stable buck ratio and strong doe component of this population will ensure tag availability for the coming season.

Units 101 – 104, 108, 109 portion of 144: South Central Elko and Western White Pine Counties

Report by: Caleb McAdoo

Harvest Data

For many years the mature buck segment of this unit group has been strong and as such, an intentional strategy to take advantage of high buck ratios and provide additional hunting opportunity was implemented. This year's harvest results indicate that hunter success was excellent for most hunts and was above the statewide average.

Survey Data

Units 101,102,104,108,109 and 144^{B} were surveyed from the ground in mid-October of 2012. A total of 579 animals was classified, yielding sex and age ratios of 32 bucks:100 does:17 fawns. Observed buck and fawn ratios were down significantly from last year's observations. The fawn ratio was the 2nd lowest ever observed. Fifty-four percent of the 123 bucks observed during the survey were yearling bucks, up from the 39 percent observed last year.

Habitat

Persistent drought during the winter of 2011, the spring of 2012, and summer of 2012 created poor range conditions throughout the year. Range conditions were poor for pregnant females early in the spring and when fawns were born in early summer. Summer afforded no reprieve and the continued drought cycle worsened as the year progressed. The onset of forbs and grasses, which antelope so heavily rely on, was minimal and much of the available forage was residual from 2011. Wild horse competition with antelope exacerbated these drought conditions. Units 104,108 and 144^{B} are especially prone to over-utilization by wild horses; however, recent gathers have reduced the level of the negative impacts to some extent.

Water availability is limited in many portions of the unit group and 2012 was no exception. It is expected to take several years for the range conditions to recover from the drought conditions experienced in 2012.

Population Status and Trend

The current population estimate for the 101–104,108, 109 and 144[B] unit group is 800 animals, down from last year's estimate of 950. Until 2007, this population showed a positive upward growth trend, however; the subsequent 3 years of low fawn ratios resulted in a sharp decline followed by population stability in 2010 and 2011. The low fawn ratio combined with a high buck harvest were primary factors contributing to the lower population estimate this year. Although this year's estimate is down significantly from last year, the long-term trend for this herd is stable.

Units 111 – 114: Eastern White Pine County

Report by: Curt Baughman

Survey Data

The 2012 post-season survey was conducted from the ground in late November and early December. The survey was very thorough and area coverage was excellent. Due to abundant fall green-up and earlier survey timing, group size was modest and pronghorn were scattered. The sample of 1,217 pronghorn yielded sex and age ratios of 33 bucks:100 does:22 fawns. An additional 30 pronghorn were observed but unclassified. During the 2011 postseason survey 1,220 pronghorn were classified with ratios of 30 bucks:100 does:34 fawns. Sample composition has averaged 34 bucks:100 does:27 fawns for the previous 10 surveys. Fawn recruitment has been below the long term (1970-2011) average of 36 fawns:100 does since the spring of 2006.

Habitat

Habitat conditions improved substantially in 2011 due to abundant moisture. The 2010-11 water-year ended with over 150% of average moisture received at Ely. A high potential existed for wildfire to burn important pronghorn habitat given the tremendous growth of cheatgrass, mustard and other vegetation across many mountain benches; however, no significant fires occurred in pronghorn habitat. The 2011-2012 winter was dry and abnormally warm. This was followed by a May-June period with above-average temperatures and 7% of average precipitation. The resulting dismal growth of grasses and forbs limited nutritional resources for pronghorn at a critical time and compromised the ability of pronghorn does to maintain healthy kids. Cover values for hiding newborn kids were certainly reduced. The late summer and fall of 2012 brought impressive precipitation that produced tremendous improvements in habitat conditions. Green-up in September resembled spring conditions. The nutritional value of winter forage was also improved. This allowed pronghorn to recover body condition and endure the prolonged cold and snow-cover that followed. Ongoing habitat projects are reducing tree-cover over many acres in north Spring Valley as well as the north end of the Antelope Range. Pronghorn are already taking advantage of these habitat improvements.

Population Status and Trend

The effects of severe drought and hard winters produced a downward population trend from 2007 through 2010, followed by herd expansion in 2011. Unusual climatic conditions in 2012 cancelled what could have been a good year for kid production, survival and recruitment. Instead of further population growth in 2012 the low fawn recruitment produced a stable to slight downward trend. Current water-year precipitation as measured at the Ely airport stands near average. Local Snotel sites are showing 65% to 85% of average total precipitation. Productivity potential for 2013 could be average or above, but will depend on climatic conditions through the spring and early summer.

Units 115, 231, 242: Eastern Lincoln and Southern White Pine Counties

Report by: Mike Scott

Survey Data

Ground surveys were conducted for pronghorn in this hunt unit during October 2012. A total of 356 antelope were classified, consisting of 78 bucks, 250 does, and 28 fawns. This total provides a ratio of 31 bucks:100 does:11 fawns. Antelope were classified in Lake, South Spring, Hamlin, and Snake Valleys.

Habitat

Habitat conditions during the survey were very good due to heavy summer and fall precipitation, however, the dry spring conditions during the spring of 2012 likely led to the low fawn ratio. Although Lincoln County experienced approximately 104% of average precipitation during 2012, the precipitation during April – June was almost zero, which resulted in poor range conditions for pregnant or lactating does. Pronghorn were observed using nearly all of the recent habitat enhancements and most of the new water developments. Feral horse numbers remain well above AML, which results in degraded habitat conditions for antelope as well as other wildlife. Pinyon-juniper expansion into lower elevations continues to slowly reduce available habitat for pronghorn.

Population Status, and Trend

Although this antelope population has contracted due to low fawn recruitment over the past five years, the population is still stable and should expand with average precipitation combined with improved habitat and new water developments. The computer-generated population estimate for 2013 is below the estimate from 2012.

Units 131, 145, 163, 164: Southern Eureka, Northeastern Nye, and Southwestern White Pine Counties

Report by: Mike Podborny

Survey Data

Post-season herd composition surveys were conducted from the ground in October 2012. A record sample of 500 antelope was classified; yielding sex and age ratios of 35 bucks:100 does:18 fawns. The survey was conducted in Antelope, Jakes, Little Smokey and Railroad valleys with limited time spent in Big Sand Springs Valley. In 2011 the sample was 257 antelope yielding age and sex ratios of 38 bucks:100 does:53 fawns. The 10-year-average (2002-2011) fawn ratio was 28 and has ranged from 5 to 53 during that same time period.

Habitat

Range conditions throughout occupied antelope habitat declined in 2012 due to drought conditions until August when monsoon rains caused flooding and abundant grass and forb growth in the fall. There have been no major wildfires or other land actions to degrade the overall habitat for antelope.

Population Status and Trend

The record buck harvest (74), record sample size and a high buck ratio indicate the population is at all time highs, but the below-average fawn recruitment indicates a declining short-term trend for this antelope population.

Units 132-134, 245: Eastern Nye and Western Lincoln Counties
Report by: Mike Podborny

Survey Data

Post-season antelope surveys were conducted from the ground in September and October 2012. There were 360 antelope classified, a record sample; yielding sex and age ratios of 34 bucks:100 does:14 fawns. The previous survey was conducted in 2011 with 101 antelope classified; yielding ratios of 38 bucks:100 does:45 fawns. The increased sample was due to increased survey effort in all major valleys including: Coal, Garden, Railroad, Sand Springs and White River valleys. The average fawn ratio for the previous 20 years, in years when surveys were conducted, was 28 and has ranged from 6 to 45.

Habitat

Sagebrush valleys of the northern portion of this area transition into very dry Mohave Desert with desert shrub and cactus in the south. These range types are less productive than typical antelope habitats in northern Nevada. There were 3 years of above-average precipitation from 2009 through 2011 improving habitat conditions in the short-term. 2012 was a drought year until late summer monsoon rains caused some severe flooding and abundant forbs and grasses in the fall. There have been no major land actions negatively affecting the overall habitat for antelope.

Population Status and Trend

There was a record harvest of 44 bucks in 2012, a high post-season buck ratio but a low fawn ratio. The computer modeled population estimate shows a decreasing population trend in 2013 at approximately 490 animals.

Units 141, 143, 151 – 156: Eastern Lander and Eureka Counties
Report by: Jeremy Lutz

Survey Data

Post-season antelope surveys were conducted from the ground in October 2012 and January 2013. Areas surveyed included Crescent Valley, Grass Valley, Antelope Valley, Reese River Valley, and the Simpson Park Mountains. There were 1,128 animals classified during the surveys, yielding sex and age ratios of 38 bucks:100 does:41 fawns. The average fawn ratio for the past 5-years for this management unit was 51 fawns:100 does.

Habitat

Long-term habitat conditions for antelope continue to improve across much of Lander and Eureka counties except for Unit 141, where feral horse numbers and use have been noted as being severe. Unfortunately, 2011-2013 was the driest on record since the 1890's. According to the National Drought Monitor index most of Lander and Eureka counties have experienced severe drought like conditions over the last 2 years.

Since 1999 over 450,000 acres have burned in Management Areas 14-15. Upper elevation burns have responded exceptionally well with a mixture of brush, native grasses and forbs, however, the lower elevation burns have been less successful with exotic annuals like cheatgrass and mustard dominating the landscape. Areas that were identified as crucial wintering areas for wildlife were seeded resulting in the successful establishment of forage kochia and crested wheatgrass. With successful rehabilitation of fires since 1999 and a maturity of the established plant community, antelope numbers have responded positively to these large scale disturbances.

The Battle Mountain BLM is currently working on the Battle Mountain Allotment and the Argenta Allotment evaluations. Completion and implementation is anticipated in 2013-14.

In June 2012, the Battle Mountain BLM signed a record of decision for the Battle Mountain District Drought EA. Due to the severity of range conditions attributed to the 2011-present drought, several thousand AUM's of voluntary non-use will be implemented. This should help alleviate some stress on key forage for antelope.

Population Status and Trend

The 2012 hunter success rate of 72% was almost identical to last year (73%). Management Area 14-15 had the 2nd highest recorded harvest in the state with 169 animals being harvested.

The large scale fires of 1999 have created ideal habitat for antelope with the increase of annual and perennial grasses and forbs. The total amount and timing of precipitation will ultimately regulate this population's ability to grow and expand. This year's fawn ratio of 41 fawns:100 does was the lowest ratio in the last 6 years and is directly related to the lack of precipitation associated with severe drought like conditions.

The high fawn recruitment the past several years has resulted in strong population growth. If drought conditions persist across Management Area 14-15, this population will start to decline.

Units 161, 162: Northern Nye, Southeastern Lander, and Southwestern Eureka Counties

Report by: Tom Donham

Survey Data

Pronghorn composition surveys were conducted from the ground in Units 161 and 162 during the late September to early October time period in 2012. A sample of 256 pronghorn was classified as 57 bucks, 170 does, and 29 fawns. The low observed fawn ratio (17 fawns:100 does) indicates the herd experienced very poor production and recruitment in 2012. These reduced rates were likely due to severe drought conditions throughout the winter and spring of 2012. Observed buck ratios (34 bucks:100 does) indicate the mature buck segment of the herd is still strong. The previous composition survey was conducted from the air during October 2011 when a record sample of 339 pronghorn was classified as 79 bucks, 189 does, and 71 fawns. Although the majority of animals observed during these surveys reside primarily in Units 161 and 162, there is regular movement of pronghorn between these and adjacent units. This is taken into account in population modeling and the quota setting process.

Habitat

Wildlife habitats in Central Nevada have struggled for over a decade due to regularly occurring periods of drought. An improvement in climatic conditions from 2009 thru the summer of 2011 greatly benefited habitats and associated wildlife, however, the winter of 2011-2012 saw a return to drought conditions. Severe drought prevailed through the spring and early summer of 2012, once again resulting in declining habitat conditions in central Nevada. Fortunately, the late summer of 2012 saw substantial moisture receipts, resulting in remarkable green-up throughout the fall, and a much needed boost to stressed vegetation. At the time of this report, data published by the United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) indicate that central Nevada hovers near 80% for the water year and average snowpack conditions.

The completion of 3 water developments in the southern portion of Unit 162 should benefit pronghorn that have been impacted by the degradation of natural spring sources caused by feral horses and drought. These water developments were completed during the early summer of 2012 by NDOW and USFS personnel, and local volunteers. The water development projects were begun in 2005 by the USFS, but only a single unit was completed at that time. Unfortunately, the unit was never fenced and

feral horses began using it heavily. This resulted in increased horse use in the very area where the development was supposed to have provided relief for resident pronghorn. Hopefully, the completion of the last two units, and fencing of all three, will help mitigate some of the impacts to natural waters caused by feral horses.

Population Status and Trend

In response to very favorable climatic conditions and resultant improvements in habitat, central Nevada pronghorn populations experienced very good production and recruitment rates for two consecutive years in 2010 and 2011. This increase in production allowed for a welcomed boost to these herds. Unfortunately, due to drought conditions, production and recruitment rates plummeted in 2012, which has resulted in a short-term decline in the population. Over the past several years, an increase in numbers has occurred around agricultural areas in Big Smoky Valley, and along the Unit 161/155 boundary as well. This increase can be attributed to the ingress of animals from past transplants of pronghorn in neighboring units, as well as the availability of more succulent forage and more reliable access to water in these areas during critical periods.

While this herd has suffered a recent setback, overall the population remains at a healthy level.

Units 171 – 173: Northwestern Nye and Southern Lander Counties

Report by: Tom Donham

Survey Data

The 2012 post-season composition surveys in Units 171-173 took place from the ground during late September. A total sample of 137 pronghorn was classified as 36 bucks, 88 does, and 13 fawns. Similarly to Units 161-162, which lie immediately to the east, data gathered in Units 171-173 indicate that pronghorn production and recruitment rates were hampered by drought conditions here as well. However, observed buck ratios (41 bucks:100 does) indicate good numbers of 2-year-old and older males in the population. In comparison, the previous composition survey, which was conducted in late September 2011, resulted in the classification of 185 pronghorn. The sample contained 38 bucks, 93 does, and 54 fawns.

Habitat

Following favorable climatic conditions experienced during the 2009 – 2011 period, severe drought returned to central Nevada during the winter and spring of 2012. While habitat conditions suffered due to drought during the winter and spring of 2012, central Nevada received significant amounts of moisture during July and August, 2012. These impressive moisture receipts resulted in dramatic green-up, and a much needed boost to forage species through the late summer and fall period.

At the time of this report, data published by the United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) indicate that snowpack and total precipitation receipts for the current water year hover near 80%.

Population Status and Trend

Much like pronghorn populations in adjacent Units, the 171-173 pronghorn herd had shown recent increases due to favorable conditions experienced during 2009-2011. Unfortunately, very poor recruitment rates (15 fawns:100 does) experienced in 2012 due to drought, have resulted in an end to the recent increasing trend, at least temporarily. An unusually wet July and August resulted in a flush of green grass and forbs throughout much of central Nevada. Pronghorn should have been able to take advantage of the boost in nutrient quality of forage species and enter the winter period in good condition. A continuation of favorable climatic conditions will be necessary for this herd to resume an increasing trend.

Seemingly independent of the trend of pronghorn numbers in other portions of Units 171-173, which is heavily influenced by prevailing climatic and habitat conditions, a consistent increase in pronghorn numbers is occurring in and around the agricultural areas in north Reese River Valley. This can be partly attributed to the ingress of animals from transplants of pronghorn in neighboring units, but also because regularly occurring drought periods have made the availability of more succulent forage and more reliable access to water in these areas more attractive to pronghorn.

Due to regular movements of pronghorn between Nye, Esmeralda, Mineral, and Churchill counties, the total number of pronghorn in the unit group can vary widely on a seasonal basis. This is taken into account in the computer model when estimating population size.

Units 181-184: Churchill, Southern Pershing, Western Lander and Northern Mineral Counties

Report by: Jason Salisbury

Survey Data

A ground survey was conducted in the 181-184 Unit Group in September and October of 2012. A sample of 373 pronghorn was obtained; yielding ratios of 37 bucks:100 does:24 fawns. This year's fawn ratio was 55% below the previous year and was the lowest on record.

Habitat

The spring and summer of 2012 was extremely dry. The vegetative component was severely affected by the lack of precipitation in many valleys. Cattle left out on the range further exacerbated the reduction of available forage. Areas near water haul sites were denuded of any grass component and brush was left in a declined state.

In 2012, the Gilbert fire consumed more than 29,000 acres of the New Pass Range located in Unit 183. Most of the burn occurred in an old fire scar and will most likely recover on its own with perennial bunch grasses surviving the fire. On a positive note the eastern side of Gilbert Creek that burned was covered in a pinyon juniper canopy with strong bunch grass prevalence. The area was seeded by NDOW with strips of four-wing salt brush. Additionally the BLM seeded 2,500 acres in the Gilbert Creek Basin. These burned areas are expected to provide new habitat for pronghorn where pinyon canopy previously hampered occupancy.

The corral spring area located in Smith Creek Valley (Unit 184) has a hog-wire fence which will be replaced with a new pipe-rail fence to allow wildlife access to water in the summer of 2013. This new water source will allow Area 18 antelope to utilize more of the western side of the Smith Creek Valley.

Population Status and Trend

The current population estimate for Units 181-184 is similar to last year. This year's fawn ratio of 24 fawns:100 does was the lowest recorded since this population was first estimated in 2004. These record low fawn recruitment rates are attributed to severe drought conditions experienced in 2012. The previous 10-year average of 46 fawns:100 does resulted in an increasing trend in this population. Hunter success remains high with a harvest rate of 85% in the general rifle season. The percentage of bucks harvested with a horn length over 15" was low (13%) but can be attributed to the previous year's high fawn recruitment that resulted in more young bucks available for harvest. The long-term outlook seems good for Area 18 with a stable population trend.

Units 202, 204: Lyon and Mineral Counties
Report by: Jason Salisbury

Survey

Post-season surveys were conducted from the ground in February 2013. A total sample of 98 antelope was obtained; yielding ratios of 20 bucks:100 does:9 fawns. This year's fawn and buck ratio were the lowest ever recorded.

Habitat

Persistent drought plagued the Unit 202,204 antelope herd. This antelope herd is shared with California and utilizes upper elevation summer range in the Bodie Hills of California and winters primarily in Nevada. Because of the rain-shadow effect of the Sierra Nevada's, the Nevada portion of winter range is often in poor condition. This can wreak havoc on fawn survival through the winter months. Water developments on Fletcher Flat were built for antelope many years ago. They function properly but have archaic fence designs that preclude use by antelope. The replacement of these old fences with pipe-rail type designs will encourage both winter and possibly summer use on Fletcher Flat and surrounding areas.

Population Status and Trend

This population of antelope is experiencing a decreasing trend. Following good precipitation years, the population responds quite well with ample fawns contributing to a stable antelope herd. This year's fawn ratio was a direct result of poor native summer and winter range conditions. This population will only respond favorably when climatic conditions improve. The population estimate for the Bodie and Wassuk pronghorn herd is estimated to be 7% below last year.

Units 203, 291: Lyon, Douglas Counties
Report by: Jason Salisbury

Survey Data

A ground survey was conducted in January 2013 for the 203,291 unit group. A sample of 39 antelope was obtained providing sex and age composition ratios of 39 bucks:100 does:12 fawns.

Habitat

Continued drought conditions with poor water availability hamper pronghorn productivity in the 203,291 unit group. Large playa lakes exist within the table top mountains of the Pine Nut Mountains. On normal precipitation years, these lakes provide needed water. Spring and summer moisture is required in 2013 to replenish these lakes and provide for a high elevation foraging area.

The BLM removed numerous acres of pinyon and juniper within the Pine Nut Mountains for the protection of sage-grouse habitat. In the process, this has opened up travel corridors and grazing opportunities for the pronghorn population as well. Future projects that target the removal of trees will only enhance the landscape for this antelope herd.

Feral horse numbers are exceedingly high within the Pine Nut Mountains horse management area (HMA). A horse gather is needed to reduce competition for limited resources in the area.

Population Status and Trend

This year's fawn ratio was low. It is an indicator that conditions are less than ideal. This small antelope population is considered static at this time.

Units 205-208: Eastern Mineral County
Report by: Jason Salisbury

Survey Data

Post-season composition surveys were conducted from the ground in October 2012. A sample of 52 pronghorn was observed yielding sex and age ratios of 69 bucks:100 does:31 fawns.

Habitat

Over the last seven years numerous water developments have been rebuilt in Mineral County mostly for the sole purpose of providing water for desert sheep in the area. It has been discovered through the use of trail cameras, that these water developments are also benefitting pronghorn. Water developments throughout the region are showing increased use by pronghorn.
In 2013, three additional water developments are being built in the Candelaria Hills and Miller Mountain. These units will provide additional access to habitat for antelope to occupy in Area 208.

During the summer of 2012, large downpours of rain were received in Units 207 and 208. Shortly thereafter, a reemergence of green grasses was prevalent throughout the area. This provided needed nutrition for this antelope herd.

Population Status and Trend

Fawn recruitment of 31 fawns:100 does should allow the population to remain stable at current population levels. This population has small groups of antelope scattered over a large geographic area. Competition for available forage and water is intense among longhorn cattle and feral horses within this unit group. New water developments within Mineral County should decrease competition between native wildlife and domestic livestock. If current drought conditions continue, increased pressure on habitat and limited water sources will occur. This population of antelope continues to persist in marginal habitat. Periods of decent recruitment can be followed by many years of poor recruitment but the antelope herd continues to persist under harsh environmental conditions.

Units 211, 212, 213: Esmeralda County
Report by: Angelique Curtis

Survey Data

No formal surveys have been conducted in this unit.

Habitat

Recent drought events and impacts from burro and feral horse use have led to marginal pronghorn habitat in Management Area 21. The majority of this herd can be found northwest of Goldfield, and in the northern portion of the Monte Cristo Range. Pronghorn may also be found west of Lida Junction and in the northern Fish Lake Valley area.

Population Status and Trend

There is no modeled population estimate for this herd. Based on general observations, anecdotal reports, and hunter harvest data from 2012, the Management Area 21 pronghorn population appears to be stable at a low density.

Previously, pronghorn movement in and out of Management Area 21 was seasonal. As pronghorn populations in neighboring units have increased, more and more animals are remaining year around in units 211, 212, and 213.

Intense ground composition surveys and trail camera surveys are scheduled for the summer and fall of 2013. Data gathered during these surveys, as well as hunter harvest results from the 2012 season, will aid in the creation of a Management Area 21 pronghorn population model and formal population estimate.

Units 221 – 223, 241: Lincoln and Southern White Pine Counties

Report by: Mike Scott

Survey Data

Ground surveys were conducted for pronghorn in these units during October and November 2012. There were 246 antelope classified as 43 bucks, 166 does, and 37 fawns, yielding sex and age ratios of 26 bucks:100 does:22 fawns. Antelope were classified in Delamar, Dry Lake, Cave, Lake, South Spring, and Steptoe Valleys.

Habitat

Habitat conditions appeared to be very good during the survey due to heavy summer and fall precipitation. Pronghorn seem to like the recently completed habitat enhancement projects in Cave Valley, which were done for the benefit of sage-grouse. Feral horse numbers remain well above AML in some parts of this hunt unit. Pronghorn were observed in close proximity to the large new powerline that runs through Dry Lake and Delamar valleys. The increased traffic will likely have some effect on pronghorn, but it's not yet known what that might be. Other threats include the Silver State Trail and OHV races that run through pronghorn winter and fawning habitat, as well as continued Pinyon-Juniper expansion into the lower elevations.

Population Status and Trend

Low fawn recruitment in five of the last six years has resulted in a downward trend in this antelope population. Although this population has decreased, it still appears to be stable and should show an increasing trend with the reasonable precipitation due to the improvements made in habitat and water distribution. The computer-generated population estimate for 2013 is lower than the 2012 estimate.

Unit 251: Central Nye County

Report by: Tom Donham

Survey Data

A total of 134 pronghorn was classified during a post-season composition survey conducted from the ground during early October 2012. The sample consisted of 58 bucks, 72 does, and 4 fawns. The poor observed fawn ratio (6 fawns:100 does) indicates the Unit 251 pronghorn herd experienced similar reduced recruitment rates as other pronghorn populations in central Nevada. Typically, a large number of pronghorn can be found in and around agricultural areas near the Nellis Test and Training Range boundary during the survey period. In 2012, an unusually wet late summer period resulted in exceptional green-up throughout central Nevada, and pronghorn dispersed away from cultivated lands. This in turn resulted in a somewhat smaller than average sample size in Unit 251. The previous post-season composition survey conducted in Unit 251 took place in October 2011, when a total of 155 pronghorn was classified as 49 bucks, 71 does, and 35 fawns. The 2011 survey sample size was also somewhat small because a portion of the Unit had to be left out of the survey due to time constraints.

Habitat

Pronghorn habitats in Unit 251 have been impacted by unreasonably high numbers of feral horses and regularly occurring periods of drought for years. Many natural water sources have been severely degraded in this Unit, possibly irreparably.

Some improvement to habitat conditions were seen in Unit 251 due to recent removals of large numbers of feral horses from the Unit and improved climatic conditions from 2009 through the summer of 2011. Unfortunately, severe drought returned to the area during the winter and spring of 2012. A boost was given to drought ravaged rangelands by an unusually wet July and August, and overall, habitat conditions remain somewhat improved.

Population Status and Trend

The Unit 251 pronghorn population showed an increasing trend due to improved climatic conditions during the 2009-2011 period. Poor recruitment experienced in 2012-13 has ended that trend, at least in the short-term. However, as with other central Nevada herds, a steady increase in pronghorn numbers has been occurring in and around agricultural areas in the unit, regardless of fluctuations in other areas where pronghorn occur in native habitats. This increase is likely due to regularly occurring drought periods which have made the forage and water available in the agricultural areas more attractive to pronghorn.

ROCKY MOUNTAIN ELK

Units 061, 071: Bruneau River and Merritt Mountain Area: Northern Elko County

Report by: Matthew Jeffress

Harvest Results

There were 189 rifle bull elk tags available for the 2012 season including resident, nonresident and incentive tags. This represented a 9 tag increase from the 2011 quota. Hunter success for the resident rifle bull hunt was 49%. Antlerless rifle tags were increased from 366 tags in 2011 to 432. The 2012 hunter success rate for these hunts was 34%. For more specific hunting results, please refer to 2012 Harvest Tables in the Appendix.

Survey Data

A total of 2,179 elk was classified during an aerial survey in January of 2013. The sex and age ratios of the sample were 39 bulls:100 cows:55 calves (Table 1). This year's calf ratio was 10 calves higher than the 10-year average.

Table 1. Observed bull ratios, calf ratios and sample size for elk in Units 061-071.

Parameter	2012	2011	2002-2011 Average
Bulls:100 cows from winter surveys	39	35	33
Calves:100 cows from winter surveys	55	45	45
Sample size from winter surveys	2179	1833	1089

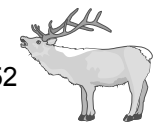
Habitat

The Murphy fire burned approximately 550,000 acres during the summer of 2007. This fire burned most of the Bruneau River drainage, parts of the Mahoganies and over half of the Diamond A Desert. The grass and forb components continued to show excellent recovery throughout the burn. The recovery of the grass and forb segment of the burn, combined with good summer range, once again facilitated a high calf ratio.

Two fires burned within the unit group last summer. The Browns Gulch and Mustang Fires burned primarily on USFS administered lands within Unit 061. The 2 fires combined burned over 31,000 acres. The loss of aspen and fir pockets will likely negatively impact elk in the short-term; however a flush of perennial grasses will benefit elk over the long-term.

Population Status and Trend

The 061-071 elk population continued to increase last year. In fact, the average annual rate of increase for this population over the past 10 years has been 16%. The population estimate for 2012 is 3,100 animals. Most of the annual increase was related to high calf production and lower than expected cow harvest. It has been reported by a number of sources that a few hundred elk reside in the deserts of Idaho on a yearlong basis. In addition, a segment of this herd lives on the Duck Valley Indian Reservation for most of the year. In 2012, a summer fixed-wing survey of the Nevada/Idaho border documented summer elk use of potions of Idaho and the Duck Valley Indian Reservation. In 2011, Idaho significantly increased controlled hunt tags for cow elk adjacent to Nevada's Hunt Unit 071. Anecdotal information suggests Idaho seasons are successful in reducing elk numbers and maintaining a balance of elk distribution along the Nevada/Idaho border. NDOW biologists will continue to work with Idaho Fish and Game biologists to advance understanding of elk distribution along the Nevada/Idaho border in an effort to improve harvest in both states.



A new split season structure for rifle bull and cow tags was implemented for the 2011 hunting season. It will take several years to fully assess the success of the split season structure. As a result of low hunter success coupled with high calf recruitment, NDOW expects to increase harvest quota recommendations in an effort to curb elk herd growth and to manage this herd at or near its current level for a series of years to assess utilization on seasonal ranges. Adjustments to season dates and harvest objectives will likely be recommended for the 2014 season.

Units 062, 064, 066 – 068: Independence and Tuscarora Ranges; Western Elko and Northern Eureka and Lander Counties

Report by: Matthew Jeffress

Hunt Data

There were 96 rifle bull tags issued in 2012. This represented an increase of 38 tags. Hunter success for resident rifle hunters was 56%, which represents a slight decrease over 2011. Antlerless rifle tags were increased from 114 to 293. Rifle cow hunter success increased from 18% in 2011 to 33% in 2012.

Two emergency depredation hunts were initiated in February 2013 to address damage to private alfalfa and hay meadow stack yards. There were 18 any elk depredation tags issued for a portion of Unit 068 and 9 any elk depredation tags issued for portions of units 066 and 067. Reported success for the hunts indicates 6 bulls and 2 cows were harvested from Unit 068 and 5 bulls from units 066 and 067.

Survey Data

Aerial surveys in January 2013 resulted in the classification of 627 elk. The sex and age ratios of the sample were 93 bulls:100 cows:61 calves. The sample is very comparable to the sample obtained last year.

Habitat

Between 2005 and 2007 over 677,000 acres burned within occupied elk habitat. Many of these burns have recovered and are now dominated by perennial grasslands. The grass dominated vegetative communities favor elk, which is evident by several years of high calf recruitment. An additional 176,000 acres of occupied elk habitat burned in 2011. Elko BLM, Newmont Gold Company, NDOW, private landowners and sportsman's organizations seeded over 75,000 acres of scorched rangeland during the fall and winter of 2011. The lack of winter precipitation may have compromised the establishment of sagebrush within the seeded areas, however the reestablishment of perennial grasses is expected to be high.

This last summer, the Willow Fire consumed over 42,000 acres within the North Tuscarora Range. Several thousand acres of this fire re-burned rangeland affected by the 2005 Esmeralda Fire and 2006 Winters Fire. The majority of what burned was intact mountain shrub community. BLM and Barrick Gold Corporation seeded several thousand acres with desirable forbs, grasses and shrubs in early 2013. Elk are expected to benefit from the increase of perennial grasses that will likely establish within the fire perimeter.

Population Status and Trend

New concentrations of elk found on the 2012 survey led to an increase in bull and cow survival rates in the population model. Factoring in the adjusted rates, the population increased by an average of 15% annually from 2002 to 2011. A combination of adjustments to the population model, increased quotas, changes to season dates and increased hunter success rates all combined to maintain the population at an estimated 850 adult elk.

A new split-season structure for rifle bull and cow tags was implemented for the 2011 hunting season. A 3rd late cow elk season was added in 2012. This year there will be a new late split-season structure for cow elk. The split season structure and additional new hunts should aid in reducing the population. The goal of split seasons is to disperse hunting pressure while increasing the tag quota and harvest success. The Western Elko County Elk Management Committee has made recommendations to reduce the elk herd down to the objective of 500 elk as agreed upon in the current Western Elko County Elk Management Plan. Harvest objectives will be aimed at a stepwise reduction of the herd over the next few years.

Units 072, 074: Jarbidge Mountains; Northern Elko County

Report by: Kari Huebner

Harvest Results

This unit group had 3 any-legal-weapon bull hunts in 2012. The hunter success remained high with 77% success in the mid season and 71% in the late season. Antlerless elk hunter success was similar to last year.

Survey Data

Post-season surveys conducted in January 2013 resulted in the classification of 793 elk with observed sex and age ratios of 77 bulls:100 cows:51 calves. The calf ratio was slightly higher than last year's ratio of 49 calves:100 cows. The bull ratio was also higher than last year's observed ratio of 38 bulls:100 cows. About 75% of the elk surveyed in Unit 073 were added to the survey results for the 072/074 unit group because Unit 073 serves as a major winter range for the Jarbidge Elk Herd.

Habitat

This herd has been positively impacted by the large amount of acreage burned in 2007 and 2008. The recovery of perennial grasses and forbs has been phenomenal in most of the burned areas. The resulting habitat created by these burns has been excellent for elk and has facilitated high calf production despite drought-like conditions throughout the summer and fall. A 6,700 acre fire burned in Stud Creek in August 2012. This fire is expected to recover and will benefit elk.

Vegetation monitoring that occurred on the Forest in 2010 and 2012 has been analyzed and documented. Although elk use was found in nearly all aspen stands sampled, the use was minimal and not enough to lead to the overall decline of aspen stands. The same holds true for the mountain mahogany stands. It was recommended that both aspen and mahogany that are recovering from the East Slide Rock Ridge fire be closely monitored to determine if recovery is being compromised by elk, domestic livestock or a combination of both.

Population Status and Trend

The *Jarbidge Mountains Elk Herd Management Plan* identified an objective to maintain the elk herd at 1,000 adult animals plus or minus 10% on the Forest portion of Unit 072. There are also 220 elk allotted for the BLM portions of units 072 and Unit 074, and the east side of Unit 073 in the Wells Resource Area Elk Plan.

Due to high calf recruitment coupled with the low success of antlerless elk hunters in this area, the antlerless tag quota recommendations will be increased significantly to keep up with population growth in order to meet management objectives.

Due to the high degree of elk movement between units 072, 073, 074 and 075, consideration will be given to modeling the populations of these units as one herd and then breaking the quotas out

appropriately in order to achieve population objectives. This effort will be aided by the establishment of 3 any weapon antlerless seasons.

Unit 073: Stag Mountain Area; Elko County
Report by: Kari Huebner

Harvest Data

The rifle bull hunt was split into early and late season for the 2011 season. This year the hunter success rate dropped in the early season from 46% to 39% and increased from 42% to 57% in the late season. The early antlerless elk hunter success was similar to last year, however, late season hunter success decreased from 67% to only 33%.

Survey Data

Post-season surveys conducted in January of 2013 resulted in the classification of 947 elk with observed sex and age ratios of 32 bulls:100 cows:55 calves. The bull ratio was similar to last year. The calf ratio was up from last year's ratio of 43 calves:100 cows. Approximately 25% of the elk surveyed in Unit 073 were estimated to be Unit 073 resident elk. From information obtained from collaring projects, it is believed the remaining elk are from Unit 072 and were added to the Unit 072 survey results.

Habitat

Unit 073 has been significantly influenced by fire during the past 10 years. Over 185,000 acres burned in 2006 alone. The recovery of perennial grass has been phenomenal in much of the burned areas. In addition, these fires were heavily seeded with a mixture of plant species which accelerated the recovery of these burns, especially the grass component. The resulting habitat created by these burns has been excellent for elk and has facilitated high calf production.

Population Status and Trend

A collaring project was initiated in this unit in 2009. Results were used to justify including the majority of the elk sampled in Unit 073 into the sample for Unit 072 and for the resulting population estimate. Despite dry summer conditions, calf production remained high for this and surrounding units. Knowledge gained from collaring data is being used to better distribute tags to help achieve management objectives. Because collaring data and hunter observations have indicted a high degree of elk movement between units, Unit 073 will be combined with units 072 and 074 for all bull hunts.

Unit 075: Snake Mountains; Elko County
Report by: Kari Huebner

Survey Data

Post-season surveys resulted in the classification of 237 elk yielding age and sex ratios of 71 bulls:100 cows:57 calves. The bull ratio was similar to last year. The calf ratio was higher than the 45 calves:100 cows observed last year. Due to light snow cover, elk were not found in their typical winter ranges during this survey.

Habitat

A 16,720 acre wildfire burned in the Deer Creek portion of this unit in the summer of 2006. Although initial impacts from wildlife were negative, the elk herd is now utilizing this area due to the release of perennial grasses, forbs, and aspen as the burn recovers. Elk are taking advantage of the recovering 2007 Hepworth Fire on the southern end of the unit as well.

Population Status and Trend

The recommendations for both antlerless and antlered quotas will remain aggressive in order to keep this herd at population objectives. Unit 074 and Unit 075 will have separate antlerless hunts in order to try to focus hunting pressure.

Due to mild conditions this past winter, elk that usually winter in the southern portion of Unit 074 remained in Unit 075. Because of this change in elk distribution, private landowners in the unit qualified for more elk incentive tags than normal.

Units 076, 077, 079, 081: Thousand Springs, Goose Creek, and Pequop Mountains Area; Northern Elko County

Report by: Kari Huebner

Harvest Results

Bull rifle hunter success in the early season dropped slightly this year, while the late hunt remained the same. Unit 081 antlerless tags have been split from the rest of the unit group since the 2009 hunting season. This year hunter success increased for antlerless hunters in all hunt units.

Survey Data

Post-season surveys in January 2012 resulted in the record classification of 1,577 elk yielding age and sex ratios of 26 bulls:100 cows:45 calves. The observed bull ratio was lower than last year's ratio of 46 bulls:100 cows. The calf ratio was lower than last year's ratio of 52 calves:100 cows.

Habitat

Nearly 240,000 acres burned in this unit group during the summer of 2007. Extensive seeding efforts were expended to rehabilitate fire-ravaged areas. The habitat is responding favorably as it did after the fires in 1999 and 2000. The long-term outlook is positive for elk.

Most water developments that were proposed for the area have been built and are currently being used by elk. Increased water availability has helped distribute elk throughout the unit group. Existing cable fences around water developments are being replaced with pipe-rail fences in an attempt to more effectively exclude livestock.

Population Status and Trend

High calf production was an indication elk were doing well in this unit group and as a result the population estimate will increase.

Elk spend a significant amount of time on private lands in this area as a result of the checker board land pattern. There are currently 12 landowners that participate in the elk incentive tag program who qualified for 38 elk incentive tags for elk use incurred on private rangeland in 2012.

Unit 081 was split out from the rest of the unit group for antlerless tags again last year. There were also 3 additional late emergency depredation antlerless hunts in the northeastern portion of Unit 081. This was due to low hunting pressure in the past and increasing elk numbers attracted to the extensive grass component of recovering burns in this unit. There will be 5 antlerless depredation hunts in the northeast portion of Unit 081 (everything except the Delano Mountains) for the 2013 season. The goal is to reduce elk numbers in this area to alleviate pressure on private land.

Units 078, portion of 104, 105 – 107,109: Spruce Mountain; Elko County

Report by: Caleb McAdoo

Harvest Results

For 2012, 16 any legal weapon tags, including resident and non-resident, were available. Of these, 15 tag holders were successful. Three resident muzzleloader tags and 6 archery tags were also available with success rates of 33% and 50% respectively. Overall, 87% of the bulls harvested had 6 or more points indicating the presence of a strong mature bull segment. Twenty-five antlerless rifle tags were issued for the 2012 season, with a success rate of 68%. For more specific 2012 hunting results, please refer to Harvest Tables in the Appendix Section.

Survey Data

Elk surveys were completed in January 2013. A total of 202 elk was observed during this survey yielding sex and age ratios of 56 bulls:100 cows:20 calves. Generally speaking, mature bull groups were not observed during this year's survey. The observed calf ratio was down significantly from last year's observed ratio of 31, and was well below the long-term average of 34. Calf-ratios in this unit are largely driven by annual precipitation, and as such, are cyclic with the differing moisture patterns (see Figure 1 below). Animal movements observed during both this survey and the Unit 121 elk and deer survey suggested significant interchange between Units 104, 105, 109 and 121, further complicating harvest management strategies for this herd.

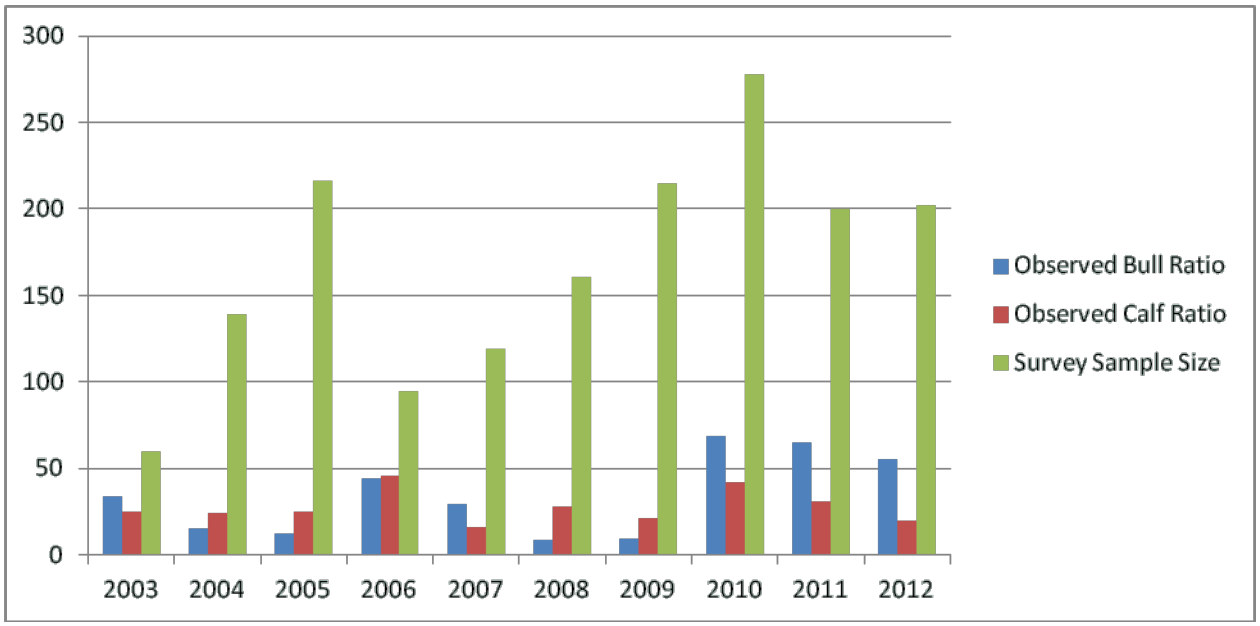


Figure 1. Observed bull ratios, calf ratios and sample size.

Weather and Habitat

This unit group consists of a relatively arid environment and forage production and quality in this area are largely dictated by spring and summer precipitation. As a whole, precipitation during 2012 was extremely poor and the subsequent range conditions created less than ideal conditions for pregnant cows and newborn calves. Poor range conditions have been further compromised and exacerbated by wild horse populations which are above Appropriate Management Levels (AML). Year round over-utilization of the grass and forb component by wild horses has set the stage for long-term impacts related to conversions of native perennial understory to an understory dominated by non-native invasive annuals. Several habitat projects in the area are undergoing NEPA review and when

completed, should create more favorable habitat conditions in the area for both elk and mule deer by promoting more healthy rangelands.

Population Status and Trend

In the winter of 1997, 146 elk were released in Unit 105 on Spruce Mountain. It has been 16 years since the release and elk have established themselves throughout the entire unit group. Dispersal to other units has also occurred. Although the long-term average calf ratio remains relatively low, the long-term trend depicts positive population growth within this unit group. High percentages of mature bulls continue to be harvested and cow hunters have been extremely successful. Elk are now well established in Unit 078 and Unit 107. More frequent observations of elk in Unit 106 indicate the elk herd is still expanding its distribution and range. Movement between adjacent units such as 077, and especially Unit 121, is also occurring and evidenced by elk numbers observed in Unit 121 during late winter surveys in 2013. Collaring efforts have been initiated to investigate the immigration/emigration dynamics of this herd and to determine seasonal movements. The current elk population estimate only accounts for initial emigration out of this unit group in 1997, shortly after the initial release, but does not account for any additional animals migrating into the population. As collaring investigations continue to reveal insight into seasonal movement patterns of this population, the population estimate will be adjusted accordingly. Until last year, harvest management was designed to promote overall herd growth towards the population objective of 340 elk. With the success of this management strategy, the Department will work to maintain the population objective through harvest strategies. For this year, modeled survival rates were increased and wounding loss estimates were decreased to more accurately account for true population parameters. This resulted in a modeled increase to 386 animals, up from 350, last year. More aggressive cow harvest will be implemented to bring total population numbers in line with desired objectives. Additionally, a continued emphasis will be placed on working with the Bureau of Land Management to conduct gathers and maintain wild horse populations at AML.

Unit 091: Pilot Range; Eastern Elko County

Report by: Kari Huebner

Harvest Results

Six bulls were harvested in Unit 091 in the 2012 hunting season, 3 by Utah hunters and 3 by Nevada hunters.

Survey Data

A composition survey was conducted in August 2012. A total of 121 elk was classified. The resulting age and sex ratios were 50 bulls:100 cows:59 calves. This was the 2nd highest calf ratio ever recorded in Unit 091.

Habitat

The Rhyolite Fire burned approximately 4,500 acres on the northeast portion of Pilot Mountain this past summer. The habitat is expected to recover and the long-term outlook is positive for elk.

A water development south of Miners Canyon was recently upgraded. An old saucer style unit was replaced with a new metal apron collection with 4 storage tank capacity. The unit should provide a benefit for the bighorn in the area as well as elk.

Population Status and Trend

Hunters that draw this tag will only be able to hunt Pilot Mountain (both in Utah and Nevada) with the new western boundary being the Pilot Valley Road. There is an exception for Unit 091 that will

preclude PIW elk hunters from hunting elk in Unit 091 due to low tag numbers and the cooperative agreement with Utah that both states will evenly share the elk resource and resulting quotas based on the elk population estimate.

Unit 101 – 103: East Humboldt and Ruby Mountains; Elko County

Report by: Caleb McAdoo

Tag Quotas and Harvest Results

For 2012, a more aggressive approach to achieving harvest of elk within the elk restricted zone was taken with increases in both cow and bull tags. For the last few years, there were 40 cow elk tags issued with success rates ranging from 10-20 percent and approximately 4-6 cows harvested. In 2012, 110 cow tags were issued and 11 cows were harvested. Although the overall success rate didn't increase, a net increase was realized in cow harvest. Success rates between the 4 cow seasons varied from 7-13 percent. Of the 11 cows harvested, 5 were harvested in Unit 101, 2 were harvested in 102, and 4 were harvested in Unit 103. There were 50 tags issued for the early depredation bull hunt in 2012, up from 25 in 2011. Twenty-seven bulls were harvested (56% hunter success) of which 59 percent were 6-points or better. Quotas were also increased to 30 tags for the late season, which resulted in the harvest of 15 bulls and a success rate of 50%. Thirty-three percent of the 15 bulls taken in the late season were 6-points or better. The distribution of harvest for the 42 bulls killed in both seasons included 13 harvested in Unit 101, 10 in Unit 102, and 19 in Unit 103. For specific 2012 hunting season results, please refer to Harvest Tables in the Appendix Section.

Survey Data

Specific elk surveys were not conducted for this unit group but intensive helicopter surveys were conducted for deer, bighorn sheep, mountain goats, and pronghorn in the area. Elk observations were documented during these surveys and also when hunters and others reported sightings, or when landowner complaints were received and investigated. Incidental to other wildlife surveys in these units during 2011 and 2012, very few elk were observed from the helicopter. Other sightings indicated a movement of bulls and cows between the following: units 107 and 101; units 065 and 102; and units 102 and 103. Landowner complaints regarding elk damages continue to remain low and considered to be one measure of success for these management practices.

Population Status and Trend

The objective of the hunt strategy is to eliminate elk or keep elk numbers at a level where depredation on agriculture does not occur and a viable elk herd does not become established. This hunt strategy has been quite effective so far. However, it does appear elk are gradually increasing in some areas, especially the bull segment. Elk observations have increased as small groups of elk have been found within the unit, crossing the unit boundary, or near the periphery of these hunt units.

Units 111 - 115, 221, 222: Schell, Egan, and Snake Ranges; Eastern White Pine, and Northern Lincoln Counties

Report by: Curt Baughman

Seasons, Tag Quotas and Harvest Results

The Wildlife Commission supported the county advisory board recommendations to create separate bull quotas for the 111-115 units and the 221-222 units. This concept arbitrarily splits the core of this elk herd for the purpose of bull harvest. Because the Department's population estimate is for a single elk population within the 111-222 unit group, the 2012 quotas for antlered hunts were based on the recent bull harvest history of approximately 56% for Units 111-115 and 44% for Units 221-222. The actual harvest was very close to these figures.

The 369 bull tags available in 2012 represented a 12% increase over 2011 quotas. The total bull harvest was 2 bulls above the 2011 harvest of 230 bulls. The overall success rate for bull elk hunters dropped slightly to 63% in 2012. This follows an increasing trend from 47% in 2007 to 67% in 2011. The success rate for combined resident and non-resident any-legal-weapon hunts was 63% in 2012, down from 71% in 2011. Archery and muzzleloader bull hunters experienced 68% and 63% success respectively, with both increasing substantially from 2011. Two Heritage and 1 PIW tag holders took bulls in this unit-group. The total elk harvest was 658 in 2012 following 680 in 2011.

Trophy quality of the 2012 bull harvest was high. A record 74% of bulls taken were 6-point or better, up from 68% in 2011. An impressive 90% of bulls taken by archers were 6-point or better and 29% were 7-point or better. The long-term (1981-2011) average for all hunts was 51%. The reported length of main beams was the strongest on record since 2007 when antler length data was first included on hunter questionnaires.

The harvest objective for antlerless elk was not reached in 2012. While much of December was favorable for late season hunters, the extremely high quality of October habitat conditions may have resulted in antlerless elk being more difficult to locate. The 2011 antlerless harvest fell short as well, due to Commission actions that erased that year's October any-legal-weapons seasons. Antlerless elk hunters have traditionally been more successful during the October hunts. Late season hunts are at risk for low hunter success if winter weather causes access and other issues for hunters, so it may not be wise to rely solely on late hunts to reach antlerless harvest goals.

Survey Data

Annual elk herd composition surveys have been combined with spring deer surveys for the past 4 years. This strategy tends to result in larger overall sample sizes but lower observed bull:100 cow ratios. A sample of 2,855 elk was classified; yielding sex and age ratios of 30 bulls:100 cows:32 calves. During the spring 2012 survey, 2,524 elk were classified; yielding sex and age ratios of 31 bulls:100 cows:38 calves. Survey samples have averaged 2,383 elk with sex and age composition of 28 bulls:100 cows:38 calves for the past 10 years (2002-2011). Computer generated population models suggest less than 30% of the bulls in this population are observed during surveys.

Hunters were again asked to donate incisor teeth from their bulls in 2012. Teeth from 62 bulls were aged at an independent lab. The resulting age data was indexed with beam length data from nearly every bull to generate an average age of 5.9 years for the 2012 harvest. Teeth collected from bulls harvested in 2011 produced an estimate of 5.8 years. Such age data is an important factor used in the modeling of this elk population because direct measurements of male to female ratios have proven to be very difficult to document due to heavy tree cover.

Habitat

Following a fantastic habitat year in 2011 and a mild 2011-12 winter, elk should have been in above-average body condition in the spring of 2012. Unfortunately, May and June brought above-average temperatures and insignificant rainfall. This coincided with the period surrounding the birth pulse and likely had a negative effect on the condition of cow elk and the survival of calves during this critical time. The late summer and fall of 2012 brought abundant moisture which triggered an amazing green-up throughout much of this unit-group. This was a great benefit to adult elk but came too late to salvage strong calf recruitment in 2013. Current (early April) water-year precipitation totals stand below average, but are better than that received over the balance of the state. Local Snotel sites are reporting 60 and 72% of average water-year precipitation. Although the recent winter brought a period of harsh conditions, a warm March and strong early green-up should contribute to the health of pregnant cows.

Thankfully, the threat to mountain top elk habitat from the development of renewable energy facilities has receded somewhat and no projects appear imminent at this time. Habitat values are being

compromised by excessive numbers of feral horses in some areas. The subdivision and/or sale of private parcels in quality habitat is still a threat. The encroachment of pinyon and juniper is degrading and/or eliminating habitat in the longer-term. On the positive side, elk are already benefiting from over 10,000 acres of chainings and other tree removal projects completed over the past few years. During June 2012, 3 substantial wildfires burned approximately 20,000 acres in Units 111 and 221. Much of this acreage was formerly dominated by pinyon and juniper. Elk will profit greatly from the recovery of vegetation within these areas. Additional project areas that are in various stages of planning/NEPA analysis include the north Schell Creek Range (USFS), Ward Mountain (USFS/BLM), South Steptoe/Cave Valleys (BLM) and Duck Creek Basin (BLM and USFS).

Population Status and Trend

Elk calf recruitment has been below-average for the last 6 years. This has been influenced by climatic conditions as well as the fact that this herd is closer to carrying capacity than other herds with lower densities. Although this has not been a problem from a population standpoint, it has contributed to lower bull tag quotas. The 2013 population estimate is slightly higher than the 2012 estimate. This adjustment was made to correct for past underestimation of the herd. A substantial antlerless harvest will again be needed to control this herd, especially in Units 111, 112, 221, and 222 where numbers are still pushing the upper end of objectives. Bull quota recommendations for 2013 will seek to balance trophy opportunity with maintenance of male age class structure while recognizing a high and climbing bull:100 cow ratio.

Unit 121 and portion of Units 104 and 108: Cherry Creek, North Egan, Butte, Maverick Springs, and Medicine Ranges; Northern White Pine County, Southern Elko County

Report by: Scott Roberts

Tag Quotas and Harvest Results

There were 47 bull tags issued across all weapon classes in 2012 and 62% of the tag holders were successful. Of the 29 bulls harvested in this unit group, 86% were 6 points or better, and 76% came from Unit 121.

This was the 2nd year of antlerless tags within this unit group. There were 80 antlerless tags issued across all weapon classes with 41 tag holders being successful. There was also an emergency depredation antlerless hunt initiated in the area surrounding Lages Junction in Units 106, 111, and 121. This hunt was an attempt to alleviate some of the pressure put on the private agricultural fields by the resident elk in the area. Of the 12 tags that were issued, 10 hunters were successful in harvesting elk.

Survey Data

Aerial post-season elk surveys were conducted in January 2013. The survey concluded with 292 elk being classified and yielding ratios of 45 bulls:100 cows:43 calves. The abundance of trees within this unit group makes locating mature bulls extremely difficult. Of the elk classified, 44% of the bulls were spikes. The reported number does not reflect the herd that winters on Palomino Ridge. There were 185 elk (9 Bulls, 131 Cows, and 45 Calves) classified on Palomino Ridge, but there is great uncertainty as to how many of these elk spend their summer in Unit 105. The collaring project that was initiated in 2012 to delineate these herds is still in its infancy and unable to shed light on the use patterns of these herds. Of the 5 collars that were deployed, 4 of the cows were found in this herd.

Habitat

Areas throughout the Cherry Creeks and North Egans that are recovering from relatively recent fires and/or vegetation modifications are providing excellent habitat for elk. Pinyon/Juniper (PJ) encroachment continues to plague a significant portion of this unit group. The PJ problem will continue to offer an abundance of potential habitat projects that will benefit elk and other wildlife in

the future. There were marked habitat improvements following horse round-ups conducted in the Cherry Creek Range and Butte Valley during the summers of 2006 and 2011, but horse competition continues to a be a factor in areas with limited water resources. The high levels of precipitation that were received in the late summer of 2012 allowed for significant range improvements and will lead to high amounts of amounts of residual forage throughout the unit group.

Population Status and Trend

During January of 2011, 3 cow elk were radio collared in Unit 104 and 3 cow elk were collared in Unit 121. Objectives of this project were to determine seasonal use and distribution within the unit group, quantify elk use on private land, and begin delineating winter range use between this herd and the Unit 105 herd. In January of 2012, 4 cow elk were radio collared on Palomino Ridge in Unit 121 and 2 cow elk were collared at the base of Spruce Mountain in Unit 105. The intent of this project was to further understanding of winter habitat utilization between these 2 herds. One of the collared cows from this project was harvested during the fall of 2012.

High calf ratios for the past 3 years have led to a steady population growth within this unit group. The antlerless quota recommendation is expected to again be relatively liberal in an attempt to slow the growth of this population as it approaches the population objective. In addition to the unit group antlerless quota, a depredation cow hunt in the Steptoe Valley portion of Unit 121 has been proposed for the 2013 season. The objective of this hunt is to minimize elk use on privately owned agricultural fields throughout the valley. Bull tag quota recommendations are expected to be higher than last year.

Units 131, 132: White Pine, Grant and Quinn Canyon Ranges; Southern White Pine and Eastern Nye Counties

Report by: Mike Podborny

Survey Data

A helicopter post-season herd composition survey was conducted in February 2013. There were additional elk classified during the spring deer survey in March 2013. The total sample of all elk classified was 369 elk, a record sample; yielding ratios of 29 bulls:100 cows:37 calves. Almost all elk were found on winter ranges with 4 large groups making up 76% of the sample. A group of 82 elk were classified near Jakes Wash in Unit 131. Some of these elk are believed to have immigrated from Unit 221 in January 2013 following heavy snow and cold temperatures. It is unknown if these elk returned to Unit 221 or stayed in Unit 131. The entire group was included in the sample for Unit 131. The previous survey in 2012 yielded ratios of 86 bulls:100 cows:44 calves from a sample of 179 elk.

Habitat

Drought conditions existed the first half of 2012 until heavy monsoon thunderstorms began in August. The rains washed out many roads in the White Pine, Grant and Quinn Canyon ranges while at the same time filling guzzlers and improving range conditions with extensive grass and forb growth that existed through the fall. The Forest Service had crews cutting small pinion and juniper trees with chainsaws that were encroaching into the open grass and brush zones in both Units 131 and 132. These projects will continue in 2013 and although not specific for elk, the projects should benefit elk and other wildlife in the future.

Population Status and Trend

The 56 elk harvested was a record but the cow harvest was below expectations. The desired harvest combined with the calf recruitment would have resulted in static growth. The large sample resulted in an upward adjustment to the computer model. The 2013 population estimate is 450 elk, a large increase from the 2012 estimate of approximately 350 elk. The 2013 quota recommendations will be

designed to reduce the population closer to the objective level identified in the White Pine County Elk Management Plan (300 elk + or - 20%).

Units 145: Fish Creek and Mountain Boy Ranges; Southern Eureka County

Report by: Mike Podborny

Background

Depredation bull and cow hunts were initiated in 2012 to reduce the elk population in Unit 145 in concurrence with the Central Nevada Elk Plan. Five bulls and 2 cows were harvested during the 2012 hunt.

Survey Data

There was no formal elk composition survey conducted in Unit 145. During the spring 2013 mule deer helicopter survey conducted in March, 23 elk were classified as 5 bulls, 12 cows and 6 calves. There were 5 bull elk classified in Unit 145 during the November 2011 helicopter deer survey.

Population Status and Trend

It is estimated there are approximately 30 to 35 elk in Unit 145. Unit 144 was added to both the depredation bull and the depredation cow hunts for 2013. The NDOW recommended quotas for both hunts will be increased in 2013 to reduce this elk population in line with the objectives of the Central Nevada Elk Plan.

Units 161 - 164: North-Central Nye and Southern Lander and Eureka Counties

Report by: Tom Donham

Survey Data

The 2013 aerial elk composition survey was conducted in Unit 162 during mid-January. A record sample of 612 animals was classified as 90 bulls, 375 cows, and 147 calves. Favorable survey conditions in the form of fresh snow allowed for good coverage of the area in a relatively efficient manner. Relatively good snow accumulations at higher elevations had cow/calf groups concentrated in the valleys which made them easier to locate. In comparison, the previous aerial composition survey conducted in late January 2012 saw a total of 445 elk classified as 113 bulls, 253 cows, and 79 calves.

Habitat

Following a stretch of favorable climatic conditions from 2009 through the summer of 2011, central Nevada once again experienced severe drought conditions through the winter and spring of 2012. While big game herds and their habitats were impacted by a drought period, much needed relief came in the form of an unusually wet July and August. Due to impressive moisture receipts, central Nevada experienced a flush of green-up during the late summer which continued into the fall of 2012. This should have allowed for improvement in habitat conditions, as well as helping big game species enter the winter of 2012-13 in relatively good body condition. At the time of this report, data published by the United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) indicate central Nevada is hovering near 80% for average snow pack and total moisture receipts for the current water year.

Population Status and Trend

Following approval of the Central Nevada Elk Plan (CNEP) in January 2004, which included updated elk population objectives, the Management Area 16 elk population was allowed to begin a controlled increase. The harvest of female elk continued at low levels to ensure the herd did not increase too

rapidly. Nine years later, the MA 16 elk population has reached the approximate level of the CNEP population objective of 850 adult elk. As a result of the herd reaching stated population objectives in MA 16, harvest management will be designed to maintain this elk population at current levels. This change in harvest management will include increased harvest of both the female and male portions of the herd to negate annual calf production and recruitment.

Although the vast majority of the MA 16 elk herd still occurs in the Monitor Range (Unit 162), increasing numbers of elk are moving into adjacent areas such as the Toquima Range (Unit 161) and the Hot Creek/Antelope Ranges (Unit 163).

Elk movement from Management Area 16 to the west into Management Area 17 has resulted in an established herd in Units 171-173 in recent years. Due to the presence of a small number of mature bulls available for harvest in the area, Units 171-173 have been included in the 161-164 antlered elk hunts for the past few years.

Units 171 - 173: North-Western Nye and Southern Lander and Counties

Report by: Tom Donham

Survey Data

An aerial composition survey was conducted in Unit 171 during mid-January, 2013. A total sample of 41 elk was classified as 6 bulls, 26 cows, and 9 calves. Although the MA 17 elk herd can be difficult to locate during the winter period, relatively fresh snow made successful tracking of the herd possible. While the small sample size makes observed ratios statistically suspect, it appears the MA 17 elk population is at least continuing to maintain itself at a stable level. In comparison, the previous aerial composition survey took place in 2010 when a total of 38 elk was classified as 2 bulls, 30 cows, and 6 calves.

Habitat

Following a stretch of favorable climatic conditions from 2009 through the summer of 2011, central Nevada once again experienced severe drought conditions through the winter and spring of 2012. While big game herds and their habitats were impacted by a drought period, much needed relief came in the form of an unusually wet July and August. Due to impressive moisture receipts, central Nevada experienced a flush of green-up during the late summer which continued into the fall of 2012. This should have allowed for improvement in habitat conditions, as well as helping big game species enter the winter of 2012-13 in relatively good body condition. At the time of this report, data published by the United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) indicate central Nevada is hovering near 80% for average snow pack and total moisture receipts for the current water year.

Population Status and Trend

For many years, small numbers of elk were sporadically reported in Units 171-173. Presumably, these elk were moving between Unit 173 and adjacent Units 161 and 162. By the early 2000's, reports had become more frequent, and the NDOW determined that a small, permanent, resident herd had established itself in the southern portions of MA 17.

In 2007, several cow elk were fitted with radio collars in Units 172 and 173 to aid in delineating seasonal use patterns, and to help more accurately determine herd size. Through the collaring effort, it was determined that the core elk population was inhabiting the southern portions of the Toiyabe and Shoshone Ranges during the summer and fall, and transitioning to Units 171 and 184, in Ione and Smith Creek Valleys, during the winter and spring periods. These movements have remained consistent to the present time.

Despite allowing no female elk harvest in MA 17, this herd has remained relatively static at low numbers for several years now. Despite the availability of large amounts of good quality habitat, there has been very little discernible growth in this population. Regular observations are made of the core herd, and numbers have consistently hovered between 35-50 animals. Currently, the MA 17 elk population model suggests an approximate population level of less than 100 adult elk. Due to the presence of a small number of mature bulls available for harvest in the area, Units 171-173 have been included in the 161-164 antlered elk hunts for the past few years.

Unit 223: North Pahroc and Bristol Ranges; Lincoln County

Report by: Mike Scott

Survey Data

Aerial surveys were completed in February 2013 and resulted in the classification of 54 elk consisting of 9 bulls, 31 cows, and 14 calves. This provides a ratio of 29 bulls:100 cows:45 calves. This was the third time elk have been surveyed and observed in Unit 223. The unit was added to the 231, 241-242 elk hunt in 2011.

Habitat

Habitat conditions in Unit 223 were very good due to higher-than-average precipitation during the late summer and fall of 2012. According to BLM rain can data and CEMP, precipitation received during 2012 was slightly over 100% of the previous ten-year average. Although BLM removed some of the feral horses in the unit, the numbers remain above AML. Elk continue to utilize the higher elevations of the North Pahroc Range and tend to avoid many of the habitat issues associated with the lower elevations such as new powerlines, OHV races, and the Silver State Trail.

Population Status and Trend

Although it's possible that some of these elk are spending the entire year in this area, it remains unknown at this time how many, as well as where these elk might be going seasonally. No population model will be created until radio or satellite telemetry data indicate some portion of these animals are permanent residents of Unit 223. Return card data indicate 11 cows and 6 bulls (1 male calf) were harvested from Unit 223. Other reports and sightings indicate there may be as many as 70 elk found in Unit 223.

Unit 231: Wilson Creek Range; Lincoln County

Report by: Mike Scott

Survey Data

Aerial surveys were conducted during February 2013 and resulted in the classification of 297 elk consisting of 54 bulls, 170 cows, and 73 calves. The sex and age ratios of the sample were 32 bulls:100 cows:43 calves. Of the 54 bulls observed, 48% were classified as having 4-points or less.

Habitat

The Table Mountain Wind Project proposal was eliminated from consideration and no longer poses a threat to wildlife in Area 23. This would have had long-lasting detrimental effects on elk, as well as other wildlife in this area. Rampant shed hunting and disregard for wintering big game animals continues to be a threat throughout this area. Shed hunting continues to expand in volume of people, areas they search, and length of time they spend searching. What used to be a few hobby shed hunters a decade ago has evolved into a highly competitive, long-lasting event with hundreds of local and out-of-state enthusiasts combing the winter ranges on foot, on ATV's, and even from the air. Feral horse numbers remain well above AML despite periodic removals by BLM. Fire suppression continues to result

in closed canopy pinyon-juniper forest as the dominant vegetation throughout much of Area 23. A new fire burned the area south of Reed Cabin Summit in 2012. In future years, elk and elk hunters will likely enjoy this newly opened country along with livestock, feral horses, and hopefully even sage-grouse. Since 2000, over 40,000 acres have burned in Area 23, much of which was dense pinyon-juniper forest. Chaining maintenance has recently been done in the Wood-McCullough and Reed Cabin chainings, which will be a benefit to elk. Currently there are ten water developments that have been installed in Area 23 to assist with the distribution of elk.

Population Status and Trend

According to return card data, there were 164 elk harvested from Area 23 during the 2012 season. These included 96 cows and 68 bulls. This represents a 3% decrease in harvest from the 2011 season, when 169 elk were harvested.

The number of elk in Area 23 remains relatively high despite the continuing high harvest numbers. There were 580 tags available for all seasons in this hunt unit, an increase of over 6% from the 2011 season. This was done in an effort to maintain the elk population close to the population objective of 350 stipulated in the Lincoln County Elk Management Plan. Many of the elk in Area 23 forage on private property, which NDOW addresses through the elk damage or incentive tag programs. According to recent radio and satellite telemetry info, many of the elk also spend some amount of time across the state line, in Utah.

Unit 241-242: Delamar and Clover Mountains; Lincoln County

Report by: Mike Scott

Survey Data

Surveys were conducted during February 2013, and resulted in a total of 15 elk observed. These were classified as 11 cows and 4 calves.

Habitat

Habitat conditions were good in the late summer and fall of 2012 due to heavy late-summer and fall precipitation. According to BLM rain can data and CEMP monitoring information, precipitation received in 2012 was just over 100% of the previous ten-year average. New habitat projects and water development should allow elk to use different areas than in previous years. Unit 242 has vast areas of dense pinyon-juniper forest which remain poor habitat due to successful fire suppression efforts. Feral horse numbers appear to be increasing in the Clover Mountains and are completely out of control in the Delamar Mountains, both of which have AML's set at zero.

Population Status and Trend

No population model will be developed for elk in this area until sufficient data are collected to demonstrate elk are established and using seasonal ranges. Return card data indicate 6 cows and 2 bulls were harvested from Area 24 in 2012. Prior surveys, reports, and sightings indicate there may be up to 50 elk in the area during the summer months.

Unit 262: Spring Mountains; Clark and Southern Nye Counties

Report by: Patrick Cummings

Survey Data

In September 2012, a brief aerial survey conducted in the Spring Mountains yielded a sample of 70 elk. The sample included 15 bulls, 40 cows, and 15 calves. As in past years, the survey was focused in the

area around the Cold Creek Community. Elk were encountered south of Cold Creek, on the southern margin of the McFarland Burn, in the Willow Creek Drainage and on the south side of Willow Peak.

In January 2012, a brief 3.1-hour aerial survey conducted in the Spring Mountains yielded a sample of 80 elk. The sample included 1 spike bull, 64 cows, and 15 calves.

Habitat

Severely degraded vegetative conditions on the McFarland Burn were noted in 11 aerial surveys conducted between 2002 and 2012, and likely the reason fewer elk were encountered in the area. Degraded habitat is largely the result of an over population of feral horses aggravated by the effects of periodic drought conditions.

Presently, the United States Forest Service (USFS) is engaged in a preliminary National Environmental Policy Act, 1970 (NEPA) process in support of producing a comprehensive herd management plan. The plan will cover horse and burro gathers and resetting Appropriate Management Levels (AML). It is anticipated the decision will be signed in late fall 2013, at which time the USFS will request to be put on the gather schedule. The earliest a gather may be conducted is winter 2013-14.

Elk avoidance of roads and decrease in habitat use adjacent to roads has been reported in literature. Moreover, avoidance behavior becomes exacerbated in roaded areas adjacent to openings (burns) and meadows. Based on well-documented findings, another factor that has influenced elk distribution has been increased off-highway vehicle (OHV) use. In recent years, recreational use of OHVs in the Cold Creek area and on the McFarland Burn has increased substantially.

In June 2004, the Humboldt-Toiyabe National Forest issued a Decision Notice and Finding of No Significant Impact for Spring Mountains National Recreation Area Motorized Trails Designation Project. The decision to implement alternative 5 (with modifications) as summarized in the respective Environmental Assessment involves minimal closure of newly established roads on the McFarland Burn. Thus, the recently authorized management prescription for motorized trails ensures the status quo on the McFarland Burn for the near future.

Population Status and Trend

The population estimate for elk inhabiting the Spring Mountains approximates the estimate reported last year. Elk habitat quality throughout most of Unit 262 is marginal. Elk have existed on a low nutritional plane limiting reproduction and recruitment. Calf recruitment in many years has been low. Formerly, under ideal conditions marked by lower horse numbers and normal precipitation receipts, the McFarland Burn afforded quality early-seral forage necessary for maintenance, growth, and reproduction. In the near future, meaningful efforts to improve elk habitat must entail management of horse and burro numbers consistent with AMLs and completion of habitat improvements. Elk habitat in the Spring Mountains can be enhanced by seeding recently burned areas, increasing water availability and decommissioning/restoring newly created roads and trails.

As of this writing in April 2013, environmental conditions range from fair to good due to limited winter and spring storms. Moisture receipts in the first quarter of 2013 were below average, and the likelihood for an overall dry year appears high. In the seasonal drought outlook valid for April 4 – June 30, 2013, the National Weather Service forecasted likely development of drought. Based on environmental conditions, it is reasoned the elk population in Management Unit 262 is stable.

DESERT BIGHORN SHEEP

Units 044, 182: East and Stillwater Ranges; Pershing and Churchill Counties
Report by: Jason Salisbury

Survey Data

Aerial surveys were conducted in the Stillwaters and East Range in September 2012 and resulted in the classification of 175 bighorns consisting of 38 rams, 94 ewes, and 43 lambs. This provided a ratio of 40 rams: 100 ewes: 46 lambs. This year's survey is the highest recorded for this unit group.

Habitat

Consistent drought continues to plague western Nevada. Higher elevations received some snowpack over the past winter but generally precipitation levels have been below average.

Pinyon juniper encroachment is a concern within the Stillwater Range. Lighting-caused fires such as the Table Mountain fire have been beneficial to the establishment of perennial grasses and browse species that benefit bighorn sheep. There have been increased observations of bighorn in rehabilitated fire areas.

Population Status and Trend

Bighorn numbers in the Stillwater and East Range appear to be stable to increasing at this time. Recent observations documented bighorn use along the eastern face of the Stillwater Range.

The East Range population continues to grow and expand. In 2012, the Department of Wildlife collared two ewes and two rams in the East Range to document bighorn distribution, movement patterns within the East Range, and movement between adjacent ranges, including the Stillwaters and the Tobin's. To date, the two collared ewes have been documented traveling back and forth between the East Range and the Fencemaker area of the Stillwater Mountains. The rams are traveling back and forth from the Root Springs area to as far north as Inskip Canyon in the East Range. Additionally one of the rams traveled from the north end of the East Range to the south end near Root Spring where he was later shot by a hunter.

Population estimates for 2012 indicate a slight increase in the Unit 182/044 bighorn sheep herd due to good lamb recruitment.

Units 045,153: Tobin Range and Fish Creek Mountains; Pershing and Lander Counties
Report by: Kyle Neill

Survey Data

An aerial survey of Unit 045 was performed in August 2012. This was the first aerial survey conducted since 2008. The purpose of this one-day aerial survey was to identify new use areas and obtain a larger composition sample. Efforts resulted in a record survey of 73 animals with age and sex ratios of 59 rams:100 ewes:56 lambs.

Population Estimate and Trend

Re-establishment efforts of desert bighorns into the Tobin Range began in 1984. An augmentation of 18 bighorns occurred in 1991. These initial efforts failed to establish a viable population. However, re-establishment attempts occurred again in 2003 followed by an augmentation in 2008. Release stock was provided from Unit 161, the Toquima Range of Nye County. Total numbers of bighorns released into

Golconda Canyon in 2003 and 2008 were 45 animals. These efforts were successful in establishing a productive population in the Tobin Range.

During these reintroduction efforts a few bighorns established themselves in Unit 153, the Fish Creek Range, and resulted in a small population of approximately 20 animals. Unfortunately, these bighorns are living within an active domestic sheep allotment. A collaring project in Unit 153 documented the movement of two rams into Unit 045 from Unit 153 during the breeding season then back into Unit 153 after the breeding season. This movement has been documented for the past two years. Due to limited movements of rams into Unit 045 from Unit 153, these units were combined in 2013 for harvest purposes. Biologists believe the Unit 153 population may remain stagnant due to its population's size and close association with an active domestic sheep allotment could result in an eventual die-off.

The Tobin herd continues to show an increasing trend. Lamb ratios that have averaged 53 lambs:100 ewes over the last nine years allowed this population to grow at a rapid pace. The 2013 population estimate for Unit 045 represents a 30% increase from last year. Primary bighorn use areas in Unit 045 include Cottonwood Canyon, Bushee Creek area, Rim Peak, Golconda Canyon, Little Miller and Miller Basins. Bighorns have also been utilizing Mount Tobin and the Indian Caves area at various times throughout the year.

Units 131 and 164: Duckwater Hills, White Pine Range and North Pancake Range; Southern White Pine and Eastern Nye Counties

Report by: Mike Podborny

Survey Data

A helicopter composition survey was conducted in February 2013. There were 143 bighorns classified. This record sample yielded sex and age ratios of 43 rams:100 ewes:14 lambs. There were 90 bighorns classified in Unit 131 and 53 classified in Unit 164. A large portion of the sample was obtained in the low hills at Currant with 63 bighorns classified in a single group. The heavy snows on the White Pine Range likely forced these bighorns to concentrate at lower elevations. The previous survey was conducted in January 2012 with 113 bighorns classified; yielding sex and age ratios of 26 rams:100 ewes:15 lambs. The lamb ratio has been in the teens for 2 consecutive years.

Habitat

The range conditions during the first half of 2012 were poor due to drought. Heavy monsoon rains in August and September 2012 resulted in flash floods and improved range conditions in the fall with abundant grass and forb growth.

Population Status and Trend

There have been 2 releases of bighorn into the White Pine Range of Unit 131 for a total of 49 bighorns released since 1999. This expanding population has resulted in the establishment of other herds in the Duckwater Hills of Unit 131 and that portion of the Pancake Range in Unit 164. The 2013 population estimate was 170 bighorns, an increase from the 2012 population estimate of 150. The increase in the population estimate was due adjustments made to the computer model to reflect the record number of adult bighorns classified during the survey. The low lamb recruitment was possibly a result of a disease event that appears to have started in Unit 134 and spread into the adjoining Unit 164 herd during the winter of 2011-12. The disease event appears to have affected the lamb segment of the population greater than the adults. There may also be a disease issue in the Duckwater Hills based on the lamb ratio which has been low for several years. The high number of adult bighorns classified during surveys demonstrates the presence of a viable population of bighorns with ample adult rams available for harvest.

Three rams harvested in Unit 131 since 2008 were believed to be Rocky Mountain bighorn. DNA testing on 1 ram proved it was indeed a Rocky Mountain bighorn that moved south from the Ruby Mountains. Rams harvested from these units will only be accepted into official record books as Rocky Mountain Bighorns because of the mixing of sub-species that has occurred.

Unit 132: Grant Range; Eastern Nye County

Report by: Mike Podborny

Survey Data

A helicopter composition survey was conducted in February and March 2013 with 48 bighorns classified; yielding sex and age ratios of 19 rams:100 ewes:31 lambs. The bighorns classified were on lower elevation ridges from Irwin Canyon to Little Meadows Creek. A small group of 4 bighorns was classified on the spring deer survey on the west side of Blue Eagle Mountain that were in addition to the bighorns classified in February. The previous survey was conducted in February 2012 by helicopter and resulted in 53 bighorns classified; yielding sex and age ratios of 27 rams:100 ewes:33 lambs.

Habitat

The majority of bighorns live on the west side of the Grant Range from Irwin Canyon to Little Meadows Creek. Some bighorns reside in the lower rocky ridges while others spend the summer and fall months in the high timbered ridges and sheer cliffs near Troy Peak. There is permanent water in Irwin Canyon, Troy Canyon and Little Meadows Creek and the possibility of developing artificial water around Blue Eagle Mountain is being explored. Drought conditions existed the first half of 2012 with abundant summer rains beginning in August causing flooding and good grass and forb growth in the fall.

Population Status and Trend

The population has expanded in size and distribution since the 2 releases in Troy Canyon in 2005. The computer-modeled population estimate of approximately 100 animals indicates the herd has been stable for the past two years.

Unit 133, 245: Pahranagat and Mount Irish Ranges; Lincoln County

Report by: Mike Scott

Survey Data

No surveys were conducted during the reporting period. The previous survey was an abbreviated survey completed in January 2012 following reports and removal of an exotic sheep. The survey resulted in the classification of 48 sheep consisting of 10 rams, 25 ewes, and 13 lambs, which provides a ratio of 40 rams:100 ewes:52 lambs.

Habitat

Habitat conditions were likely somewhat poor during the spring of 2012 due to lower-than-average precipitation. Above-average precipitation fell during the late summer and fall of 2012 leading to very good range conditions. According to BLM rain can data and CEMP precipitation data, the annual precipitation received during 2012 was approximately 100% of the previous 10-year average. The timing of the precipitation was not ideal, but should have allowed sheep to go into the winter in good condition.

Population Status, and Trend

This population has shown a slight but steady upward trend. Although no surveys were done, the other herds in Lincoln County experienced similar weather conditions and generally showed average lamb recruitment. The computer-generated population estimate for 2013 is similar to the 2012 estimate.

Unit 134: Pancake Range; Nye County

Report by: Mike Podborny

Survey Data

A helicopter composition survey was conducted in September 2012. There were 211 bighorns classified; yielding sex and age ratios of 48 rams:100 ewes:1 lamb. The previous survey conducted in January 2012 resulted in 238 bighorns classified; yielding sex and age ratios of 38 rams:100 ewes:9 lambs. There were 10 surveys conducted between 1995 and 2009 with an average lamb ratio of 40 lambs:100 ewes ranging from 22 to 67 during that same time period.

Habitat

Range conditions during the first half of 2012 were poor due to drought. Heavy monsoon rains in August and September 2012 resulted in improved range conditions in the fall with abundant grass growth and water available in lake beds and rock catchments.

Population Status and Trend

There were 26 desert bighorns released into Unit 134 in 1984. Since that time, the population has done very well. The reintroduction was so successful that this population has served as a source of transplant stock on 3 different occasions. Trapping and transplanting operations conducted in 1996, 1998, and 2003 have resulted in the successful translocation of 78 bighorns into other mountain ranges in the state.

The population took a downward turn beginning in November 2011 when it was documented the herd was experiencing a pneumonia epizootic. There has been almost no lamb recruitment for 2 consecutive years following the disease outbreak. Adult bighorns appear to have been affected much less by this disease event than were lambs. The 2013 population estimate indicates a downward trend due to no lamb recruitment but the adult population still exceeds 200 animals with ample mature rams available for harvest.

Unit 161: Toquima Range; Northern Nye County

Report by: Tom Donham

Survey Data

An aerial composition survey was conducted in Unit 161 during early September 2012. During the survey, a total of 187 desert sheep was classified as 35 rams, 92 ewes, and 60 lambs. The observed lamb ratio indicates the herd experienced above average lamb production in 2012. In comparison, the previous aerial survey took place in August 2010, when a total of 144 desert sheep was classified as 27 rams, 82 ewes, and 35 lambs.

Population Status and Trend

The Unit 161 desert sheep population was re-established through the release of 22 animals in 1982. In 1983 an additional 4 animals were released in the area. Since the initial release, the Unit 161 sheep population has thrived. The population has surpassed expectations by a large margin, and has fared so well that it has served as a source of transplant stock on 5 occasions. A combined total of 123 sheep

has been captured and relocated during trapping operations occurring in 2002, 2003, 2006, 2007, and most recently in 2008. Animals from Mount Jefferson have been relocated to the Clan Alpine and Tobin Ranges of Churchill and Pershing Counties, respectively, and to the Grant/Quinn and southern White Pine Ranges of Nye County.

The majority of desert bighorn in Unit 161 inhabits Mount Jefferson, in the Alta Toquima Wilderness, during the summer and fall. These animals will then move to lower elevations in the surrounding area during the winter and early spring months. However, a smaller herd has established itself to the north of Mount Jefferson in the Northumberland area.

Currently, due to increased production and recruitment, as well as the discontinuation of capture projects over the past several years, the Unit 161 desert sheep herd is experiencing an increasing trend.

Units 162, 163: Monitor and Hot Creek Ranges; Nye County

Report by: Tom Donham

Survey Data

The most recent Unit 163 aerial composition survey was conducted in early September 2012. The survey yielded a record sample of 146 sheep classified as 35 rams, 78 ewes, and 33 lambs. The observed lamb ratio indicates the herd experienced above average lamb production once again in 2012. In comparison, the previous aerial composition survey was conducted in late August 2010 when a total of 136 animals were classified as 29 rams, 75 ewes, and 32 lambs.

Population Status and Trend

A small number of desert bighorn sheep occurred in the Hot Creek Range prior to the 1990's, but the population remained static at very low levels. Releases of desert sheep in 1994 and 1995 augmented the existing population, and resulted in stimulating herd growth.

Increased production and recruitment over the past few years has allowed the Unit 163 desert sheep herd to reach its highest level in recent memory. An increasing number of animals continue to utilize the southern extent of the Hot Creek Range in the Warm Springs area, and movement between the Hot Creeks and the Kawich Range to the south during the cool season has increased concurrently.
There is some concern that an epizootic pneumonia outbreak discovered in adjacent Unit 134 in 2011 could find its way to Unit 163. However, it currently appears the Hot Creek population remains healthy.

In order to take advantage of an increasing number of sheep inhabiting the southern portion of the Monitor Range, Unit 162 was combined with Unit 163 for the desert sheep hunt in 2005. While the population in Unit 162 is not considered robust enough to warrant its own hunt at this time, sheep observations continue to increase, and potential exists for some limited harvest in the hunt unit. During the winter of 2012-13, a ram and a ewe were captured in Unit 162 and fitted with radio collars in an effort to learn more about sheep movements in the area.

Currently, the Unit 163 desert sheep population is experiencing a steadily increasing trend. A population model for Unit 162 has yet to be developed, but data indicate the population remains stable to increasing, at low levels.

Unit 173: Toiyabe Range; Northern Nye County
Report by: Tom Donham

Survey Data

An aerial composition survey was conducted in Unit 173 in mid-September, 2012. Due to moist, green conditions on the range, animals were widely dispersed which resulted in a smaller than average total sample size. During the survey, a total of 54 desert sheep was classified as 15 rams, 36 ewes, and 3 lambs. The low observed lamb ratio indicates herd production was very poor in 2012. This may have been due to severe drought conditions experienced through the winter and spring of 2012, although other central Nevada desert sheep populations fared much better. In comparison, the previous aerial composition survey conducted in 2010 resulted in a total sample of 121 desert sheep being classified as 10 rams, 79 ewes, and 32 lambs.

Habitat

The majority of the Unit 173 desert sheep population inhabits the southern 1/3 of the Toiyabe Range. The core of this herd's range is in and around the Peavine Canyon/Seyler Peak area. Due to the consistent occurrence of drought over most of the past decade or more, desert sheep in this area have become accustomed to using private lands in Peavine Canyon that are more moist and lush than adjacent habitats. This behavior has been passed along to several generations of sheep at this point and the problem is likely to continue even if climatic conditions return to more favorable patterns. Bighorn sheep depredation of private lands is likely to continue until an acceptable solution to landowners, NDOW, and sportsmen can be devised.

Population Status and Trend

The Toiyabe desert sheep population is one of only a few remnant sheep herds that exist in central Nevada. This population was nearly extirpated along with many other sheep herds in the state and had been reduced to an estimated 50 animals by the early 1980's. During 1983 and 1984, a total of 21 desert sheep were captured in southern Nevada and transplanted into the Toiyabe Range. In 1993, an additional 9 rams were released. The releases were intended to augment and stimulate the existing herd. In 1988 the desert sheep hunting season, which had been closed since 1969, was reopened.

The Toiyabe desert sheep population primarily inhabits the southern 1/3 of the Toiyabe Range. A small number or animals occur in various locations along the range as far north as Bunker Hill, just north of Kingston Canyon. Expansion of this portion of the Unit 173 population will not be encouraged until such time as domestic sheep grazing is discontinued in the Kingston Canyon/Big Creek area.

While favorable climatic conditions from 2009 through 2011 allowed for some moderate increases in the Unit 173 desert sheep population, very low lamb production due to drought in 2012 has set the herd back once again. The current population estimate for the Unit 173 desert sheep population reflects a decrease from 2012.

Unit 181: Fairview Peak, Slate Mountain, and Sand Springs Range; Churchill County
Report by: Jason Salisbury

Survey Data

In September 2012, a 3.5-hour survey yielded a sample of 203 bighorn sheep. The observed sex and age ratios were 73 rams: 100 ewes: 19 lambs. Areas surveyed include the Fairview Range, Sand Springs Range, and Monte Cristo Mountains.

Habitat

Unit 181 experienced severe drought conditions in 2012. Areas like the Sand Springs Range experience reduced precipitation when compared to the adjacent higher elevational Fairview Mountain. Fairview Mountain is able to hold snow for longer periods of time enabling it to stay green for an extended period throughout the critical summer months.

In the summer of 2012, the Fast Glass water development located on the southern extent of the Sand Springs Range was upgraded from 3,600 gallon capacity to 8,000 gallon capacity. Prior to the rebuild effort, this large capacity water development received no use by big game animals due to an archaic fence design that precluded use.

Future water development plans include building four new water sources located in the Sand Springs, Cocoon Mountains, and the Monte Cristo Range. Additionally, a small game guzzler located on withdrawn Navy land in Bell Canyon will be rebuilt to allow for bighorn use.

In the summer of 2012, the South Sand Springs water development (South Rail Unit) was almost completely dry, so the Nevada Department of Wildlife, with aid from the Navy, hauled water to fill it. Approximately 100+ bighorn sheep were utilizing this spring development throughout the summer months. Without spring and summer rains in 2013, the Unit 181 sheep herd is possibly facing a repeat of last summer's extreme habitat conditions, including a reduction in the quality and quantity of forage and reduced water availability.

Population Status and Trend

The Unit 181 bighorn herd is stable. This year's lamb ratio of 19 lambs per 100 ewes was the lowest ever recorded for this herd. A combination of drought like circumstances has degraded habitat conditions in 2012. Previous high lamb ratios should provide an ample number of rams in this population to support sport harvest over the short term.

Unit 183: Clan Alpine Range; Churchill County

Report by: Jason Salisbury

Survey Data

Bighorn composition surveys were conducted in Unit 183 in September of 2012. A total of 184 sheep were classified providing a ratio of 46 rams: 100 ewes: 38 lambs. This year's sample is the highest number of bighorn ever recorded in this unit group.

Habitat

Habitat conditions continue to be influenced by persistent drought. Water developments are currently full and will provide adequate water for this sheep herd during upcoming summer months. Spring and summer rains in 2013 are needed to improve the grass and brush component in this mountain range.

Horse Creek, located on the west side of the Clan Alpines, is an important riparian area used by bighorn in this range. This area is owned by the United States Navy. Plans are currently being reviewed to provide fence-crossings for bighorn to access water through a barbwire fence that surrounds the property.

Population Status and Trend

The Clan Alpine population continues to experience a stable population trend. This year's lamb ratio of 34 lambs:100 ewes should maintain the population at the current level. This lamb ratio is consistent

with the past five-year average of 35 lambs:100 ewes and should afford the bighorn herd maintenance level recruitment.

Unit 184: Desatoya Range; Churchill and Lander Counties
Report by: Jason Salisbury

Survey Data

In September 2012, a 3.0 hour aerial survey yielded a sample of 60 bighorn sheep. The observed sex and age ratios were 38 rams:100 ewes:38 lambs. The lower sample size for the Desatoya Mountains over the past few years, appears to indicate the population may be somewhat reduced from highs experienced late in the first decade of the 2000's. Another possible contributing factor leading to this year's low sample size may have been a horse round-up by the BLM that ended just prior to the survey.

Habitat

In the early fall of 2012, the BLM removed 433 feral horses from the Desatoya Horse Management Area. The removal of these horses, especially on the top of the Desatoya Mountains, will afford some temporary relief to riparian areas, as well as reduce competition between bighorns and feral horses for available forage and water.

Population Status and Trend

The Unit 184 bighorn population seems static at this time. It is believed some rams have recently moved off the Desatoya Mountains to adjacent mountain ranges, including Fairview and the Clan Alpines. Since 2007, aerial surveys have not produced more than 70 bighorn. It was also believed the bighorn population may have experienced some level of die-off since 2009. As expected, sample sizes of bighorn sheep have decreased accordingly. This year's low lamb production was the result of below-average precipitation levels received in 2012 which led to a decreased forage base in the upper elevations of the Desatoya Mountains. This year's population estimate shows a 12% decrease in size. Aerial surveys and hunter observations indicate this population has decreased from a historical high experienced in 2007.

Unit 195: Virginia Range; Storey County
Report by: Carl Lackey

Survey Data

A ground and an aerial survey were both conducted on the same day in January 2013. This survey resulted in the classification of 28 sheep with a composition of 9 rams, 11 ewes and 8 lambs. The observed lamb ratio of 73 lambs:100 ewes was encouraging. This recruitment represents the first generation of lambs born within this mountain range in approximately 80 years.

Habitat

Habitat conditions in this unit are marginal following the drought in 2012 and low winter precipitation receipts thus far in 2013. Compounding this scenario, the feral horse population in the Virginia Range is estimated at over 1500 by the Nevada Department of Agriculture which has management responsibilities for horses in this unit. Two water developments built just prior to the sheep release in 2011 are both in good condition, however the upper development still needs to be evaluated as to why it will not completely fill.

Population Status and Trend

There were 53 sheep translocated into the Virginia Range to initiate this reintroduction including 42 ewes and lambs in the fall of 2011 and 11 mature rams in the spring of 2012. Only one mortality has been documented since the release. A mature ram with ear tag #160 was hit by a car on Interstate 80 between Wadsworth and Fernley in late 2012. NDOW and UNR continue to monitor collared lions in the Virginia Range and document every recorded kill site. Thus far no sheep have been killed by these collared lions.

This population appears to have settled into two core areas. One group has established on and around Clark Mountain. The other group has established above the river corridor east of Derby Dam. It is very early in the evaluation period for this herd, but thus far, the Virginia Range desert bighorn population is exhibiting a positive growth trend.

Unit 202: Wassuk Range; Mineral County

Report by: Jason Salisbury

Survey Data

Aerial surveys were conducted in the Wassuk Range during September 2012 and resulted in the classification of 71 sheep. The sample included 17 rams, 38 ewes, and 16 lambs with ratios of 45 rams: 100 ewes: 42 lambs.

Population Status and Trend

The Wassuk Range continues to have healthy lamb ratios fostering expanded growth from the core population located in Cottonwood Canyon. This year's lamb recruitment of 42 lambs:100 ewes was down significantly from past years' ratios which were in the mid-60's. This year's lamb ratio should enable the herd opportunity for some limited growth. The Unit 202 bighorn herd was combined with Unit 204 for hunting purposes. In 2012, all three harvested sheep came out of Unit 202. In the future, hunters may spread out attempting to find quality rams. Unit 204 is harder to hunt but a hunter willing to exert more effort could possibly be rewarded by locating a large trophy ram.

Unit 204: East Walker River; Lyon County

Report by: Jason Salisbury

Survey Data

Aerial composition surveys were conducted on the East Walker bighorn sheep herd during September of 2012. During this survey a record total of 61 sheep was classified as 17 rams, 30 ewe, and 14 lambs.

Habitat

Habitat conditions in Unit 204 have suffered along the East Walker River drainage because it sits in the rain shadow of the Sierra Nevada Mountains. This bighorn sheep herd receives some relief from challenging habitat conditions by utilizing the flood plain of the East Walker, which provides more nutritious grasses and forbs. Unfortunately, there is a higher risk of lion predation with the thicker canopy found along the riparian corridor.

The opening of a clay mine in the Rough Creek area of the East Walker River drainage is expected to pose an increased mortality risk for this bighorn sheep herd. The clay company will be hauling loads of material from the bottom of the canyon on the East Walker River on a daily basis. Methods employed to discourage vehicle/sheep collisions include the posting of 15 mph speed limit signs.

Population Status and Trend

In October of 2011, a group of hunters scouting Unit 204 located a domestic ewe in the vicinity of the Elbow area of the East Walker River. The Elbow area is considered a high-use area for the bighorn herd occupying Unit 204. After investigation, the Nevada Department of Wildlife made contact with the owner and removed the sheep. Samples from the sheep were collected and sent off to a lab. This animal had traveled at least 35 miles from its known location.

Again in February of 2013, a sportsman looking for bighorn observed a lone domestic sheep in the elbow area and reported it to Nevada Department of Wildlife personnel. These instances are frustrating and alarmingly frequent due to the high risk of pathogen transmission between domestic sheep and bighorn. The projected outcome of having a viable bighorn herd in the East Walker river drainage is not good. Vigilant observers that witness domestic sheep in the bighorn herd use areas have been key to detecting and helping reduce interaction between the two species. Future plans may entail placing signs at various locations along the East Walker alerting people to report observations of domestic sheep to the Nevada Department of Wildlife.

Unit 205, 207: Gabbs Valley Range, Gillis Range, Pilot Mountains; Eastern Mineral County

Report by: Jason Salisbury

Survey Data

In September 2012, a 6.5-hour aerial survey yielded a sample of 311 bighorn sheep. This sample was the highest ever recorded for this population and consisted of 88 rams, 152 ewes, and 71 lambs. The observed lamb ratio of 47 lambs per 100 ewes is slightly below the five year average of 50 lambs per 100 ewes.

Habitat

In the summer of 2012, the Field of Dreams water development was rebuilt and will have the capacity to store 7,500 gallons of water. In the past, because of buck and pole fence designs, this unit received pronghorn use and no known bighorn use. After completion of the project both antelope and bighorn were captured on trail cameras utilizing the new pipe-rail fence designs.

During the summer of 2012, torrential downpours were observed in Unit 207 but not in Unit 205. As a result, Unit 207 water developments were recharged and the summer moisture resulted in the greening-up of bunch grasses. While surveying for bighorn to the north in Unit 205, many longhorn cattle were found dead, in and around riparian areas. The bighorn in the same area appeared healthy with decent lamb ratios. It was believed the deceased longhorn succumbed to disease, starvation or the possible consumption of too much halogeton.

Population Status and Trend

The lamb recruitment rate of 46 lambs:100 ewes should allow for a slight increase in the bighorn population estimate. Because of past water development enhancement projects, as well as new projects in the future, this bighorn herd has the potential to be the largest desert sheep population in the state. The Pilot Mountain sheep herd, located on the south end of Unit 207, is still experiencing low overall numbers. It is believed sheep that were once here in large numbers have moved off to the north and south occupying areas with more abundant water. In the future, it may be worth augmenting the Pilot population again to allow for increased use of a great sheep mountain, but it would be wise to add additional water developments, pipe water to more open areas to reduce the potential of lion predation on bighorn, and conduct P-J removal to improve overall habitat for desert bighorn sheep on Pilot Mountain.

Unit 206, 208: Excelsior Range, Candelaria and Miller Mountain; Mineral County
Report by: Jason Salisbury

Survey Data

Aerial surveys were completed in September of 2012 and resulted in the observation of 72 bighorn sheep; classified as 28 rams, 29 ewes and 16 lambs. The observed lamb ratio of 55 lambs:100 ewes indicate very good production and should enable this herd the opportunity for growth.

Habitat

As of this report, two new water developments have been built in Unit 208. NDOW personal, as well a Nevada Bighorn Unlimited volunteers, helped complete two projects in the Candelaria Hills. Each new water development will house a total of 10,000 gallons of available storage capability, as well as a large oval dish-type, walk-in drinker. A third water development on Miller Mountain is proposed to be completed as well, in the summer of 2013.

Future plans for water developments include the Eastside Mine project, the Marietta water development, as well as three new units located in the Garfield Hills in the northern portion of Unit 206.

Population Status and Trend

In November of 2012, 25 bighorn sheep were captured from Lone Mountain (Unit 212) and relocated to the Excelsior Mountains (Unit 206). In October of 2011, 20 bighorn sheep were captured on Stonewall Mountain (Unit 252) within Nye County. These bighorn were released near the base of the Excelsior Mountains just below the new Defender water development. In both of these releases, sheep have imprinted onto the new Defender water development area. There has been documented lion mortality on some of these sheep. Through the use of telemetry and satellite collars on the released complement, sheep have been documented using Scott Mountain, Candelaria Hills, and Miller Mountain. This herd continues to do well and the addition of water developments in the surrounding mountain ranges will enable the population to move freely back and forth as one large metapopulation. The 2013 population estimate for Unit 206 shows an increase from 2012.

Unit 211 (Previously Unit 211S): Silver Peak Range and Volcanic Hills; Esmeralda County
Report by: Tom Donham

Survey Data

No aerial composition survey was accomplished in Unit 211 during 2012. The most recent survey in Unit 211 was conducted in 2011, when a total of 221 animals was classified as 75 rams, 95 ewes, and 51 lambs. The sample of 221 animals represents the second highest sample ever obtained in Unit 211.

Population Status and Trend

The Unit 211 desert sheep herd is one of only a few remnant herds in central Nevada. Historically, sheep movement occurred regularly between the Silver Peak Range (Unit 211) and the Monte Cristo Range (Unit 213). The Monte Cristo Range served primarily as winter range for many of the sheep in the Silver Peaks. Over the years this movement has nearly ceased, and each of the 2 ranges now support distinct populations.

The vast majority of the desert sheep inhabiting Unit 211 occur in the Silver Peak Range and the Volcanic Hills. However, some incidental use does occur on the Nevada portion of the White Mountains in the general area of Boundary Peak. Seasonal movements also occur between the Volcanic Hills and Miller Mountain/Candelaria Hills portions of western Esmeralda and eastern Mineral Counties, Unit 208.

Due to the steadily increasing bighorn population inhabiting Unit 211, the herd was utilized as a source of transplant stock in 2009 when a total of 25 animals was captured for relocation in Churchill County (Unit 182). The release compliment consisted of 21 ewes and 4 lambs. The Unit 211 desert sheep population exhibited good production and recruitment rates for the past few years, and has recently experienced an increasing trend. Drought conditions during the winter and spring of 2012 resulted in reduced production and recruitment of lambs in some surrounding units, and may have done the same in Unit 211.

Unit 212: Lone Mountain; Esmeralda County

Report by: Angelique Curtis

Harvest Results

A total of 10 tags was allocated for Unit 212 during the 2012 hunting season. Nine tag holders were successful. Unofficial Boone and Crockett scores ranged from 133 5/8 to 163 6/8. The average age of harvested rams was 7.2 years.

Survey Data

No aerial composition survey was accomplished in Unit 212 during the 2012 survey season. The previous aerial composition survey for this unit was conducted in October 2011. During the 2011 survey, a record sample of 305 animals was classified as 96 rams, 139 ewes, and 70 lambs.

Population Status and Trend

The Unit 212 desert sheep population is one of a few remnant herds that survived extirpation during the 19th and 20th century due to a variety of anthropogenic causes. Once regulations were put into place to protect bighorn sheep, the Lone Mountain bighorn herd began increasing steadily. By the late 1980's the estimated population was over 200 animals.

This population served as transplant stock during 2 successive years in the late 1980's. Immediately following these captures, the herd experienced a sharp decline and by 1991 the herd's estimated population was less than 50 animals. Due to excellent production and recruitment rates experienced over the past several years, the Unit 212 desert sheep population has improved at an impressive rate. Due to the steadily increasing population, the Unit 212 desert bighorn sheep herd was utilized as a source of transplant stock in November of 2012. A total of 25 animals was captured and relocated to the Excelsior Mountains, Mineral County, and Unit 206. The release compliment consisted of 21 ewes and 4 lambs.

Unit 213 (Previously Unit 211N): Monte Cristo Range; Esmeralda County

Report by: Tom Donham

Survey Data

The most recent aerial composition survey of Unit 213 was conducted in early September, 2012. A record sample of 338 desert sheep was classified as 105 rams, 186 ewes, and 47 lambs. While reduced rates of production and recruitment have been observed over the past few years and are likely to be density related, drought conditions during the winter and spring of 2012 may have further impacted production in this herd. The previous aerial composition survey accomplished in Unit 213 was conducted in late August, 2010. During the 2010 survey, a total of 311 desert bighorn sheep was classified as 78 rams, 176 ewes, and 57 lambs.

Habitat

Due to effects from drought and feral horses, several natural water sources in the Monte Cristo range are becoming less and less reliable. In 2005, a fourth water development was constructed in order to augment existing water sources in the range. Plans are being made for an additional 2 water developments in the Monte Cristo Range to help ensure water availability does not become a problem if natural waters fail.

During the spring of 2011 a water development on the east side of the range, Monte Cristo #1, was rebuilt. The unit now has increased storage capacity and a self-leveling drinker, which should provide a more reliable source of water. The location of the drinker was also moved to a new location to reduce the risk of predation.

Population Status and Trend

The Monte Cristo desert sheep population is one of only a few remnant sheep herds in central Nevada. The herd has exhibited steady growth over the past 7 to 10 years. Very good production and recruitment rates have allowed this population to increase at a greater rate than most surrounding herds. The population has reached a level where there is concern over animal densities at some water sources. During the fall of 2011, a capture project was conducted in the Monte Cristo Range. The project not only provided valuable transplant stock for a desert sheep reintroduction in the Virginia Range, Unit 195, but also served to reduce animal densities on the southern portion of the Monte Cristo Range. A total of 34 animals were captured and relocated including 19 ewes, 12 lambs, and 3 yearling rams.

In addition to augmenting existing waters, if the current increase in this herd continues, it may be necessary to continue removing animals thru trapping and transplant projects, or by initiating a ewe hunt in the future.

Due to reduced production in 2012, the current population model for Unit 213 shows a slowdown in the recent rate of increase of this herd.

Unit 221: South Egan Range; Lincoln County
Report by: Mike Scott

Survey Data

Four ewes and one lamb were observed during deer surveys in March 2013. This observation marks the first time bighorns have been observed in the last few years.

Population Status, and Trend

Domestic sheep have been reported, observed, and removed on several occasions from the South Egans. At this point in time, it appears that the population has been essentially lost, despite the presence of a few remaining bighorns. No new releases will be done in this area unless domestic sheep issues can be addressed. Existing survey data are insufficient to make a reasonable population estimate. This unit will remain closed indefinitely.

Unit 223, 241: Hiko, Pahroc, and Delamar Ranges; Lincoln County
Report by: Patrick Cummings

Survey Data

Aerial bighorn sheep surveys were conducted in the Delamar Mountains, South Pahroc Range and southern portion of the Hiko Range in September 2012. Aerial survey efforts equated to 7.6 hours, and

yielded a combined sample of 19 rams, 39 ewes and 13 lambs. In the southern portion of the Hiko Range, 4 rams, 8 ewes and 4 lambs were encountered. In the Delamar Mountains 15 rams, 31 ewes and 9 lambs were observed. No bighorn sheep were encountered in the South Pahroc Range. Bighorn sheep were found in proximity to water developments in the south and southeast portions of the Delamar Mountains.

Habitat

Bighorn sheep in these areas are faced with a host of issues including OHV races, rock-crawling courses, new power lines, development, and domestic sheep interactions.

Population Status and Trend

Two releases were completed in the Delamar and South Pahroc ranges in fall of 2011. There were 75 sheep released into these areas. The Hiko and Pahroc bighorn populations appear to be stable to increasing. The Delamar population appears to be somewhat stable despite ongoing predator issues and movement of released sheep to nearby mountain ranges. Sheep released in the Delamars are commonly observed in all adjacent mountain ranges. The computer-generated population estimate for 2013 reflects a slight decline relative to the estimate reported last year.

Unit 243: Meadow Valley Mountains; Lincoln County

Report by: Patrick Cummings

Survey Data

Aerial bighorn surveys were completed in September 2012, and resulted in the classification of 72 sheep. The survey sample was comprised of 17 rams, 40 ewes, and 15 lambs.

Habitat

A common concern in the Mojave Desert is that with precipitation comes a higher density of exotic annual grasses increasing the potential for wildfires. One fire in the northern portion of the Meadow Valleys burned approximately 10,000 acres in 2011. The wilderness designation placed on the Meadow Valleys combined with limited access around the range makes hunting sheep in the area very difficult.

Population Status and Trend

Recent releases of sheep into the Meadow Valleys combined with good habitat conditions should continue the upward trend in the population. The computer-generated population estimate approximates the estimate reported last year.

Unit 244: Arrow Canyon Range; Northern Clark County

Report by: Patrick Cummings

Survey Data

The last aerial bighorn sheep survey conducted over the Arrow Canyon Range was in September 2010. The aerial survey yielded a sample of 83 bighorn sheep. The observed sex and age ratios were 83 rams:100 ewes:47 lambs. Bighorn sheep were encountered throughout much of the interior of the Arrow Canyon Range, and within 2.5 miles of available water. The survey sample included 6 rams, 9 ewes, and 7 lambs that were encountered in the adjacent Battleship Hills. The next aerial survey over the Arrow Canyon Range is expected to occur in fall 2013.

Habitat

Bighorn sheep inhabiting the Arrow Canyon Range and Meadow Valley Mountains will likely be impacted by impending infrastructure construction and other anthropogenic influences from the Coyote Springs master planned community. This 43,000-acre parcel situated northeast of the junction of U.S. 93 and State Route 168 is the largest privately held property for development in Southern Nevada. Construction of the master planned community commenced in 2005; however, construction has stalled in recent years, likely due to the economic recession.

The Southwest Intertie Project (SWIP) corridor spans 235 miles from near Ely to north of Las Vegas, and involves construction of a 500-kV transmission line. The new line will provide transmission access to otherwise isolated renewable energy projects in parts of northern and eastern Nevada. The transmission line will be constructed along the west side of the Arrow Canyon Range. It will cross the range approximately 1.5 miles south of the Arrow Canyon #1 water development.

The southwest end of the Arrow Canyon Range, given close proximity to Las Vegas, continues to attract recreational shooters and recreational vehicle enthusiasts. It appears bighorn sheep tend to avoid the area as result of increased human use and presence.

Population Status and Trend

The bighorn population inhabiting the Arrow Canyon Range endured abnormally dry conditions over a recent 4-year period (2006-09). Environmental conditions in 2010 and 2012 were comparatively improved. The current bighorn sheep population estimate reflects no change relative to the estimate reported last year.

Unit 252: Stonewall Mountain; Nye County

Report by: Angelique Curtis

Harvest Results

A total of 8 tags was allocated for Unit 252 during the 2012 hunting season. All 8 tag holders were successful. Unofficial Boone and Crockett scores ranged from 123 3/8 to 164 7/8. Five of the 8 rams harvested scored 157 B&C or better. The average age of harvested rams was 6.4 years.

Survey Data

No aerial composition survey was accomplished in Unit 252 during the 2012 survey season. The previous aerial composition survey for this unit was conducted in September 2011. During the 2011 survey, a record sample of 384 animals was classified as 117 rams, 193 ewes, and 74 lambs.

Habitat

The 2012 summer and winter range conditions were exceptionally dry. Precipitation patterns affect both habitat conditions and sheep dispersal and were likely the cause of the influx of population in the 2011 aerial survey. Despite these dry conditions, sheep numbers have remained relatively consistent, however, the sheep had to rely heavily upon perennial waters sources. Adequate spring moisture is needed for sufficient perennial grass and forage growth in order to maintain the current population level.

Population Status and Trend

Recently, Stonewall Mountain has seen a noticeable increase in the desert bighorn population level. This increase is believed to be the result of major sheep movement into the Stonewall Mountain area from areas deep within the Nevada Test and Training Range (NTTR) .This movement is likely attributed

to consistent drought conditions and the resultant impacts to habitat conditions. Unlike within the NTTR, currently few numbers of feral horses occupy Stonewall Mountain making it more attractive to desert bighorn sheep during drought periods. It is difficult to accurately model this population due to the continual movement of desert bighorn sheep between Stonewall Mountain and the NTTR. The number of animals that utilize the Stonewall Mountain/Pahute Mesa area fluctuate greatly.

In an effort to decrease densities of desert bighorn sheep in the Stonewall Mountain area, a capture project was conducted in fall of 2011. A total of 28 animals was successfully captured. The first 20 animals captured were transported to the Excelsior Range (Unit 206) where they were successfully released in order to augment an existing sheep population. The final 8 animals captured were successfully released in Unit 195, Storey County, as part of a desert bighorn sheep reintroduction effort. Currently, the Unit 252 bighorn sheep population is estimated at over 300 animals.

Unit 253: Bare Mountain; Southern Nye County

Report by: Angelique Curtis

Harvest Report

A total of 7 tags was allocated for Unit 253 during the 2012 hunting season. All 7 tag holders were successful. Unofficial Boone and Crockett scores ranged from 158 7/8 to 178 4/8. Five of the 7 rams scored 162 B&C or better. The average age of harvested rams was 8.4 years.

Survey Data

No aerial composition survey was accomplished in Unit 253 during the 2012 survey season. The previous aerial composition survey for this unit was conducted in October 2011. During the 2011 survey, a record sample of 235 animals was classified as 55 rams, 104 ewes, and 76 lambs.

Habitat

A water haul operation was conducted in April 2012 to recharge bighorn sheep water developments due to insufficient precipitation received during the fall of 2011 and spring of 2012. Moderate to good precipitation was received in late 2012 and early 2013, and improved habitat conditions by producing good spring forage.

In April 2013, Bare #1 water development was moved and reconstructed to an area just northwest of the old Bare #1 project. Moving Bare #1 to an area that is less steep and more protected from the elements will help alleviate some maintenance issues.

Population Status and Trend

The model population estimate for Unit 253 for 2013 is comparable to last year's estimate. This is likely due to the continual ingress and egress of sheep from within the National Training and Test Range (NTTR). The 2011 aerial survey proved to be a new record with 235 animals classified. The 47% population increase from 2010 to 2012 was attributed to high lamb recruitment documented during the October 2011 aerial survey.

In an effort to decrease densities of desert bighorn sheep in the Bare Mountain area, a capture project was conducted in fall of 2011. A total of 26 animals was successfully captured and translocated to the South Pahroc Range. The composition of the release complement included 20 ewes, 5 lambs and 1 ram.

Unit 254: Specter Range; Southern Nye County
Report by: Angelique Curtis

Harvest Results

A total of 3 tags was allocated for Unit 254 (previously, Unit 253 Specters) during the 2012 hunting season. All 3 tag holders were successful. Unofficial Boone and Crockett scores ranged from 141 4/8 to 151 7/8. The average age of harvested rams was 8.0 years.

Survey Data

No aerial composition survey was accomplished in Unit 254 during 2012. The previous aerial composition survey for this unit was conducted in September 2010. During the 2010 survey, a sample of 56 animals was classified as 19 rams, 28 ewes, and 9 lambs.

Habitat

Unit 254 bighorn sheep habitat is marginal. This range tends to be dryer compared to surrounding ranges due to its location. Storm systems in Southern Nevada typically move in from the Northwest and tend to drop most of the precipitation in the mountain ranges preceding the Specter Range. Drought conditions have caused poor forage growth. The bighorn sheep population may travel back and forth between the Specter Range and deep within the NTTR to look for additional foraging areas.

Population Status and Trend

The model population estimate for bighorn sheep in Unit 254 for 2013 was comparable to last year's estimate. In 2002, a suspected disease event swept through the bighorn sheep population. This led to successive years of poor lamb recruitment which has resulted in comparatively fewer older class rams in the population. In spring of 2008, observations along with remote cameras that were installed at water developments documented ewes with attendant lambs. Since 2008, there has been a general upward trend in the bighorn sheep population. However, due to the proximity to the Nevada Test and Training Range (NTTR) along with weather patterns, this population tends to fluctuate.

Unit 261: Last Chance Range; Southeastern Nye County
Report by: Angelique Curtis

Harvest Report

A total of 8 resident tags and 1 non-resident tag was allocated for Unit 261 during the 2012 hunting season. All 9 tag holders were successful. Unofficial Boone and Crockett scores ranged from 116 3/8 to 168 3/8. Six of the 9 rams scored 155 B&C or better. The average age of harvested rams was 7.1 years.

Survey Data

No aerial composition survey was accomplished in Unit 261 during the 2012 survey period. The previous aerial composition survey for this unit was conducted in October 2011. During the 2011 survey, a sample of 111 animals was classified as 42 rams, 47 ewes, and 22 lambs.

Habitat

Habitat conditions were improved by moderate to good precipitation that occurred in late 2012 and early 2013. For the 2013 spring, sufficient perennial grass and forage growth can be expected only if adequate moisture is received.

Population Status and Trend

The model population estimate for Unit 261 for 2013 was comparable to last year's estimate. The current trend in the Last Chance population estimate shows a sharp increase since 2009. The increase in the model population estimate was consistent with aerial survey samples sizes and sex and age composition figures. It is hypothesized that there was a migration of ewes and older age-class rams from nearby mountain ranges into the Last Chance Range.

Unit 262: Spring Mountains (La Madre, Red Rock and South Spring Mountains) and Bird Spring Range; Western Clark County

Report by: Patrick Cummings

Survey Data

In October 2012, the bighorn sheep population inhabiting Unit 262 was extensively surveyed due to concerns related to the low observed lamb ratio in 2010 and subsequent reports, beginning in the spring 2011, of sick animals on the north end of the Red Rock Escarpment. Aerial survey efforts equated to 16.5 hours, and were focused over the following areas: La Madre Mountain, Brownstone Basin, Calico Hills, Red Rock Escarpment, Potosi Mountain (north, east and south), Shenandoah Peak complex, west side of Table Mountain, Little Devil Peak and Devil Peak. The survey yielded a sample of 235 bighorn sheep (one unclassified animal included). The observed sex and age ratios were 41 rams:100 ewes:22 lambs.

State Route 160 serves as a formidable barrier to bighorn sheep movements. Thus, the population can be considered partitioned (i.e., northern and southern segments relative to State Route 160). Viewed in this way, the 2012 aerial survey in the northern segment yielded a sample of 142 bighorn sheep, and reflected sex and age ratios of 36 rams:100 ewes:11 lambs. The southern segment yielded a sample of 92 bighorn sheep, and reflected sex and age ratios of 50 rams:100 ewes:42 lambs.

In September 2010, an aerial survey conducted in the La Madre Mountain and Red Rock Escarpment areas yielded a sample of 56 bighorn sheep. The observed sex and age ratios were 29 rams:100 ewes:18 lambs. South of State Route 160, aerial bighorn surveys in 2010 extended over portions of the south Spring Mountains and Bird Spring Range. Bighorn sheep were encountered on the south end of Potosi Mountain, on and in proximity to Little Devil and Big Devil peaks, and on the northern portion of the Bird Spring Range. Inclusive of these areas, 18 rams, 34 ewes and 6 lambs were observed. Overall, the 2010 survey sample contrasted with the 2006 aerial survey by exhibiting a higher lamb ratio, a larger bighorn sample and broader sheep distribution.

In October 2006, a sample of 104 bighorn sheep yielded sex and age ratios of 55 rams:100 ewes:42 lambs. At the time, the survey effort resulted in the largest recorded sample, and documented bighorn presence and distribution along the prominent south ridge that defines Box Canyon.

Habitat

Unit 262 tends to receive more precipitation than most other areas in Clark County. Bighorn sheep generally benefit from adequate range conditions on a consistent basis; however, due to proximity to Las Vegas, recreational pursuits (e.g., OHV and mountain bike use/proliferation of roads and trails, rock climbing), feral horses and burros, and suburban sprawl serve to degrade habitat.

On June 22, 2005, lightning strikes in the higher elevations near Potosi Peak ignited the Goodsprings Fire. The heavy accumulation of fine fuels coupled with high winds allowed the fire to spread along ridgelines and ultimately consume vegetation across 33,484 acres. The Goodsprings Fire consumed plants within 3 vegetative associations: Creosote-Bursage Flats, Mojave Desert Scrub, and Pinyon-Juniper Woodland along a 3,940'-elevation gradient. Landmark areas within the Goodsprings Fire included: northern portion of the Bird Springs Range; eastern portion of Cottonwood Valley, northern

portion of Goodsprings Valley, eastern and southern Potosi Mountain and Shenandoah Peak. Severely and extensively burned areas with little to no remaining vegetation included: northern portion of Goodsprings Valley, Double Up Mine canyon, Cave Spring canyon and Shenandoah Peak. Areas burned that contained a few small mosaics of remaining vegetation included: the northern portion of the Bird Spring Range, Ninety-nine Spring canyon, and areas southwest, south and east of Shenandoah Peak. In addition, vegetation associated with approximately 3 springs and numerous wash complexes were impacted by fire.

Population Status and Trend

In 2012, aerial bighorn sheep surveys conducted north of State Route 160 reflected few lambs in the population. Likewise, aerial survey data in 2010 portrayed low lamb representation. Several months after the fall 2010 aerial survey, beginning in spring 2011, reports of adult bighorn sheep coughing and apparently sneezing, were received from people recreating along the lower elevations of the north portion of the Red Rock Escarpment. In May 2011, in the course of investigating whether a disease process was impacting the bighorn sheep population, seven penned domestic sheep were located on a private parcel in Calico Basin. The small rural community in Calico Basin is nestled within bighorn habitat. The community lies below red sandstone ridges and cliffs that characterize Red Rock Canyon. The distance from bighorn sheep escape terrain and the penned domestic sheep was approximately 100 yards. Therefore, the possibility of earlier nose-to-nose contact between bighorn and domestic was quite real.

In the near term, efforts to better assess the status of the population should include additional extensive aerial surveys and physical examination of five to ten bighorn sheep. The captures of five to ten bighorn sheep on the Red Rock Escarpment for the purpose of obtaining biological samples for diagnostic testing is in the planning phase.

The extensive aerial bighorn sheep surveys conducted in 2012, despite the low observed lamb ratio, yielded a record sample. Moreover, the number of ewes encountered on the survey well exceeded the adult ewe component of the population model. As such, it was necessary to revise upward the size of the model's starting population from 190 to 310. As a result of the modification, the 2013 population estimate of 225 animals is 32% higher than the previous year's estimate of 170.

North of State Route 160, bighorn sheep inhabit the Red Rock Escarpment and La Madre portions of the Spring Mountains. South of State Route 160, bighorn occur in lower densities throughout the Bird Spring Range, Potosi Mountain, Table Mountain, Little Devil Peak and Devil Peak. In recent years, several motorists traveling along U.S. 95 adjacent to the Specter Range reported observations of bighorn sheep south of the highway on the north end of the Spring Mountains. These reports suggest a potential movement corridor exists between the Spring Range and the Specter Range.

Desert bighorn sheep in the Spring Mountains face a host of challenges with respect to habitat degradation, fragmentation and loss. In the La Madre Ridge area, human encroachment in the form of suburban sprawl and OHV use has eliminated and degraded bighorn sheep habitat. Increasingly, land management emphasis in the Red Rock area is to accommodate human recreational pursuits that are often incompatible with habitat and wildlife conservation. Future large-scale projects include an upgrade of the Sandy Valley Road and likely development of a wind-energy power generation plant in the Table Mountain area.

In the late 1990s, the Las Vegas District Bureau of Land Management (BLM) administratively designated a large area (approximately 3,641 acres) east of La Madre Ridge as the Lone Mountain Community Pit (LMCP). The intent of the designation was to accommodate local demand for an additional source of sand and gravel to support development in Southern Nevada. However, the BLM designated LMCP without adequate evaluation of environmental impacts or review of existing documents. In the 1960s, BLM identified much of the area now within the boundary of LMCP as seasonally important for bighorn sheep.

Unit 263: McCullough Range and Highland Range; Southern Clark County

Report by: Patrick Cummings

Survey Data

In October 2012, aerial bighorn sheep surveys over the north McCullough Range yielded a sample of 231 bighorn sheep. The sample reflected sex and age ratios of 38 rams:100 ewes:14 lambs. Bighorn sheep were encountered on the prominent ridge south of Railroad Pass, hills south and west of the Blue Quartz Mine, north of the Quo Vadis Mine, north end of the range immediately south and east of the Roma Hills ridge-top luxury custom home community, west side of Black Mountain, north and south of the Roy water development and McCullough Pass area. Breezy conditions hampered the survey. Therefore, additional time was required to complete coverage of the area. Consequently, the scheduled aerial survey over the Highland Range was not conducted.

In September 2011, aerial bighorn sheep surveys were accomplished in the Highland Range and McCullough Range. In the Highland Range, 10 rams, 12 ewes and 2 lambs were encountered. In the McCullough Range, 153 sheep were classified reflecting sex and age ratios of 51 rams:100 ewes:43 lambs. The aerial survey in the McCullough range was necessarily truncated. As a result, much of the area in the northwest quadrant of the range was not surveyed. Bighorn sheep were encountered on the prominent ridge south of Railroad Pass, the hills south and west of the Blue Quartz Mine, the north end of the range, near Roy water development and north of McCullough Pass.

Habitat

In February 2013, the Poppy water development was reconstructed. Situated in the North McCullough Wilderness, the existing three upright poly tanks were replaced with low profile IRM tanks (manufactured by Innovative Rotational Molding). The old drinker and float valve were replaced with a new drinker to complete the leveled system. Water storage capacity was nearly doubled from 4,650 gallons to 8,800 gallons. As of early April 2013, the Poppy unit is filled to approximately 52% capacity and the remaining three water developments in the North McCullough Range are filled to capacity.

Several projects to construct recreation trails in bighorn sheep habitat are underway or completed. The City of Henderson is constructing trails on the north end of the McCullough Range, and BLM will ultimately complete a network of linking trails in Sloan Canyon National Conservation Area and in two wilderness areas.

The Record of Decision for the Eldorado—Ivanpah Transmission Line Project was signed in May 2011. Southern California Edison is presently constructing a new 230-kV transmission line between Eldorado Substation through north McCullough Pass and the proposed Ivanpah Substation in California near Mountain Pass.

Population Status and Trend

In 2012, aerial bighorn sheep surveys conducted over the northern half of the McCullough Range reflected few lambs in the population. Subsequently, three bighorn sheep hunters and a guide reported inordinate bighorn mortalities during the 2012 hunt season. One tagholder indicated several dead lambs unrelated to predation. Two hunters noted bighorn that seemed sick (i.e., coughing, running noses, excessive licking). A master guide, familiar with Unit 263, stressed the point that there were fewer bighorn sheep in the McCullough Range.

In December 2012 and January 2013, ground-based efforts to assess bighorn health status through use of optics failed to detect clinically sick animals. However, remains of several adult bighorn sheep were noted. Similar to accounts from reporting bighorn sheep hunters, the condition of remains suggest the sheep died in the latter half of 2011. However, aerial survey data from September 2011 were in line with expectations, and no hunters in 2011 reported excessive mortalities or sick animals.

In the near term, efforts to better assess the health status of the population should include aerial surveys in fall 2013 and physical examination of five to ten bighorn sheep. The captures of five to ten bighorn sheep in the McCullough Range for the purpose of obtaining biological samples for diagnostic testing is in the planning phase. Additionally, diagnostic test results of bighorn lung samples supplied by hunters in 2011 and 2012 are forthcoming.

The bighorn sheep population inhabiting the Highland Range and McCullough Range was estimated at 240 adults. The 152 ewes classified on the fall 2012 aerial survey exceeded the adult ewe component in the population model. Therefore, the model was adjusted to reflect a larger 2012 population estimate. The 2012 estimate was revised from 250 to 280. As a result, the 2013 population estimate reflects a decline from 280 to 240. The population decline was attributed to reduced survivorship among lambs and adults.

Since the first capture and removal of bighorn sheep from the McCullough Range in October 2003 and the last capture and removal in November 2008, 58 bighorn have been removed from the population including 50 ewes and 8 lambs (6 male, 2 female).

Bighorn sheep in the northern portion of the McCullough Range face a variety of human imposed challenges in the near future. On the west flank of the range, suburban sprawl and flood control measures have already claimed much of the lower elevation habitat. To the north, the movement corridor between the River Mountains and the McCullough Range across US 93/95 at Railroad Pass has been effectively eliminated. Additional urban sprawl southward along I-15 is expected to degrade bighorn sheep habitat in the Hidden Valley area.

Unit 264: Newberry Mountains; Southern Clark County

Report by: Patrick Cummings

Seasons and Hunt Quotas

Units 264 and 265 have constituted a bighorn sheep hunt unit group since 1998.

Survey Data

In October 2012, an aerial bighorn sheep survey in the Newberry Mountains yielded the highest recorded sample yet, and surpassed the previous record survey obtained in 2010. The sample was comprised of 40 rams, 65 ewes and 23 lambs (Table 1).

Habitat

The Record of Decision for the Searchlight Wind Energy Project was signed by the Secretary of the U.S. Department of Interior in March 2013. The Searchlight Wind Energy, LLC Facility is the second wind energy project approved for construction on public lands in Nevada. The 200-megawatt (MW) project entails construction, operation and maintenance of 87 2.3 MW Siemens wind turbines. The project is situated northeast, east and southeast of Searchlight atop ridgelines that link bighorn movements between south Eldorado Mountains and Newberry Mountains. Area disturbance will include 27.3 miles of new roads, and approximately 230 acres for construction of facilities. Wind turbine generators (WTG) will be sited approximately 750 feet apart and arranged in linear strings. The WTGs would have maximum height of up to 427.5 feet with three mounted rotor blades, each 165 feet in length.

NDOW is concerned that bighorn sheep may be impacted by turbine structures, new roads, appurtenances and human activity during construction and operational phases. New structures, roads and increased human presence may effectively serve as a barrier that suppresses or eliminates connectivity between populations of bighorn sheep in the Newberry Mountains and Eldorado Mountains.

Table 1. Bighorn composition obtained through aerial surveys in the Newberry Mountains.

Year	Rams	Ewes	Lambs	Total	Rams:100 Ewes:Lambs
2012	40	65	23	128	62:100:35
2010	34	54	11	99	63:100:20
2008	23	17	11	51	135:100:65
2006	22	19	4	45	116:100:21
2003	11	16	14	41	69:100:88
2000	12	18	5	35	67:100:28
1998	7	13	11	31	54:100:85
1996	6	11	4	21	55:100:36
1994	3	6	0	9	50:100:0

Population Status and Trend

Recent aerial survey data indicate the bighorn population inhabiting the Newberry Mountains was underestimated. The revised population estimate is 130. The larger than expected aerial survey sample in 2012 may have been due, in part, to bighorn ingress from the adjacent Dead Mountains in California and/or the Eldorado Mountains. The next aerial bighorn sheep survey is scheduled for fall 2014.

Unit 265: South Eldorado Mountains; Southeastern Clark County

Report by: Patrick Cummings

Seasons and Hunt Quotas

Units 264 and 265 have constituted a bighorn sheep hunt unit group since 1998.

Survey Data

No aerial survey was conducted in the southern portion of the Eldorado Mountains in 2012. In October 2010, 19 rams, 9 ewes and 1 lamb were observed during a 2.4-hour survey (Table 1). The next aerial bighorn sheep survey in the south Eldorado Mountains is scheduled for fall 2013.

Table 1. Bighorn composition obtained through aerial surveys in the south Eldorado Mountains.

Year	Rams	Ewes	Lambs	Total	Rams:100 Ewes:Lambs
2010	19	9	1	29	211:100:11
2003	2	6	4	12	33:100:67
2002	3	2	2	7	150:100:100
1998	14	3	1	18	467:100:33
1996	19	14	5	38	136:100:36
1994	1	5	3	9	20:100:60
1992	3	1	0	4	300:100:0

Since 1969, survey sample sizes have varied widely; samples have ranged from 0 to 50 animals. In some years, aerial survey data portray a disproportionate number of rams in the unit. In many of the 21 aerial surveys conducted since 1969, the number of rams observed either equaled or far exceeded the number of ewes.

Habitat

The Record of Decision for the Searchlight Wind Energy Project was signed by the Secretary of the U.S. Department of Interior in March 2013. The Searchlight Wind Energy, LLC Facility is the second wind energy project approved for construction on public lands in Nevada. The 200-megawatt (MW) project entails construction, operation and maintenance of 87 2.3 MW Siemens wind turbines. The project is situated northeast, east and southeast of Searchlight atop ridgelines that link bighorn movements between south Eldorado Mountains and Newberry Mountains. Area disturbance will include 27.3 miles of new roads, and approximately 230 acres for construction of facilities. Wind turbine generators (WTG) will be sited approximately 750 feet apart and arranged in linear strings. The WTGs would have maximum height of up to 427.5 feet with three mounted rotor blades, each 165 feet in length.

NDOW is concerned that bighorn sheep may be impacted by turbine structures, new roads, appurtenances and human activity during construction and operational phases. New structures, roads and increased human presence may effectively serve as a barrier that suppresses or eliminates connectivity between populations of bighorn sheep in the Newberry Mountains and Eldorado Mountains.

Population Status and Trend

The southern Eldorado Mountains support a low-density resident bighorn herd, as well as a fall migrant segment from the northern portion of the range. The 2013 population estimate for the herd inhabiting the entire Eldorado Mountains (Units 265 and 266) approximates the estimate reported last year.

Unit 266: North Eldorado Mountains; Southeastern Clark County

Report by: Patrick Cummings

Survey Data

No aerial survey was conducted in the northern portion of the Eldorado Mountains in 2012. In late September 2011, an aerial survey conducted in the northern portion of the Eldorado Mountains yielded a sample of 75 bighorn sheep. The observed sex and age ratios were 81 rams:100 ewes:53 lambs. Bighorn sheep encountered during the aerial survey were noted as not exhibiting normal startle responses (i.e., fleeing). Upon initial detections, bighorn sheep were standing or lying down. It is strongly suspected bighorn sheep have become habituated to the consistent outbound and inbound tour helicopters that originate out of the Boulder City Airport enroute to the Grand Canyon. In that motionless animals are difficult to detect, it is anticipated there will be that added challenge in conducting future aerial surveys.

Bighorn sheep were encountered along the prominent east-west oriented ridge situated northeast of Boulder City, Boy Scout Canyon and in dispersed groups south to Burro Wash. The 5.6-hour aerial survey was terminated in lower Burro Wash.

Habitat

The bighorn sheep herd in the Eldorado Mountains has and will continue to face additional human imposed challenges. Two massive highway projects are intended to divert traffic from Hoover Dam and Boulder City. The Hoover Dam Bypass Bridge and new U.S. 93 alignment was opened to traffic in October 2010. The new bridge spans the Colorado River approximately 1,500 feet downstream of the dam. The second bypass project is planned to extend the new U.S. 93 alignment east and south of Boulder City through the northern portion and western flank of the Eldorado Mountains.

On the northern end of the Eldorado Mountains, the herd has coped not only with persistent drought conditions (2000-02 and 2006-09), but also periodic deaths consequential to collisions with vehicles along U.S. 93. The highway traverses through a bighorn sheep core-use area and likely represents a

population sink. The magnitude of the problem is somewhat unclear as it is expected only a fraction of bighorn-vehicle collisions are reported.

In October 2003, in efforts to better understand how the Hoover Dam Bypass project may impact bighorn sheep, the Federal Highway Administration, National Park Service and Nevada Department of Wildlife cooperated in capture of 20 bighorn sheep subsequently fitted with GPS and VHF telemetry subsystems. The objectives were to obtain baseline information on bighorn movements and distributions before and during construction phases. The information would later facilitate identification of impacts that may be mitigated, as well as impacts that may be irreversible.

Population Status and Trend

The 2013 population estimate for the herd inhabiting the entire Eldorado Mountains (Units 265 and 266) approximates the estimate reported last year. In fall and winter months, some bighorn sheep move south into Unit 265.

Unit 267: Black Mountains; Eastern Clark County

Report by: Patrick Cummings

Survey Data

No aerial survey was conducted over the Black Mountains in 2012. In late October 2010, an aerial survey yielded a sample of 185 bighorn sheep. The observed sex and age ratios were 66 rams:100 ewes:17 lambs. Given generally higher bighorn sheep density, the majority of the aerial survey was focused between Echo Bay and Boathouse Cove Road. Since the early 1980s, aerial survey sample sizes, lamb-to-ewe ratios and encounter rates generally trended downward.

Habitat

Environmental conditions as of this writing in April 2013 are fair to good due to late winter and spring storms. Thus far in 2013, precipitation receipts are below normal. The National Weather Service issued the seasonal drought outlook (late March through June 2013), and assigned some probability for development of drought conditions.

Population Status and Trend

Over the long term, recruitment of young animals appears below levels necessary to maintain the current population of bighorn sheep inhabiting the Black Mountains. Aerial survey data (i.e., lamb:ewe ratio, sheep per hour, total observed) portray a steady population decline that began in the latter half of the 1980s.

Desert bighorn sheep occupying the Black Mountains and Muddy Mountains comprise a single population given the high degree of movement between ranges. However, environmental conditions and local population dynamics have differed markedly. Over the long term, aerial survey data portray a decline in the number of bighorn sheep inhabiting the Black Mountains, and an increase in sheep numbers in the adjacent Muddy Mountains. The bighorn sheep population inhabiting the Black Mountains and Muddy Mountains experienced an expansion in 2012 due to high lamb recruitment. The 2013 population estimate for bighorn sheep inhabiting the Black Mountains and Muddy Mountains approximates the estimate reported last year.

Unit 268: Muddy Mountains; Clark County

Report by: Patrick Cummings

Survey Data

No aerial survey was conducted over the Muddy Mountains in 2012. In October 2011, 7.3 hours of flight time were expended to conduct an aerial bighorn sheep survey over the Muddy Mountains. The survey yielded a sample of 485 bighorn sheep. The observed sex ad age ratios were 81 rams:100 ewes:63 lambs. Bighorn sheep were widely distributed and encountered throughout much of the survey route. The survey was undertaken over the course of 2 days, and commenced on Muddy Peak. On the second day, the survey began on Rogers Ridge south of State Route 169 and proceeded west to nearly Buffington Pockets. The area surveyed did not include the North Muddy Mountains.

Habitat

In March 2013, the Cliff Site water development was reconstructed. The hypalon apron was replaced with a metal apron, and the four upright poly tanks were replaced with low profile IRM tanks (manufactured by Innovative Rotational Molding). The two old drinkers and float valves were replaced with a new drinker to complete the leveled system. Water storage capacity was increased 1,000 gallons from 7,800 gallons to 8,800 gallons. As of early April 2013, the Cliff Site unit is filled to approximately two-thirds capacity, and the remaining five water developments are filled to capacity.

In late March 2012, the Five Ram water development was upgraded. Notably, the project was fully converted to a leveled system, thus eliminating the need for a float valve. The upgrade also entailed removal of 3 aged, high profile poly tanks and installation of 5 new, low profile tanks and a drinker. The upgrade augmented the water storage capacity from roughly 10,350 gallons to approximately 13,600 gallons.

Environmental conditions as of this writing in April 2013 are fair to good due to late winter and spring storms. Thus far in 2013, precipitation receipts are below normal. The National Weather Service issued the seasonal drought outlook (late March through June 2013), and assigned some probability for development of drought conditions.

Population Status and Trend

Desert bighorn sheep occupying the Muddy Mountains and Black Mountains comprise a single population given the high degree of movement between ranges. However, environmental conditions and local population dynamics have differed markedly. Over the long term, aerial survey data portray a decline in the number of bighorn sheep inhabiting the Black Mountains, and an increase in sheep numbers in the adjacent Muddy Mountains. The bighorn sheep population inhabiting the Black Mountains and Muddy Mountains experienced an expansion in 2012 due to high lamb recruitment. The 2013 population estimate for bighorn sheep inhabiting the Black Mountains and Muddy Mountains approximates the estimate reported last year.

In early November 2012, a bighorn sheep capture and removal operation was conducted in the Muddy Mountains to reduce the population, and to accommodate the request for bighorn sheep from Utah Division of Wildlife Resources (UDWR). In the course of a single day, 18 ewes, 4 lambs and 3 18-month-old rams were captured and furnished to UDWR. The sheep were released in the south-central portion of the Kaiparowits Plateau north of Lake Powell.

In late October and early November 2011, a bighorn sheep capture and removal operation was conducted in the Muddy Mountains to reduce the population, and to achieve augmentations of herds inhabiting the Delamar Mountains and Meadow Valley Mountains. In the course of 2 days, a total of 50 bighorn sheep was captured and translocated.

In early November 2009, 19 ewes and 1 lamb were captured in the Muddy Mountains and furnished to biologists with the Utah Division of Wildlife Resources. The sheep were released into the Grand Staircase—Escalante National Monument in southern Utah.

Unit 271: Mormon Mountains; Lincoln County

Report by: Patrick Cummings

Survey Data

Aerial surveys were completed in September 2012, and resulted in the classification of 181 sheep. The survey sample was comprised of 55 rams, 102 ewes, and 24 lambs. The resulting sex and age ratios were 54 rams:100 ewes:24 lambs.

Habitat

Environmental conditions as of this writing in April 2013 are fair to good due to late winter and spring storms. Areas burned in the Mormons in 2005 continue to have fairly high use by sheep. Water continues to be a limiting factor for sheep in the Mormons, despite having 5 BLM water developments scattered around the range. The condition of existing water developments is poor, at best. Several of these developments are commonly observed to be dry during the late summer months. Water is not available at several of the known springs. BLM does not appear to be maintaining the existing water developments, so action needs to be taken to maintain or increase existing water sources for a potentially expanding sheep population.

Population Status, and Trend

The Mormon Mountain bighorn population appears to be stable.

Unit 272: Virgin Mountains and Gold Butte; Northeastern Clark County

Report by: Patrick Cummings

Survey Data

No aerial survey was conducted in Unit 272 in 2012. In late September 2011, an aerial bighorn sheep survey was conducted over the southern portion of the Virgin Mountains, Whitney Ridge, Bitter Ridge, Lime Ridge, Tramp Ridge, Iceberg Canyon, Indian Hills and The Cockscomb (Arizona). The survey yielded a sample of 11 rams, 11 ewes and 5 lambs.

Habitat

Environmental conditions as of this writing in April 2013 are fair to good due to late winter and spring storms. Thus far in 2013, precipitation receipts are below normal. The National Weather Service issued the seasonal drought outlook (late March through June 2013), and assigned some probability for development of drought conditions.

In May 2010, reconditioning of structures and components of the spring development at New Spring was completed. The restoration was a collaborative effort between BLM, Fraternity of the Desert Bighorn and NDOW. Historically, New Spring was an important water source for wildlife and livestock. In 2000, it was noted that water was no longer available in the cement trough. In May 2004, the Virgin #1 water development was constructed northwest of Whitney Pocket to enhance habitat prior to the bighorn sheep release (augmentation) that was accomplished in October 2005. On 18 March 2006, Virgin #2 was constructed north of Whitney Pocket.

In July 2006, lightning strikes ignited 4 wildland fires in the southern portion of the Virgin Mountains. The aptly named Whitney Pass Fire consumed vegetation across 230 acres on the northeast end of

Whitney Ridge. The Virgin Gold Fire burned to within yards of the Virgin #2 water development before a slurry drop extinguished the fire. The Virgin Gold Fire consumed mid-elevation (Mojave Desert Scrub) and upper-elevation (pinion-juniper woodland) vegetation across 2,700 acres. At its northern point, the Virgin Gold Fire burned to within a half mile of the Virgin #1 water development. The Jeep Fire occurred northeast of the Virgin #1 water development in the vicinity of the Virgin Gold Fire, and consumed vegetation over 196 acres. East of the Key West Mine, the Double Nickel Fire consumed vegetation across 523 acres.

In late June 2005, lightning strikes in the Gold Buttes ignited the Fork Fire and Tramp Fire. Landmarks within the burned areas included: Tramp Ridge, Gold Butte, Mica Peak, Cedar Basin, Jumbo Peak, Jumbo Basin, Anderson Ridge, Rattlesnake Peak, Garnet Valley and the north face of Bonelli Peak. Burned-over areas that included Tramp Ridge, Gold Butte, Cedar Basin and Mica Peak had a few remaining small mosaics of vegetation. Areas marked by little to no remaining vegetation included Jumbo Peak, Jumbo Basin, Anderson Ridge, Rattlesnake Peak, Garnet Valley and the north face of Bonelli Peak. In addition, vegetation associated with approximately 11 springs and at least 7 wash complexes were impacted by fire. The Fork Fire consumed plants over 44,314 acres along a 3,300'-elevation gradient (2,460' to 5,760') within 3 vegetative associations: Creosote-Bursage Flats, Mojave Desert Scrub, and Pinyon-Juniper Woodland. The Tramp fire consumed vegetation over 26,817 acres.

A bighorn sheep release in the Hiller Mountains was approved in Fiscal Year 1996. However, the augmentation was never accomplished due to degraded habitat conditions. Bighorn sheep habitat in the Hiller Mountains remains in a degraded state due to an existing burro population and dry conditions.

Population Status and Trend

On 30 October 2011, 17 bighorn sheep trapped in the River Mountains were released from the Old Gold Butte Road midway along the east side of Lime Ridge. The release complement was comprised of 12 ewes, 2 male lambs and 3 young rams.

Bighorn sheep were released in the Virgin Mountains and Gold Buttes to fulfill population augmentation objectives as early as 1979. Since then, approximately 182 sheep from 4 source populations have comprised 10 release contingents. Overall, it has been difficult to assess the effectiveness of individual augmentations over time due to a variety of factors. The region's expansiveness, remote location and complex topography have created challenges to monitoring efforts for nearly 3 decades.

In view of 4 bighorn sheep augmentations since 2005, monitoring efforts in recent years have expanded beyond biennial aerial surveys and ground-based monitoring of a few marked sheep. Recent enhanced monitoring efforts entail the following: increased numbers of telemetered (VHF) animals, deployment of store-on-board GPS collars (USGS and NDOW), regular fixed-wing aerial telemetry surveys, deployment of trail cameras at water sources, and even occasional reported observations of marked animals from an avid sheep hunter familiar with Virgin Mountains and Gold Buttes.

Monitoring efforts in recent years have revealed that some of the ewes released in the Virgin Mountains have dispersed. At least several ewes released in the Virgin Mountains have created home ranges in the northern portion of the Gold Buttes. Much of the precipitous bighorn sheep habitat in the Gold Buttes consists of ridges interspersed by areas of moderate terrain. Bighorn sheep released in the Virgin Mountains and Gold Buttes since 2005 inhabit the south Virgin Mountains, Whitney Ridge, Lime Ridge, Tramp Ridge, Bitter Ridge and the Cockscomb (Arizona). Presently, information remains lacking on the distribution and abundance of bighorn sheep in Iceberg Canyon, Indian Hills and Azure Ridge. In 2013, the bighorn sheep population estimate approximates the estimate reported last year.

Unit 280: Spotted Range; Northwestern Clark County
Report by: Angelique Curtis

Harvest Results

A total of 5 tags was allocated for Unit 280 during the 2012 hunting season. Three of the 5 tag holders were successful. Unofficial Boone and Crockett scores ranged from 148 1/8 to 161 2/8. The average age of the harvested rams was 7.0 years.

Survey Data

The aerial composition survey for this unit was conducted in September 2012. During the 2012 survey a sample of 65 animals was classified as 23 rams, 36 ewes, and 6 lambs. The previous aerial composition survey for this unit was conducted in September 2011. During the 2011 survey a record sample of 384 animals was classified as 117 rams, 193 ewes, and 74 lambs.

Habitat

The Spotted Range is located just north of Indian Springs and resides within the boundary of the Nevada Test and Training Range. The predominant habitat type for this range is desert shrub which is typically characterized by creosote bush and black bush communities. Access to this unit is only allowed during the bighorn sheep hunt.

Population Status and Trend

Historically, desert bighorn sheep did not populate the Spotted Range year around due to limited water availability during the hot summer months. The first water development was built in 1992. The following year (1993), 25 desert bighorn sheep captured from the River Mountains were released in the Spotted Range. Between 1994 and 1996, 3 more water developments were built and another 25 desert bighorn sheep captured from the River Mountains were released. To date, there are a total of 6 water developments on the Spotted Range.

A continuous decline in the bighorn population has been noted since 2011. The 2013 model population estimate is 90 desert bighorn sheep. This estimate represents a 10% decline from 2012. This short-term decline has been attributed to low recruitment rates that have been occurring since 2011.

Unit 281: Pintwater Range; Northwestern Clark County
Report by: Angelique Curtis

Harvest Results

A total of 5 tags was allocated for Unit 281 during the 2012 hunting season. Three of the 5 tag holders were successful. Unofficial Boone and Crockett scores ranged from 144 1/8 to 165 2/8. The average age of the harvested rams was 8.3 years.

Survey Data

The aerial composition survey for this unit was conducted in September 2012. During the 2012 survey a sample of 49 animals was classified as 12 rams, 28 ewes, and 9 lambs. The previous aerial composition survey for this unit was conducted in September 2011. During the 2011 survey a record sample of 384 animals was classified as 117 rams, 193 ewes, and 74 lambs.

Habitat

The Pintwater Range is located just south of Indian Springs and resides within the boundary of the Nevada Test and Training Range. The predominant habitat type for this range is desert shrub which is typically characterized by creosote bush and black bush communities. Access to this unit is only allowed during the bighorn sheep hunt.

Population Status and Trend

The 2013 model population estimate is 180 desert bighorn sheep. This estimate is a slightly up from the 2012 model population estimate of 170 desert bighorn sheep. The population increase can be attributed to an increase in lamb recruitment.

Unit 282: Desert Range and Desert Hills; Northwestern Clark County

Report by: Angelique Curtis

Harvest Results

A total of 6 tags was allocated for Unit 282 during the 2012 hunting season. Five of the 6 tag holders were successful. Unofficial Boone and Crockett scores ranged from 151 4/8 to 160. Four of the 5 rams scored 158 B&C or better. The average age of the harvested rams was 7.6 years.

Survey Data

The aerial composition survey for this unit was conducted in September 2012. During the 2012 survey a sample of 77 animals was classified as 27 rams, 52 ewes, and 4 lambs. The previous aerial composition survey for this unit was conducted in September of 2011. During the 2011 survey, a sample of 93 animals was classified as 42 rams, 36 ewes, and 15 lambs.

Habitat

The Desert Range and Desert Hills is located north of Las Vegas and resides within the boundary of the Nevada Test and Training Range. The predominant habitat type for this range is desert shrub which is typically characterized by creosote bush and black bush communities. Historically, sheep would migrate in the fall and winter from the Sheep Range to the Desert Range, however, with the construction of big game water developments allowing bighorn sheep access to water year around the bighorn sheep no longer need to migrate back to the Sheep Range during the summer months. Access to this unit is only allowed during the bighorn sheep hunt.

Population Status and Trend

In 2012 the model population estimate was revised upward due to the increased number of mature rams and the proportion of lambs that were encountered during the 2011 aerial survey. The 2013 model population estimate shows the population declining back to 2011 levels. This decrease in the population is likely a result of the low lamb ratio observed in 2012. The Unit 282 bighorn sheep population can experience ingress and egress from the Sheep Range bighorn sheep population.

Unit 283, 284: East Desert Range and Sheep Range; Northern Clark County

Report by: Angelique Curtis

Harvest Results

A total of 6 resident tags and 1 non-resident tag was allocated for Unit 283/284 during the 2012 hunting season. Six of the 7 tag holders were successful. Unofficial Boone and Crockett scores ranged from 146 6/8 to 164 3/8. The average age of the harvested rams was 7.0 years.

Survey Data

The aerial composition survey for this unit was conducted in September 2012. During the 2012 survey a sample of 153 animals was classified as 50 rams, 89 ewes, and 14 lambs. The previous aerial composition survey for this unit was conducted in September of 2010. During the 2010 survey a sample of 203 animals was classified as 52 rams, 111 ewes, and 40 lambs.

Habitat

The East Desert Range and the Sheep Range are centrally located within the Desert National Wildlife Refuge. Hayford Peak is the tallest peak on the Sheep Range with an elevation of 9,900 feet. The predominant habitat type for Unit 283/284 is desert shrub, however, as you increase in elevation woodland and coniferous forest habitat can be found.

Between 2004 and 2006 several wild land fires were ignited by lightning strikes and burned thousands of acres along the east side of the Sheep Range. Most of the fire damage occurred at lower elevations; however, the fire burned vegetation at mid and high elevation in bighorn sheep habitat.

Population Status and Trend

In 2012, the model population estimate was revised upward due to the increased number of ewes and mature rams that were encountered during the 2010 aerial survey. The 2013 model population estimate shows the population declining back to 2011 levels. This decrease in the population is likely a result of the low lamb ratio observed in 2012. The Unit 283 and 284 bighorn sheep population can experience ingress and egress from both the Las Vegas Range bighorn sheep population and the Desert Range and Desert Hills bighorn sheep population.

Unit 286: Las Vegas Range; North Clark County

Report by: Angelique Curtis

Harvest Results

A total of 3 tags was allocated for Unit 286 during the 2012 hunting season. One tag holder was successful, 1 tag holder was unsuccessful and 1 tag holder did not hunt. The unofficial Boone and Crockett score of the 5-year-old harvested ram was 164.

Survey Data

The aerial composition survey for this unit was conducted in September 2012. During the 2012 survey a sample of 89 animals was classified as 32 rams, 40 ewes, and 11 lambs. The previous aerial composition survey for this unit was conducted in September of 2010. Due to unfavorable weather only a brief survey was completed over Gass Peak, Castle Rock, Fossil Ridge, Peak-a-boo Canyon, Quail Spring, and the area near Frozen Toe water development. During the 2010 survey, a sample of 35 animals was classified as 14 rams, 13 ewes, and 8 lambs.

Habitat

The Las Vegas Range is located immediately north of Las Vegas. Gass Peak is the tallest peak on the range with an elevation of 6,943 feet. The predominant habitat type for this range is desert shrub which is typically characterized by creosote bush and black bush communities. Invasive and exotic annual grasses such as red brome have become established along the Las Vegas Range where the 2005 and 2006 wild-land fires burned. The fires in 2005 and 2006 were ignited by lightning strikes and burned thousands of acres. The fire caused damage to 3 water developments (Juniper Peak, Hidden Valley and Frozen Toe). Members of the Fraternity of Desert Bighorn Sheep along with NDOW personnel were able to repair the damaged projects.

Population Status and Trend

The 2013 model population estimate is comparable to last year's estimate. Despite the 2005 and 2006 fires that destroyed approximately half of the sheep habitat, the population is stable. Although, the Las Vegas Range supports a resident bighorn population, there is ingress and egress of the population from the nearby Sheep Range.

CALIFORNIA BIGHORN SHEEP

Unit 012: Calico Mountains and High Rock Canyon: Western Humboldt and Washoe Counties

Report by: Chris Hampson

Harvest Results

The 2012 California bighorn hunting season in Hunt Unit 012 was very unusual. Three of the ten tag holders, reported being unsuccessful in harvesting a ram. All three of the unsuccessful hunters reported having had the opportunity to harvest a ram but chose not to pull the trigger and continued searching for a larger ram. The three hunters said that they had difficulty either getting within range of the larger rams or had difficulty locating them during the last few weeks of the hunting season. A fourth hunter also reported that he was unable to participate in the hunt altogether due to family issues. To add another strange twist to this past California bighorn hunting season, one of the tag holders accidentally killed two rams during his hunt. The tag holder voluntarily brought both rams into NDOW and admitted to making a mistake.

A total of seven rams were harvested from Hunt Unit 012 in 2012. They averaged 7.7 years-of-age and scored an average of 150 Boone and Crockett inches. The B&C scores ranged between 133 and 165 B&C inches. Hunters expended an average of 6.6 days hunting and the range for days hunted was between 2 and 22 days.

Survey Data

Helicopter surveys were conducted in September 2012. A total of 96 bighorn was classified as 26 rams, 54 ewes, and 16 lambs. Sex and age ratios for the sample were 48 rams:100 ewes:30 lambs. Surveys covered portions of the Calico Mountains, Little High Rock Canyon Area, High Rock and Pole Canyons and the Chukar Gulch Area.

Biologists expanded surveys this year in an effort to check on the health of bighorn within the High Rock/Calico bighorn herd. All sheep observed appeared to be healthy. During January 2012, NDOW received two separate reports from hunters who had observed bighorn coughing and or wheezing. In February 2012, the Nevada Department of Wildlife captured 7 bighorn rams and sampled them for disease pathogens. Lab results from those samples indicated the herd had experienced a lower grade viral infection that was most likely a non-lethal event. These types of disease events usually lead to reduced body condition and vigor but do not generally result in death.

Lamb recruitment was observed to be quite a bit lower this year (30 lambs:100 ewes). The decrease was believed to have been caused by the combination of a very dry summer and recent health issues of the herd. In 2011, the recruitment rate was measured at 43 lambs:100 ewes. However, recruitment rates for have generally been lower since the severe drought that occurred between 2007 and 2009.

In January 2010, the herd also experienced a serious soremouth outbreak. It was estimated a minimum of 75% of the herd had been affected by this highly transmittable disease. Several studies have shown soremouth outbreaks can have a detrimental effect on lamb survival and the overall body condition and health of the bighorn herd. However, no soremouth was detected within this herd over the past year.

Habitat

As of January 31, 2013, the northwestern portion of the state was well above average for water year precipitation. Numerous large storms in November and December provided much needed moisture throughout the Northern Great Basin. However a much drier January led to a decreased snowpack and reduced snow water content. Snowpack totals are near average and sit at 103% of average at the end of January. Forecasters are predicting warm temperatures and dry conditions to remain through the

first 2 weeks of February. Stream forecasts are predicted to be well below average and currently are predicted to be between 69 and 82% of the long-term average.

Population Status and Trend

The lower lamb recruitment observed this past year will result in a static trend for the High Rock/Calico bighorn herd. This population has experienced a few health related setbacks in recent years but has had sufficient recruitment to maintain itself. Quotas will more than likely mimic the static trend.

Unit 014: Granite Range: Washoe County

Report by: Chris Hampson

Harvest Results

All three of the tag holders who hunted in Hunt Unit 014 were successful in harvesting a ram. Ram ages were 4, 5 and 7 years of age. One of the hunters reported observing older-aged rams earlier in the hunting season but could not relocate them later in the hunting season. Boone and Crockett scores ranged between 139 and 148 B&C inches. Hunters expended an average of 5.3 days during the 2012 season.

At the urging of the local biologist, two of the hunter's expended time scouting or hunting on the southern portion of the range. Difficult access and steep terrain often keeps hunters away from this portion of the hunting area. Several good reports were received from the hunters including a report of a group of 14 rams near Granite Peak. However, all three of the rams harvested during the 2012 hunting season were once again taken out of the Negro Creek subpopulation. Since the Granite Range bighorn hunt re-opened in 2006, all 17 rams that have been harvested from the Granite Range have been taken out of the Negro Creek subpopulation.

Survey Data

Composition surveys in the Granite Range took place during the first week of September 2012. Surveys were conducted on the southern portion of the range near Granite Peak and in the Negro Creek area. The southern portion of the range is extremely difficult to survey due to very steep topography and high winds. During the survey a total of 59 bighorn sheep was classified as 8 rams, 36 ewes and 15 lambs. Sex and age ratios of the sample were 22 rams:100 ewes:42 lambs. Only 6 of the sheep were located on the southern portion of the range.

The observed lamb ratio of 42 lambs:100 ewes was an improvement over the previous year's lamb ratio of 23 lambs:100 ewes. In 2011, dry conditions and a potential soremouth outbreak were believed to be the cause for the lower lamb recruitment. The Granite Range bighorn herd has generally had strong recruitment over the past decade and recruitment averaged 49 lambs:100 ewes between 2005 and 2009. Since that time two potential soremouth outbreaks and very dry summer conditions have hampered lamb survival.

Habitat

As of February 1, 2013, snowpack totals for the Northern Great Basin were significantly reduced due to unseasonably warm temperatures that have occurred in late January and first two weeks of February. Snow water content was near normal at 103% of average. Total precipitation received within the Basin was well above the long-term average and stands at 204% of average as of February 1, 2013. October thru December saw numerous cold fronts sweep through northwestern Nevada, leaving much of the area covered in a thick layer of snow. The storm fronts left the Basin well above average for snowpack and total precipitation at the end of December. However the current projection is that significant

snowfall will be needed in late February thru April in order for the winter of 2012-13 to end near normal.

Population Status and Trend

Hunters had more difficulty locating mature rams this past year, especially during the later portions of the hunting season. The Granite Range bighorn population is a low density sheep population. The ram segment of the population can be difficult to locate due to the expansive amount of habitat available. The stronger recruitment observed this past year will allow the Granite bighorn herd to experience an upward trend in 2012-13. This follows a downward trend experienced in 2011.

Units 021, 022: Virginia Mountains: Washoe County

Report by: Chris Hampson

Harvest Data

The 2013 hunting season was the first time that 3 tags were available to sheep hunters in Hunt Unit Group 021,022. All three of the hunters were successful in taking a ram. Boone and Crockett scores ranged between 142 and 153 B&C inches. Ages of the three rams were 5, 7, and 8 years of age. Two of the three tag holders hunted just 2 days to harvest their ram. The third hunter expended 20 days hunting for his ram. The tag holder who expended 20 days hunted many of the lower density areas such as the Petersen Range, Fort Sage Mountain (Unit 021) and the west side of the Virginia Mountains (Unit 022). However, he finally located his ram in a higher density area near Cottonwood Canyon on the north end of the Virginia Mountains.

Survey Data

Bighorn sheep surveys in the Virginia Mountains of Unit 022 were conducted in early September 2012. The survey lasted two hours and biologists were able to classify a new record high of 60 bighorn. The large sample obtained was made up of 7 rams, 35 ewes and 18 lambs and resulted in a composition ratio of 20 rams/100 ewes/51 lambs. Ewe/lamb groups were located with relative ease. Ram groups were not located on this flight and were thought to have been hiding in heavy tree cover prevalent in portions of the hunt unit.

The 2011 helicopter survey of the Virginia Mountains bighorn population was completely different. Most of the animals that were observed during the survey were rams. On that survey, several larger ram groups were located that provided good insight into the age classes for rams in this sheep population. The survey located 28 sheep and 21 of these were rams. The large ram sample was made up of four 2 and 3-year-olds, eight 4 and 5-year-olds, and nine 6+year olds. The sample provided a unique look into the actual age classes of rams in the Virginia Mountain bighorn population.

One of the 2012 bighorn tag holders reported hunting in the Petersen Range of Hunt Unit 021. The hunter reported observing one 5-year-old ram, 6 ewes and 4 lambs. NDOW has received numerous reports over the past few years from the general public who have reported observing bighorn sheep in the Petersen Range. NDOW observations combined with observations made by the general public indicate there are between 12 and 15 bighorn currently living in the Petersen Range. The bighorn initially moved west to the Petersen Mountains from the Virginia Mountains of Hunt Unit 022 following the release of 22 bighorn into Big Canyon in 2008.

Population Status and Trend

The lamb ratio of 51 lambs:100 ewes observed during the 2012 survey represents excellent recruitment for this herd. The strong recruitment will allow the Virginia Mountain bighorn population to experience a continued upward trend. Quotas for this hunt unit are predicted to remain static in 2013.

Wildlife Services continues to monitor the north end of the Virginia Mountains for any lion activity. Control efforts are enacted when lions are found to be living areas where bighorn are known to exist.

Unit 031: Double H, Montana and Trout Creek Mountains; Humboldt County

Report By: Ed Partee

Survey Data

Composition flights were conducted during the middle of September 2012. A total of 140 animals was observed, which was well above the five-year average. Sheep are much more evenly distributed throughout both the Double H's and the Montana Mountains. Ratios obtained from this survey were 62 rams:100 ewes:41 lambs. Sheep overall are doing well throughout this unit.

Habitat

This unit had a devastating fire which burned over 215,000 acres. Some of the sheep areas within this unit were affected by this fire. The majority of damage to the bighorn habitat occurred in the Trout Creeks and on the north end of the Montana's.

The winter of 2012-13 began with above-average precipitation amounts but was followed by an extended period of low moisture and extreme cold temperatures. Precipitation amounts at this point are still well below normal and additional moisture will be needed to sustain these herds.

Population Status and Trend

This population continues to show a steady increase in numbers since the first hunt in 1996. Despite fires that took place last year, sheep continue to use some of these areas. With the rehab efforts that have taken place and with the hopes of added spring moisture, these herds should continue to do well. Observed production over the last few years indicates this population should continue to increase.

Continued collaring efforts and monitoring is taking place to see what effects mining exploration may have on these populations. Exploration activities associated with a future mining operation have not shown a detrimental effect or caused any displacement of bighorns at this time. This monitoring project should allow for the observation of movement taking place between ranges, as well as document lambing areas within this unit. Monitoring of these animals will continue throughout the year.

Unit 032: Pine Forest Range and McGee Mountain; Humboldt County

Report by: Ed Partee

Survey Data

Aerial surveys were conducted in September in conjunction with pronghorn for this unit. This is a very large unit to cover. McGee Mountain, Pueblos, and the Pine Forest Range were surveyed with most of the sheep observed in the Pine Forest Range. A total of 140 bighorn sheep was classified with sex and age ratios of 62 rams:100 ewes:41 lambs. Survey numbers dropped below the past five-year average and can be attributed to aggressive capture and removal efforts that have taken place over the last few years. Both ram and lamb ratios continue to do well within this unit. The Pine Forest Range provides most of the sheep sampled during this survey. These animals are well distributed throughout the range and sheep are now occupying areas that have not had any sheep observations in the past.

Habitat

Habitat conditions were poor throughout most of the year. Last spring and summer conditions were extremely dry. This past winter started out with above-average precipitation receipts but a lack of

storm activity since early January has put the Lower Humboldt River Basin well below normal. There was also a period of extremely cold temperatures during late December and January. Much more spring precipitation will be needed to improve habitat condition during the coming year.

Population Status and Trend

Both ram and lamb ratios remain high in this unit. NDOW has taken advantage of this increasing trend by utilizing sheep from this population as a source stock for transplants. An additional 30 sheep were removed for transplant into adjacent mountain ranges. This population remains over 250 animals despite capture and removal efforts that have taken place over the last several years. Surveys indicate there is still good age distribution throughout the population. This population has been trending upward for the last six years and should continue to do so.

Unit 033: Sheldon National Wildlife Refuge: Washoe and Humboldt Counties

Report by: Chris Hampson

Harvest Results

All five of the bighorn hunters on the Sheldon reported being successful. Unfortunately, one hunter accidentally killed two rams. The hunter did not realize he had knocked down a ram with his first shot (two-year-old) and then proceeded to shoot at and kill a second ram (5-year-old).

Ram ages were 2, 5, 7, 7, 7 and 8 years of age. Hunters have averaged nearly 7 days of hunting in their efforts to harvest a sheep over the past several years. This considerable amount of effort ranks the Sheldon as one of the most difficult California bighorn hunts in terms of how long it typically takes hunters to locate and harvest the ram of their choice. The number of days expended hunting bighorn on the Sheldon ranged between 2 and 21 days in 2012.

Boone and Crockett scores for the bighorn rams ranged between 150 and 157 inches. Hunters harvested 3 sheep from the Guano Rim area of the Sheldon this past year. During the 2011 hunting season, hunters had a difficult time locating sheep in the Guano Rim area and no sheep were harvested from that location. Bighorn distribution near Alkali and Devaney Peaks appears to have also changed in recent years. Aerial surveys and reports from hunters in the field indicate that less sheep now inhabit this once important sheep area. Over the past decade, the Alkali Peak area has been the one of the most popular areas for hunters to harvest a ram. Prolonged drought is thought to be the reason for the shift in distribution.

Survey Data

Biologists expended more time flying the Sheldon this year in an attempt to obtain a larger sample and to better determine current bighorn distribution. The increased effort was successful in classifying 57 sheep as 23 rams, 29 ewes and 5 lambs. This was the largest bighorn sample obtained on the Sheldon since 2000. However, this sample could have been much higher if surveys had located sheep in some of the traditionally high use areas. Unfortunately, the surveys in popular areas such as Alkali and Devaney Peaks and the Big Mountain area did not locate many sheep. Hunters later reported that many of the sheep they were seeing had moved to more distant lower elevation habitats.

Lamb ratios on the Sheldon were observed to be very poor this past year. The ratio of 17 lambs:100 ewes was the lowest lamb ratio on record. Severe drought conditions on the Sheldon over the past year were believed to be the reason for the low recruitment. The ram ratio remains high and good numbers of mature rams were observed on the survey. Several hunters reported observing approximately 20 different rams during their 2012 Sheldon bighorn hunt. The average age for harvested rams this past hunting season was 6.8 years (excluding the accidental kill of the 2 year-old) which remains well above the harvest objective of 6.0 years.

Habitat

Habitat conditions on the Sheldon deteriorated quickly due to the very dry winter of 2011-12 and the lack of precipitation received during the spring and summer of 2012. The lakebeds located on top of Rock Springs Table were once again dry by mid-summer. This has been a common occurrence over the past decade. Unfortunately, there have many more dry years than wet years on the Sheldon. The lakebeds on Rock Spring Table rarely went completely dry during the 1980's and 1990's.

Animal distribution changed dramatically this past year as a result of drought conditions and lack of available water. Current bighorn distribution on the Sheldon is much different today than what was observed just 3 or 4 years ago. Alkali Peak is a good example of this. Many of the sheep that occupied this area have now moved to surrounding habitat for much of the year. This has also led to more difficult hunting conditions and forces hunters to expend more time in the field in order to locate a mature ram.

The USFWS is planning on conducting horse and burro gathers on the Sheldon again this year. The expected timeframe for the gathers is August 2012. The current plan is to target 400+ horses and burros for removal. The effort is aimed at reducing the amount of competition between wildlife and horses for food, water and space. Impacts by horses on riparian areas will be lessened once horses have been removed.

During the late summer and fall of 2012, the USFWS made a decision to close nearly all secondary access roads on the Sheldon to vehicle travel. Bighorn hunters were given a waiver to access hunt areas during the bighorn hunting season due to the fact that the hunt was considered a once in a lifetime hunt. However, all other hunters with Sheldon tags were denied access out of concern that vehicles could ignite fires. The road closures negatively impacted the vast majority of tag holders this past hunting season. NDOW was not in favor of closing the roads and felt that the closure was an overreaction. No other areas or roads in the state of Nevada were closed due to fire concerns in 2012.

Population Status and Trend

Poor recruitment observed this year will result in a decreasing trend for the California bighorn herd on the Sheldon. Population estimates have been reduced the past two years due to negative effects of long-term drought conditions on animal distribution. Bighorn sub-populations that exist in close proximity to the Sheldon boundaries are known to move in and out of the hunt unit on a regular basis and at times are not available to hunters. Some of these sub-herds that move to adjacent hunt units are those that inhabit areas near the Guano Rim, Thousand Creek Gorge, Badger Mountain and Big Mountain.

The estimate for this herd has been reduced to better reflect the number of sheep available to hunters during the hunting season. The reduction is also due to the low lamb recruitment observed this year. Harvest and survey data show mature rams are available on the Sheldon. Quotas are expected to remain static.

Unit 034: Black Rock Range; Humboldt County

Report by: Ed Partee

Survey Data

The Black Rock Range was surveyed the second week of September 2012 in conjunction with pronghorn. A total of 152 animals was classified which was up from last year. These numbers yielded sex and age ratios of 49 rams:100 ewes:38 lambs. Ram numbers were above the 2011 survey and above the past five-year average. The bulk of rams observed on this flight were associated with Big Mountain and Coleman Creek. These two areas continue to produce good numbers of sheep. Lamb recruitment has fallen slightly from the five-year average which may affect future population growth.

Habitat

Habitat conditions were a little less than ideal over the course of the year. This unit like most in Humboldt County experienced dry conditions throughout much of the winter. Precipitation amounts at this point are still well below normal and additional moisture is needed. Despite these dry conditions sheep numbers have remained relatively constant. Forage remained stable throughout the year which has significantly helped with lamb survival. Spring moisture will be needed to sustain these populations at the current levels throughout the year.

Population Status and Trend

Estimated bighorn numbers in this unit have dropped slightly. This decline is directly related to the 25 animals that were removed on a sheep capture this year. Lamb ratios have fallen and are below the past five-year average. Sheep are dispersing well throughout this range providing plenty of opportunity for harvest in several different locations. This year's survey yielded more animals than has been observed since 2007.

Hunter access has been altered by the designation of the Black Rock/High Rock Immigrant Trail National Conservation Area (NCA) and Wilderness Areas within the NCA. The BLM has marked the majority of the restricted access points and hunters who apply for this area need to understand these restrictions. Despite access issues in this area, hunter success has been good in this unit.

Unit 035: Jackson Mountains; Humboldt County

Report by: Ed Partee

Survey Data

A total of 44 sheep was classified during aerial surveys in the Jackson Mountains this year with resulting sex and age ratios of 48 rams:100 ewes:62 lambs. This sample was low compared to recent years and was attributed to not finding several ewe/lamb groups that were located in the past. Both lamb and ram numbers were above the 5-year average.

Habitat

The winter of 2012-13 began with above-average amounts of snowfall but by January, weather patterns changed and an extended period of extreme cold temperatures set in with no related moisture. Precipitation amounts at this point were still well below normal and additional moisture is needed. Continued drought conditions will have a dramatic affect on future habitat conditions.

Horse numbers are still being monitored to see if there is any correlation between horse numbers and wildlife using these areas. As of April 1st, this unit was well below average on precipitation. Significant amounts of spring moisture will be needed to provide early forage for new lamb recruitment.

Population Status and Trend

The 2013 population estimate for the Jackson Mountain Range is up from last year. This growth can be directly attributed to the additional 25 animals that were added to the north end of the range this past year. Expansion of bighorn into areas that have not had sheep in the past is being observed. This population is showing an upward trend with better quality showing up in the harvest.

Hunter access has been influenced by the designation of the Black Rock/High Rock Immigrant Trail National Conservation Area and Wilderness Areas (NCA). The NCA boundaries embrace bighorn concentration areas of King Lear Peak and Parrot Peak. The Bureau of Land Management (BLM) has

marked the majority of the restricted access points and hunters who apply for this area need to understand these restrictions.

Unit 051: Santa Rosa Range; Humboldt County
Report by: Ed Partee

Survey Data

The Santa Rosa Range was flown during the second week of September 2012. This flight was conducted under ideal survey conditions. There were 94 bighorn sheep observed with sex and age ratios of 25 rams:100 ewes:59 lambs. Lamb production remains good while ram numbers remained low. Several rams have been collared to track movement patterns. Preliminary results show movement between Oregon and Nevada.

Habitat

Unfortunately the previous winter and spring was extremely dry which has stressed many of the plant communities. Winter conditions in 2012-2013 were a little better than last year and started out very good early on but then became much drier from January to about March with extreme cold through the end of January. As of April 1st, the Lower Humboldt River Basin was well below normal for precipitation. Much more spring moisture will be needed to sustain these herds and improve habitat conditions.

Population Status and Trend

This unit has had three releases in the last two years which should help to bolster this population. Monitoring radio collared bighorn from these releases will help to determine if the releases are a success. Bighorn numbers observed in the north end of the range continue to remain well below historic highs. This last fall Oregon was able to collar approximately 10 sheep. This will aid in the knowledge of movement patterns between Oregon and Nevada. The 2013 population estimate shows an increase from last year for this unit.

Units 068: Sheep Creek; Northern Lander and Eureka Counties
Report by: Jeremy Lutz

Harvest Results

Four tags were available in Unit 068 for the 2012 season. All 4 hunters were successful in harvesting a ram. The average age of the rams was 3.5 years and the average B&C score was 135. For more specific harvest results, please review the 2012 harvest tables in the Appendix.

Survey Data

In March of 2013 a total of 83 bighorns was classified from the air in conjunction with the Area 6 spring deer flights yielding ratios of 46 rams:100 ewes:27 lambs.

Habitat

Due to the lack of moisture associated with the prolonged drought of 2011-present, habitat conditions in the Sheep Creek Range were marginal to poor depending on the location. Very little growth occurred on grasses and forbs and leader growth on shrubs was marginal. The combination of drought, excessive livestock use and both big game guzzlers going dry, concentrated sheep around White House Springs, Black Mountain and Rock Creek Gorge. High utilization on ephedra and native grass species by bighorn sheep was noted along the face of the Sheep Creek Range for the 2nd year in a row.

Bighorn sheep continue to expand into Rock Creek and Black Mountain areas of the Sheep Creek Range. Of the 4 rams harvested, 3 were taken in the vicinity of Black Mountain and the Rock Creek Gorge. NDOW has located a site for a big game guzzler on Black Mountain that will expand sheep into suitable habitat.

Population Status and Trend

In November 2012, 23 bighorn were captured in the Sheep Creek Range and transported to Humboldt County.

Bighorn sheep habitat conditions in the Sheep Creeks continue to spiral downward for most of the Sheep Creek Range with the exception of Rock Creek Gorge and Black Mountain. The removal of 24 bighorn will ultimately help this population by reducing competition for forage and water demands in this unit.

The mature ram segment remains strong and recommended tag quotas are expected to be similar to last year.

ROCKY MOUNTAIN BIGHORN SHEEP

Unit 074: The Badlands; Elko County
Report by: Kari Huebner

Harvest Results

Two resident tags were issued for Unit 074 in 2012. Both hunters were successful. One hunter harvested a 6-year-old ram while the other hunter took an 8-year-old ram.

Survey Data

A composition survey was conducted in March 2013. There were 24 bighorns classified resulting in sex and age ratios of 90 rams:100 ewes:50 lambs. The lamb ratio was equivalent to last year's ratio.

Habitat

There was a burn on the west side of Black Mountain (Salmon Fire 4,846 acres) in August 2011. There was also a small burn (Black Mountain Fire) in the southern portion of the unit and a larger fire (Scott Creek Fire) in the northern portion of the unit in 2007. These fires are expected to have minimal impacts on this bighorn herd.

Population Status and Trend

This herd appears to be stable. However, there are concerns regarding the small sample sizes that have been observed during the past couple of years. A dedicated summer flight is planned for 2013 in hopes of obtaining more accurate information to estimate the total numbers of bighorns in the population.

Unit 091: Pilot Range; Elko County
Report by: Kari Huebner

Harvest Results

Two resident tags were offered in this unit for the 2012 season. Both hunters were successful and harvested 9-year-old rams.

Survey Data

A composition survey was conducted in August 2012. There were 42 bighorns classified with resulting sex and age ratios of 64 rams:100 ewes:4 lambs.

Habitat

A recent effort was made to make water available to bighorn on the mountain as opposed to the benches in order to reduce the probability of bighorn sheep coming into contact with domestic sheep. There are active allotments and trailing routes for domestic sheep on the east side of Pilot as well as the Leppy Hills.

Population Status and Trend

In 2010, several bighorn were observed coughing, shaking their heads and were in poor body condition. Three bighorn sheep within the population were tested for disease which confirmed bacterial pneumonia was present in the population. It appears the disease event is severely impacting lamb

production. However, at least 6 mature rams remain in the population which will allow for a limited ram hunt.

Three bighorns were tested for disease this past summer but results have yet to be obtained. These 3 bighorns, 2 ewes and 1 ram, were radio collared with the objective to learn more about their movement patterns and if they are coming into contact with domestic sheep.

The short-term outlook for this herd is poor. Lamb production is almost nonexistent. The population will continue to be monitored to determine if lamb production and recruitment recover. Future recommendations for the ram hunt will be dependent on population monitoring and documented lamb recruitment.

Unit 114: North Snake Range – Mount Moriah; Eastern White Pine County
Report by: Curt Baughman

Harvest Results

In 2012, 2 tags were available for the 5th consecutive year. Overall, mature rams were difficult to locate and the single successful hunter harvested a 2-year old ram on the Mt. Moriah Table. Vastly improved habitat conditions in 2011 and lush fall 2012 forage conditions may have contributed to the lack of hunter success over the past 2 seasons by allowing bighorn to expand their distribution over this large and rugged unit. Since 2007 when this unit reopened for ram harvest, 8 rams have been harvested with an average age of 6.1 years.

Survey Data

In March 2013, a helicopter herd composition survey was flown in combination with a spring deer and elk survey. Conditions for the survey were good and a sample of 34 bighorn was classified with sex and age ratios of 32 rams:100 ewes:22 lambs. This follows the classification of 48 bighorn during the March 2012 survey with sex and age ratios of 58 rams:100 ewes:27 lambs.

Weather and Habitat

Precipitation data recorded by the National Weather Service documented 170% of average moisture measured at Ely during the 2010-11 water year. Habitat conditions improved dramatically thanks to improved water distribution and lush vegetative growth. Snow banks persisted at high elevations long into the summer, providing improved water and forage availability. Bighorn improved in both health and body condition in 2011. The following winter was mild and dry resulting in a poor snowpack. Combined with a warm and very dry May-June period, habitat values at mid and upper elevations were reduced during the lambing period. This may have impacted 2012 lamb survival. In a reversal, abundant monsoon moisture arrived throughout July, August and September. This produced lush, spring-like conditions. Bighorn should have entered the winter in good body condition. The condition of winter forage should have been above-average. The 2012-13 winter brought harsh conditions for a 6-week period however bighorn in this unit should have fared well. As of late March, local Snotel sites were showing 65% to 85% of average total water-year precipitation.

Long-term habitat limitations in this unit are related to the dense band of mixed conifer and mountain mahogany that effectively separate seasonal ranges in much of the area presently occupied by bighorn. The use of prescribed fire and managed natural fire are key components to future habitat modifications that could benefit bighorn sheep in this unit.

Population Status and Trend

This bighorn herd has experienced inconsistent lamb recruitment since late 2006 when 73 lambs/100 ewes were observed in the first winter following the January 2006 augmentation of 30 bighorn from

Unit 101. Survey data shows that recruitment has been below 30 lambs/100 ewes in 4 of the past 6 years. This is reflected in a nearly stable population trend over the past 4 years following declines in 2008 and 2009. Recruitment was likely influenced by adverse climatic conditions (severe drought and harsh winters) as well as predation. Lion predation was documented as a substantial cause of mortality in collared bighorn ewes from 2006 through 2009. Additional evidence includes random discovery of bighorn remains with signs of lion predation. This period coincided with a decline in the Snake Range deer herd. It is felt the Snake Range had become top-heavy with lions that turned increasingly to bighorn for a prey base because of the decline in the mule deer herd. There were 47 mountain lions removed from the Snake Range by sportsmen and Wildlife Services since the beginning of 2009. This was a high total for this unit-group given the presence of the National Park in Unit 115 where hunting is not permitted. This high rate of removal should be helping to strike a better balance between the Snake Range lion population and ungulate resources. The number of mature rams in the population is sufficient to sustain continued harvest. Population trend in 2013 will largely depend on climatic conditions through the spring and summer.

Unit 115: South Snake Range – Mount Wheeler: Eastern White Pine County

Report by: Curt Baughman

Background

The last recorded observation of historic Rocky Mountain bighorn sheep in the south Snake Range was made by Elwin A. Robison in 1971. Bighorn sheep were reestablished in the south Snake Range in 1979 and 1980 with the release of 20 sheep transported from Colorado. These release compliments totaled 3 rams, 11 ewes and 6 lambs. Hunting seasons were held in 1985-86 with 1 and 2 tags respectively. No rams were harvested in 1985 and 2 rams were taken in 1986. The season was then closed due to the establishment of Great Basin National Park in October 1986 and concerns about declining population trend.

An increasing bighorn population trend was observed in Unit 115 in the mid 2000s, similar to the trend in nearby Unit 114. NDOW and Great Basin National Park have worked cooperatively since 2008 with the goal of enhancing both bighorn habitats and the bighorn population in this unit. Capture projects in 2009-10 and again in 2013 resulted in 12 bighorn fitted with satellite GPS collars to increase knowledge of seasonal ranges and habitat use by this bighorn herd. Population data collected for this herd support a minimal ram harvest over the short-term. Harvest recommendations will continue to be made based on herd viability and performance. A December 20 through February 20 season was established to ensure the tag holder has the opportunity to pursue rams below the Park boundary when they descend from higher elevations in late winter.

Harvest Results

For the second consecutive year an 8-year old ram was harvested during the last month of the season. The ram harvested during the 2012-13 season was green-scored at nearly 173 B&C and was the highest scoring ram on record from this unit.

Survey Data

A combination of excellent survey conditions and luck resulted in the classification of 24 bighorn during postseason deer surveys in December 2012. This was the largest survey sample ever obtained for the unit. Sex and age ratios of the sample were 73 rams:100 ewes:46 lambs. The successful collaring project completed in January 2013 should facilitate efforts to obtain annual herd composition data from this small herd over the next couple years.

Weather and Habitat

Long-term habitat conditions for bighorn sheep have improved in this unit due to a small number of wildfires that burned at mid and upper elevations. A large burn in Lincoln Canyon receives substantial use by sheep based on data collected from collared bighorn. It is critical that natural fire be allowed to play its crucial role in creating openings in large areas that are dominated by mountain mahogany, pinyon/juniper and other conifers. The BLM and NPS are planning additional projects that have the potential to further improve bighorn habitat. Climatic conditions in 2012 were both negative and positive for bighorn sheep (see discussion in the Unit 114 report above). The removal of 19 mountain lions from this unit within the past 2 years may contribute towards increased bighorn sheep survival.

Population Status and Trend

This bighorn population is thought to be stable at approximately 30-35 animals.

MOUNTAIN GOAT

Unit 101: East Humboldt Mountains; Elko County
Unit 102: Ruby Mountains; Elko County
Unit 103: South Ruby Mountains; Elko and White Pine Counties
Report by: Caleb McAdoo

Tag Quotas and Harvest Results

There were 5 general season mountain goat tags and 1 PIW tag available in the 2012 season. Of the 6 goats harvested, 33% were nannies. While this isn't a significant increase over last year's percentage of 27%, since 1999 the trend of nanny harvest has been on a steady incline. Nanny harvest in 2008, 2009, 2010, and 2011 was 22, 30, 40, and 27%, respectively. This year's nanny harvest was above the 5-year average of 30% and well above the 10-year average. Nanny harvest will continue to be monitored closely and assessed relative to quota development to minimize any potential impacts to overall production and recruitment following the recent disease event documented in the mountain goat population. In an effort to curtail nanny harvest, the Department of Wildlife has initiated a non-mandatory online, "Mountain Goat Hunting Orientation" document to help hunters identify and determine sex of mountain goats in the field. Although quotas have been reduced in recent years, hunter success continues to be excellent and most hunters reported seeing many adult goats in the 2012 season. For specific 2012 hunting season results, please refer to Harvest Tables in the Appendix Section.

Survey Data

Mountain goat surveys were performed in Late January, 2013. In Unit 101, there were 104 adult goats observed, up from 79 last year. While the overall sample size was up from last year, no kids were observed. At no other time since the introduction of the mountain goats into the East Humboldt's has the observed kid ratio been so low. In stark contrast to Unit 101, Unit 102 had a sample size of 137 goats, yielding a ratio of 20 kids:100 adults. Kid ratios in this unit were up significantly from last year's observed ratio of 7 kids:100 adults. The survey in Unit 103 not only yielded a higher net sample size, but also a 2 fold increase in the observed kid ratio over 2011. A total of 15 goats were observed in Unit 103, yielding a ratio of 50 kids:100 adults. Aside from Unit 101, observed kid recruitment was up significantly over 2012.

Weather and Habitat

Goats live amongst the highest, rockiest, and steepest slopes in the mountains. Fortunately, snow banks accumulate throughout the winter and sustain preferred forage for goats during most of the hot and dry summer months. Even in the dry years with little precipitation, sufficient snow usually falls in the high country to facilitate goat survival. Precipitation received during the 2012/2013 winter was approximately 80 percent of normal, however; even though below average, this moisture level should be adequate to produce high quality forage on summer range. Mountain goats are more limited by winter range and a heavy spring snow load that cover their forage, limit their movements and increase their chances of fatalities from falls and avalanches.

Population Status and Trend

This year, goat populations in Unit 101 apparently experienced increased mortality in the kid segment of the population which was likely a residual effect of the bacterial pneumonia which afflicted the bighorn sheep and goats in the Ruby and East Humboldt mountain ranges during the winter of 2009-2010. Generally speaking, poor kid recruitment is a lingering effect of pneumonia die-offs which exacerbate the initial population declines realized from a disease event and can create stagnant or declining herds. No recruitment was realized for Unit 101 in 2012. For Unit 101, the 2011 population

estimate of 100 animals was obviously too conservative since the 2012 observations exceed that benchmark. Therefore, while there was no recruitment in 2012, the population will actually increase to accommodate for the observation of more adults than originally estimated last year. The 2013 estimate for Unit 101 is 130 individuals. For Unit 102, with the significant increase in kid recruitment realized this year, the population estimate for 102 has increased to 180 individuals over the 2012 estimate of 160. Similarly, for Unit 103, the substantial increase in recruitment has yielded an increase in the overall population estimate and has brought the 2013 estimate to 30 individuals.

The Department will continue its disease surveillance for both bighorn sheep and mountain goats in Units 101-103 as part of post-die-off monitoring efforts to continue to gather information about the implications of the disease for future management decisions. For 2013, a total of 17 mountain goats were captured, collared and sampled as part of this effort. In addition, and upon request by NDOW, hunters have provided invaluable biological samples from the animals which they have harvested which have furthered our knowledge for management of our mountain goats herds. Hunters who observe any abnormal animal behavior in wild goats or sheep such as coughing and abnormal nasal discharge have been encouraged to report their findings immediately to the Nevada Department of Wildlife.

MOUNTAIN LION

Western Region Areas: 1, 2, 3, 4, 5, 18, 19, 20, and 29
Report by: Carl Lackey

Harvest Results

Referencing all available reports for this report period, March 1st, 2012 through February 28, 2013, biologists recorded 59 mountain lion mortalities for the Western Region (Tables 1-4). This included 40 animals taken under valid sport tags and 13 by USDA - Wildlife Services for depredation and predator control. Total recorded mortalities were in line with the ten-year average. Sport harvest increased by 122%, probably due to very favorable hunting conditions in the early part of the season. Conversely, Wildlife Services reported take decreased by 67% compared to the 2011 season (Table 3) and was well below the ten-year average. This is the second consecutive year that total lion mortalities decreased in the Western Region. Since its inception, the year-round season has had little effect on total overall sport harvest. Additionally, increasing the sport harvest limits, as done in 2011, has not had an effect on total sport harvest. Hunt Unit 033 remains closed to lion hunting.

Table 1. Western Region mountain lion harvest limits and mortalities by type for 2012-2013.

Management Area	Harvest Limit	Mortality Type				
		Sport	Depredation	Predator Projects	Other	Total
1	Regional 169	4	0	6	0	10
2		1	0	1	1	3
3		4	1	1	0	6
4		6	0	0	0	6
5		5	0	0	0	5
18		6	3	0	1	10
19		5	0	0	3	8
20		5	1	0	0	6
29		4	0	0	1	5
Totals	**169**	**40**	**5**	**8**	**6**	**59**

Table 2. Western Region mountain lion sport harvest – 10 year sex and age comparisons.

Season/Year	Harvest			Average Age		
	# Males	# Females	Ratio Male:Female	Males	Females	All Lions
2003-2004	18	30	1m:1.6f	4.1	3.5	4.0
2004-2005	22	11	1m:0.5f	4.5	3.2	4.1
2005-2006	15	21	1m:1.4f	3.7	2.6	3.1
2006-2007	25	26	1m:1.0f	3.7	3.3	3.5
2007-2008	33	24	1m:0.7f	3.8	3.1	3.4
2008-2009	24	14	1m:0.6f	3.4	3.7	3.5
2009-2010	19	14	1m:0.7f	4.4	3.4	3.9
2010-2011	26	24	1m:0.9f	3.9	5.0	4.5
2011-2012	8	10	1m:1.3f	4.1	2.8	3.4
2012-2013	**14**	**26**	**1m:1.9f**	**4.0**	**3.7**	**3.8**

Note: two mortalities (unknown sex) in 2008

The sport harvest consisted of 14 male and 26 female lions, with average ages of 4.0 and 3.7 years, respectively (Table 2). There were 8 lions killed by USDA-WS as part of predator control projects. All

salvageable lion hides from around the state were skinned, dried and then sold at the Nevada Trapper's Association's annual fur sale in Fallon. A total of 27 hides were sold this year bringing an average price of $316 with a high of $600.

Population Trend

Population structure and trends were based on harvest data and reports from guides and hunters. Referencing the 10-year sport hunt mortality trend (Table 2), the 2012 female:male sex ratio was the highest on record for the last decade. This constitutes only a one-year phenomenon. Major trend shifts in sex ratios and/or age cohorts remain absent; suggesting the lion population in western Nevada is stable. That said, sex and age ratios in the harvest record will continue to be monitored closely for emerging trends in subsequent years.

NDOW continues to work closely with the University of Nevada, Reno on a cougar research project in the Western Region. To date, over 40 lions have been fitted with radio-telemetry collars. Genetic analysis was completed and a manuscript titled *Identification of Source-Sink Dynamics in Mountain Lions of the Great Basin* appeared in the journal *Molecular Ecology (21:5689–5701)* (Andreasen et al 2012). A dissertation by the principle researcher is in the works.

Management Conclusions

Although there were some yearly fluctuations within harvest categories, average ages and the ratio of males/females killed has not changed significantly over past years. Sport harvest regulation changes implemented beginning in 1997, have only marginally affected the number of lions taken during the sport hunt. Data indicate current harvest regulations are compatible with the lion resource and its capability to support sport harvest. Harvest limits on the other hand, were reevaluated as excessive and were dropped by 47% for the current cougar season to levels that are more in keeping with a sustainable harvest.

Table 3. Ten-year Western Region mountain lion harvest trend–all known mortalities.

Season Year	Season Length	Sport Harvest Limits	Harvest Type				
			Sport	Depredation	Predator Project	Other	Total
2003-2004	365	114	48	15	NA*	3	66
2004-2005		114	33	6	NA*	8	47
2005-2006		114	36	10	NA*	6	52
2006-2007		114	51	6	NA*	8	65
2007-2008		114	57	27	NA*	6	90
2008-2009		114	38	12	NA*	2	52
2009-2010		103	33	12	NA*	2	47
2010-2011		103	50	22	NA*	7	79
2011-2012		169	18	24	15	12	69
2012-2013		**169**	**40**	**5**	**8**	**6**	**59**
10 year avg.	365	NA	40.4	13.9	NA	6	62.6

*Predator project killed lions were not classified separately prior to 2011

Table 4. Western Region mountain lion sport harvest by unit for 2012-13 and the previous 5 years.

Management Area	2007-08	2008-09	2009-10	2010-11	2011-12	Previous 5 yrs Average	**2012-2013**
1	19	6	6	4	3	7.6	**4**
2	1	0	1	4	0	1.2	**1**
3	5	3	2	5	1	3.2	**4**
4	5	7	5	13	3	6.6	**6**
5	11	8	4	9	0	6.4	**5**
18	2	4	4	7	5	4.4	**6**
19	5	6	7	2	3	4.2	**5**
20	8	4	3	5	2	4.4	**5**
29	1	0	1	1	1	0.8	**4**
Totals	57	38	33	50	18	39.2	**40**

Eastern Region: Areas 6, 7, 8, 9, 10, 11, 12, 13, 14, and 15

Report by: Scott Roberts

Harvest Results

The Eastern Region maximum allowable sport harvest for the 2012-13 season was 232 lions. Three of those lions were allocated to Game Management Unit 091 (Pilot Peak) which exists as an interstate cooperative hunt with the State of Utah. The remaining 229 tags were allocated to the rest of the Eastern Region hunt units. No area closures took place in 2012-13.

The Eastern Region sport harvest for mountain lions for the 2012-13 season totaled 110 animals (Tables 1-4). The sport harvest for the previous year (2011-12) was 59. Guided hunters made up 42% of the region's annual sport harvest. The 2012-13 sport harvest composition was 58 males and 52 females for a ratio of 1.1 males:female. The sex ratio of sport harvested lions was 1.8 males:female for the 2011-12 season. The average sport harvest for the previous 5 years (2007-2011) was 63 lions.

The total documented cougar mortality for the Eastern Region in 2012-13, including all known causes of take was 133 lions. The 2012-13 harvest was comprised of 66 males, 66 females and 1 lion of unknown sex.

Depredation and Other Harvest

Depredation issues in 2012-13 resulted in the removal of 20 lions compared to 11 in 2011-12. Five of these lions were removed by USDA Wildlife Services at the request of NDOW for the protection of Rocky Mountain Bighorn Sheep in Units 114 and 115. Other losses including accidental trapping and vehicle collisions accounted for 3 of the documented lion mortalities during the 2012-13 season.

Table 1. Eastern Region sport harvest by area groups for 2012-13 and previous 5 years.

Management Area	2007-08	2008-09	2009-10	2010-11	2011-12	Previous 5 yr average	**2012-13**
6	12	16	21	18	12	15.8	**20**
7 and 8	8	3	6	10	7	6.8	**7**
9	0	0	0	0	0	0	**0**
10	7	6	14	21	15	12.6	**31**
11	11	13	17	8	14	12.6	**32**
12	1	3	6	2	2	2.8	**6**
13	2	0	3	1	3	1.8	**5**
14	8	6	6	3	3	5.2	**7**
15	6	7	1	8	3	5	**2**
Eastern Region Total	55	54	74	71	59	62.6	**110**

Population Trend

Mountain lion habitat remains in good condition throughout the Eastern Region with an ample prey base and minimal overall loss of habitat due to development activities. Range fires over the last 13 summers have converted tens of thousands of acres of deer habitat to vegetation dominated by grasses and annuals in the Eastern Region. Some deer summer ranges, and more importantly, some critical deer winter ranges burned. The future status and trend of deer herds in the burned areas will have the most significant impact on lion productivity and survivability. The protection of intact deer winter ranges and the rehabilitation of degraded areas will be paramount in maintaining both deer and lion populations. Documented mortality in the form of harvest, depredation, predator control and accidental loss has not exceeded the reproductive/recruitment capabilities of the mountain lion resource.

Lion harvest has been under close scrutiny by some sportsmen over the last few years. There is some concern over the quantity and quality of lions within the Eastern Region. A review of statistics within the region indicates that although some members of the sporting public may witness a locally reduced population (e.g., they are seeing fewer lions in their favorite canyon or hunting location), regionally, the population is holding up well. Population is not directly proportional to harvest as many factors can influence harvest pressure and effort. For example; factors such as weather conditions, level of interest, economics, etc. can affect annual lion harvest. Age and sex structure is a good measure of lion populations. Over-harvest would result in obvious age structure changes, e.g., the number of mature males harvested would drop while the number of adult females and sub-adult males in the harvest would increase.

The average age of cougars taken by sport hunters in the Eastern Region was 4.2 which was the second highest recorded in the last 10 years (Table 2). Perhaps more importantly, average female age was the highest recorded in the last 10 years by quite a margin. The male average age was near the lowest. Based on population estimates, sex and age ratios in the harvest, long-term harvest data analysis, and recorded mortality, the overall Eastern Region mountain lion population trend is still considered stable. Age structure will continue to be monitored in order to identify any cougar population trends that may emerge (Tables 2 and 3).

Table 2. Eastern Region sport harvest - sex and age comparisons since 2003.

Season Year	# Males Harvested	# Females Harvested	Average Age Males	Average Age Females	Average Age All Lions
2003-04	61	54	4.6	4.2	4.4
2004-05	37	22	4.3	3.9	4.1
2005-06	37	22	3.8	3.7	3.8
2006-07	38	18	4.2	3.4	3.9
2007-08	31	24	3.8	3.8	3.8
2008-09	38	16	4	4.1	4.1
2009-10	40	34	3.8	3.8	3.8
2010-11	49	22	3.7	3.2	3.6
2011-12	38	21	3.9	4.1	4.0
2012-13	**58**	**52**	**3.8**	**4.7**	**4.2**

Management Conclusions

The favorable snow conditions present for extended periods this winter led to an increase in hunter participation and hunter success throughout the Eastern Region. The maximum allowable sport harvest objective for the Eastern Region was 232 lions, of which sport hunters took 110. This harvest level represented an 88% increase over the previous year's sport harvest.

Mountain lion population trends remain stable within the Eastern Region. Although some of the more accessible and popular lion hunting areas may hold depressed populations, there are sufficient base populations of lions to allow for adequate reproduction and population maintenance. The dispersal of lions from adjacent mountain ranges with little or no harvest mortality moderates the effects of harvest in more heavily hunted areas. The base populations of prey species on which mountain lions depend most heavily (mule deer, porcupines) are currently at levels expected to continue to sustain healthy lion populations.

Table 3. Ten year Eastern Region mountain lion harvest trend – all known mortalities.

Season Year	Season Length	Maximum Allowable Sport Harvest	Sport Harvest	Depredation Mortality	Other Mortality	Total Mortality
2003-04	365	167	115	9	0	124
2004-05	365	167	59	10	7	76
2005-06	365	167	59	6	5	70
2006-07	365	167	56	12	6	74
2007-08	365	167	55	10	0	65
2008-09	365	167	54	11	3	68
2009-10	365	143	74	18	6	98
2010-11	365	143	71	13	3	87
2011-12	365	232	59	11	4	74
2012-13	**365**	**232**	**110**	**20**	**3**	**133**
Averages	365	175	71.2	12	3.7	86.9

Table 4. Eastern Region mountain lion harvest limits and mortalities by type for 2012-2013.

Management Area	Harvest Limit	Mortality Type				
		Sport	Depredation	Predator Projects	Other	Total
6	Regional 232	20	0	0	0	20
7 and 8		7	1	0	1	9
9		0	0	0	0	0
10		31	2	0	1	34
11		32	7	5	0	44
12		6	0	0	0	6
13		5	4	0	0	9
14		7	0	0	1	8
15		2	1	0	0	3
Totals	**232**	**110**	**15**	**5**	**3**	**133**

Southern Region: Areas 16, 17, 21, 22, 23, 24, 25, 26 and 27

Report by: Mike Scott

Harvest Results

The 2012-2013 mountain lion season ran from March 1, 2012 through February 28, 2013 in all areas of the Southern Region, with the exception of Area 28, which remains closed to mountain lion hunting. Harvest limits in all areas were combined to form a regional harvest limit of 99 lions. Table 1 displays a comparison of total lion take for the last ten years. Table 2 displays the regional lion sport harvest and other lion mortalities by Management Area for the March 1, 2012 – February 28, 2013 season.

Table 1: Comparison of Southern Region total lion take by management area for the last ten years

Mgt Area	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	**2012-13**
16	6	0	4	5	6	3	11	8	5	**3**
17	7	3	7	10	10	8	4	4	3	**3**
21	0	0	0	2	1	0	0	0	0	**0**
22	7	5	4	1	6	6	3	6	13	**12**
23	4	0	5	1	1	6	2	4	2	**9**
24	2	2	3	4	5	4	4	7	5	**6**
25	0	0	0	0	1	3	1	1	0	**1**
26	3	3	0	2	4	2	0	1	1	**1**
27	0	0	0	2	0	0	0	0	1	**0**
Totals	**29**	**13**	**23**	**27**	**34**	**32**	**25**	**31**	**30**	**35**

Table 2: All Southern Region cougar mortalities by type and management area for 2012-2013.

Management Area Groups	Harvest Limit	Sport Harvest	Depredation Mortality	Predator Project	Total Mortality
16	*Regional*	3	0	0	**3**
17		3	0	0	**3**
21		0	0	0	**0**
22		12	0	0	**12**
23		8	1	0	**9**
24		4	0	2	**6**
25		1	0	0	**1**
26		1	0	0	**1**
27		0	0	0	**0**
Totals:	**99**	**32**	**1**	**2**	**35**

Regional sport harvest for the 2012-2013 season consisted of 32 lions, which exceeded the annual sport harvest of between 25 and 26 lions taken during the previous 4 seasons. One lion that was observed in a yard near a residence was removed by a landowner in Area 23. Two lions were taken as part of the Delamar Mountain Bighorn Protection Project. Regional lion depredation complaints have averaged only 2.6 per year (range 0 to 8) during the last 10 seasons (2003-2013).

Population Trend

The 2012-2013 Southern Region mountain lion sport harvest consisted of 24 males and 8 females for a male to female ratio of 3:1. The 5-year average is 1.5:1. The total lion take in 2012-2013 was the highest in the past decade. The total mortality of 35 lions was 21% above the average of 29 recorded over the last ten years (2003 – 2013). Both sport harvest and the combined lion take in the Southern Region were well below the 2012-2013 harvest limit of 99 (Tables 1-4).

Table 3: Ten Year Southern Region mountain lion harvest trend – all known mortalities.

Season Year	Season Length	Harvest Limits	Harvest Type			
			Sport	Depredation	Other	Total
2003-2004	365	68	29	5	3	**37**
2004-2005	365	68	13	0	0	**13**
2005-2006	365	68	21	2	0	**23**
2006-2007	365	68	27	0	2	**30**
2007-2008	365	68	32	2	1	**34**
2008-2009	365	68	25	3	4	**32**
2009-2010	365	60	25	0	0	**25**
2010-2011	365	60	25	5	1	**31**
2011-2012	365	99	26	3	1	**30**
2012-2013	**365**	**99**	**32**	**1**	**2**	**35**
Averages:	**365**	**72.6**	**25.5**	**2.1**	**1.4**	**29**

The average age of cougars taken by sport hunters in the Southern Region was 4.2, down slightly from last year (Table 4). The average female age remained low (3.6) and was the same as last year. Male average age of sport harvested lions dropped from 4.8 last year to 4.4. Based on population estimates,

sex and age ratios in the harvest, long-term harvest data analysis, and recorded mortality, the overall Southern Region mountain lion population trend is considered stable. Andreasen et al's (2012) analysis of cougar genetic data specific to Nevada corroborates this finding and suggests the area may even act as a source population for other meta-populations in the Great Basin.

Management Conclusions

The sport harvest of 32 mountain lions exceeded the previous year's sport harvest of 26 lions by 23%. Three depredation lions were taken in the southern region during the reporting period. Average precipitation was received throughout the Southern Region during 2012, which should result in continued availability of prey species. The western portion of the Southern Region (Areas 16, 17, & 21) accounted for 19% of the Southern Region lion harvest compared to 28% in 2011-2012. The conclusion drawn from looking at data from both sport-harvested lions as well as other mountain lion mortality reports was the mountain lion population in the Southern Region continues to be stable.

Table 4: Southern Region sport harvest – ten-year sex and age comparisons.

Season/Year	Sport Harvest		Average Age		
	# Males	# Females	Males	Females	All Lions
2003-2004	18	11	3.4	3.8	3.6
2004-2005	6	7	5.9	3.6	4.7
2005-2006	15	8	4.7	3.4	4.3
2006-2007	14	16	4.1	4.0	4.0
2007-2008	18	14	4.8	4.6	4.7
2008-2009	11	14	3.6	4.0	3.8
2009-2010	13	12	5.0	4.5	4.8
2010-2011	13	12	5.2	3.5	4.6
2011-2012	16	9	4.8	3.6	4.3
2012-2013	**24**	**8**	**4.4**	**3.6**	**4.2**

BLACK BEAR

Western Region

Report by: Carl Lackey

This status report contains information for the 2012 calendar year. Specific data on all black bears handled by department personnel were first recorded in 1997 with a sample size of 12 individuals. Subsequent yearly samples for the last ten years are depicted in Table 1. These figures are for all bears handled including recaptures and all documented mortalities.

Table 1. Bears handled in the Western Region 2003-2012.

Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	**2012**
Bears Captured	44	69	74	88	159	68	40	79	78	**83**
Cumulative Total (since 1997)	240	309	383	471	630	698	738	817	895	**978**

Includes recaptured bears previously handled and marked in the same or preceding years.

NDOW maintains a database containing various data on all bears captured or handled since 1997. Bears that were captured and released have been routinely marked with ear tags and tattoos since 1998. PIT tags were first applied in 2010 as an additional means of permanently marking each bear. To date NDOW has marked/released 360 bears and has collected data on 595 individual bears.

Harvest

Results from the 2012 hunt are listed in the Appendix section.

Conflicts

In 2012 human-bear conflicts increased 82% over the conflicts recoreded in 2011 with NDOW personnel handling approximately 237 complaints and reports of bears. 2012 was considered a drought year and the resulting lack of natural foods was likely the main reason for the increase. Yearly conflicts vary in number depending on climatic conditions and other factors but when the conflict history is viewed as 5-year periods, it is clear that they continue to rise (Figure 1).

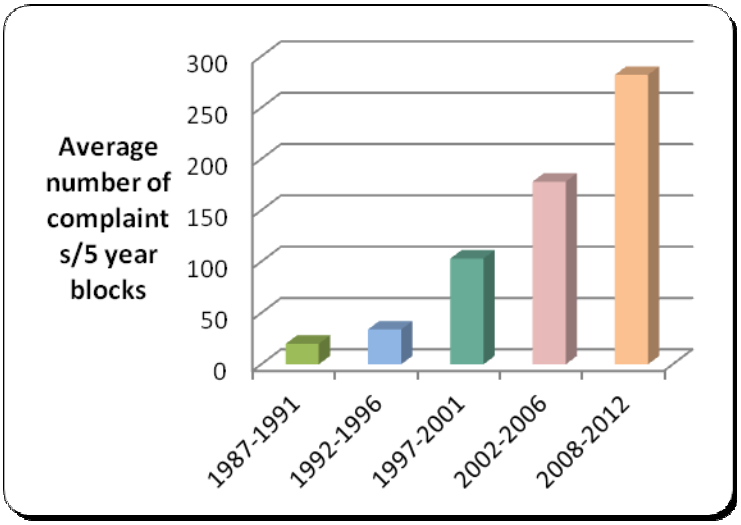


Figure 1. Statewide human-bear conflicts by 5-year block-(2007 withdrawn)

Calls are usually either routed through NDOW dispatch or they are received by the biologist/wardens directly. The first option is to advise the complainant of ways to avoid conflicts by restricting access to human foods. If the conflict persists or if the bear has caused substantial property damage NDOW personnel will usually respond to the area and investigate. Per NDOW policy, if the bear is classified as a Category 1 or 2 (dangerous, aggressive or depredating) personnel will respond, investigate and if necessary, attempt to capture the bear. The majority of complaints received pertained to conflict bears accessing garbage or

other sources of human foods. Other common complaints were bears breaking into garbage enclosures or sheds, damage to fruit trees, bears breaking into homes and vehicles and bears frequenting a particular area. All of these were directly related to bears having access to human foods, which historically accounts for >95% of the total number of calls received.

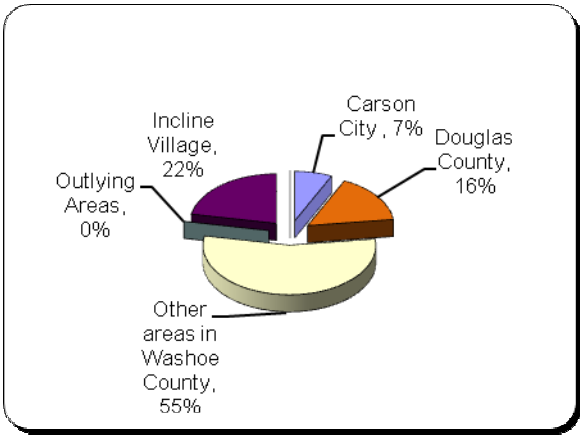


Figure 2. Human-bear conflicts by county of origin.

Conflicts were predominantly from Washoe County (77%), and in particular Incline Village which accounted for 22% of all calls received statewide (Figure 2). Property damage for the year was reported at about $14,000. It should be noted that most people don't report damage unless it is significant and even then, these figures are not often recorded.

Seventy-four individual bears were handled on approximately 83 events (includes recaptures and multiple captures per event), including about 12 bears that were handled for research purposes only. Of the 74, 56 were first-event bears (those not previously captured or handled). Additionally, some bears were caught incidental to ongoing complaints but not necessarily as conflict bears.

Thirty-three of the first-event bears handled were tagged and released, while 23 were documented as mortalities on the initial incident, i.e. sport hunt, unknown bears hit by vehicles, etc. (Table 3). An account of age cohorts for all first-event bears (minus two of unknown age/gender) handled is summarized below in Table 2, which contains figures for both conflict and research captured bears. Most bears were either caught in culvert traps or by free-ranging capture techniques. Seventeen cubs of the year were handled; with 15 of these being marked and released (two were hit by vehicles).

Table 2. Number sampled, age cohort and sex of all first-event bears for past 10 years with average age in years for adults.

Age cohort	Sex	2003	2004	2005	2006	2007	2008	2009	2010	2011	**2012**
Cubs ≤ 12mo.	♂	4	8	7	9	12	5	5	1?	7	**9**
	♀	4	8	3	4	17	2	0	1?	7	**8**
Sub-adults 1 – 3 yrs	♂	4	7	9	8	25	12	4	3	11	**9**
	♀	5	1	5	6	11	4	3	8	6	**2**
#Adults 4+ yrs / Avg. Age	♂	3 @ 7.0	2 @ 7.5	2 @ 6.5	17 @ 6.2	21 @ 7.6	5 @ 5.2	6 @ 5.2	13@ 6.2	15@ 7.2	**17@ 6.1**
	♀	2 @ 7.5	6 @ 6.5	2 @ 11.0	5 @ 7.8	23 @ 8.9	1 @ 6.0	2 @ 13.5	8@ 6.6	8@ 8.5	**9@ 8.2**

Bears of unknown gender and/or age are not included.

The Departments public education program, *Bear Aware*, has remained static over the last four years due to funding shortfalls. Handout materials are limited to stock on hand. Regardless, several public presentations were given throughout the year.

Mortalities

There were 31 documented mortalities recorded this year, (Table 3) and 8 of these were marked bears (recaptures). The total consisted of 25 males, 4 females and two of unknown gender. There were five bears killed through management for public safety reasons or chronic nuisance behavior, all males. One young adult male was killed in a non-target Wildlife Services snare in the Virginia Mountains of Unit 022, an area classified as historical habitat. Wildlife Services also removed two depredating bears responsible for killing 15 domestic sheep with a total value of approximately $5,600. Anthropogenic reasons other than legal hunting are the leading cause of documented bear mortalities in Nevada.

Table 3. Documented Mortalities 2003-2012

Mortality Type	2003	2004	2005	2006	2007	2008	2009	2010	2011	**2012**	Total (1997-present)
Hit by Car	4	9	14	22	35	6	8	8	3	**9**	**158**
Public Safety	2	3	1	4	10	17	3	12	8	**4**	**79**
3 – Strikes	NA	NA	NA	NA	1	6	3	8	0	**1**	**19**
Depredation	0	0	2	5	5	1	0	2	1	**2**	**32**
Sport Hunt	NA	NA	NA	NA	NA	NA	NA	NA	14	**11**	**25**
Illegal	0	0	0	0	3	0	0	1	1	**0**	**6**
Other	4	1	0	1	8	2	1	3	6	**4**	**39**
Total	10	13	17	32	62	32	15	34	33	**31**	**358**
Cumulative Total (since 1997)	89	102	119	151	213	245	260	294	327	**358**	

Marked Nevada bears killed in other states (20 since 2001) are not recorded in Table 1.

Expenditures

Expenditures for the time period covered by this report include monies spent on drugs and medical supplies, bear trap maintenance and capture equipment. Monies spent on controlled substances totaled approximately $1900. For all operating accounts (Category 58) plus two Wildlife Heritage Trust account projects ($70,000), a total of $83,722 was expended in calendar year 2012 for bear management related activities. This figure includes $3,108 spent from the *Bear Logic* public education program. Expenditures for salary and mileage are not included in these figures.

Research

NDOW continues to cooperate with the Wildlife Conservation Society, the University of Nevada, Reno, Columbia University (New York) and the University of Tennessee on ongoing research projects. Two of these projects received funding from the Wildlife Heritage Trust Account, totaling $70,000. Ongoing projects include: DNA mapping; Production and recruitment of wildland bears; and an Isotope analysis of urban/wildland bears.

Status

Nevada's bear population is believed to be an artifact of the larger Sierra Nevada population, estimated at 10,000-15,000 bears. Viable populations of black bears exist in the Carson Range of the Sierra Nevada, the Pinenut Mountains, Virginia Range, Peavine Mountain, Pine Grove Hills, Wassuk Range, Sweetwater Mountains, East Walker River area, and likely the Excelsior Range. Occupation in historical habitat has been documented but it is unknown at this time if these are viable populations or just bears in a transient state. One can conclude from these analyses and long-term trends in the data set, along with empirical data collected from captured bears, sightings and mortalities that Nevada's black bear population is thriving, and is likely increasing in distribution. The thresholds of harvest

criteria set forth in the Black Bear Management plan were not met in 2012, indicating that legal harvest was light and could be increased in the future.

The bear population, as evidenced by annual conflict complaints, depends on adequate production of natural food resources such as soft mast (berries), hard mast (pine nuts), forbs, grasses, insects and a mammalian prey base. These resources are most often dependent upon annual climatic conditions, thus when northern Nevada experiences drought conditions, bears will seek out other sources of food causing human-bear conflicts to increase. The winters of 2011 and 2012 registered below average for precipitation and at the time of this writing, the spring of 2013 is one of the driest on record. This could result in an increase of human-bear conflicts for the upcoming summer. Nonetheless, the long-term viability of the bear population appears favorable. Modeled population estimates were calculated in 2008 at 262±31, and in 2011 at 456±39 for the area encompassing the Carson Range, the Virginia Range and the western portion of the Pinenut Mountains. The population estimate for western Nevada is 400-700 black bears.

APPENDIX

Harvest, Survey, and Population Tables

APPENDIX - TABLE OF CONTENTS
Harvest, Survey, and Population Tables

TABLE 1. 2012 MULE DEER HARVEST BY POINT CLASS AND UNIT FOR ALL HUNTS

Unit of Harvest	Does	Fawns		Bucks by Antler Points						Unit Buck Total	Unit Group Buck Total	% 4+ pts	TOTAL DEER
		Female	Male	1	2	3	4	5	6+				
011	3		1	1	13	25	26	1	1	67			
012	1			4	12	11	15	3		45			
013	2			2	16	19	21	3		61	173	40%	180
014	2			1	10	44	59	4	2	120	120	54%	122
015	2		1	1	2	5	6	1		15	15	47%	18
021	1			1	6	16	18	1	1	43	43	47%	44
022					6	10	29	3		48	48	67%	48
031	4			5	28	48	47	3	1	132	132	39%	136
032	3			6	23	37	20	5		91	91	27%	94
033				1	10	26	12		1	50	50	26%	50
034					1	10	8	1		20	20	45%	20
035	2			3	10	29	23	2	2	69	69	39%	71
041	1				10	3	4			17			
042	1			2	1	3		1		7	24	21%	26
043	5			3	33	28	23	2		89			
044	1			2	10	17	8	1		38			
045				2	2	4	5			13			
046	2			1	5	10	14	2		32	172	32%	180
051	21		1	10	68	58	43	7	1	187	187	27%	209
061	11		1	4	57	77	92	9	2	241			
062	117	5	10	11	143	154	237	23	8	576			
064	36		1	1	34	37	44	3	3	122			
066	20			1	19	26	25	1	1	73			
067	14		2	2	21	23	54	7	2	109			
068	31		3	4	33	41	51	13	2	144	1,265	46%	1,516
065	1			1	10	15	31	4	1	62	62	58%	63
071	9			13	77	63	75	8	3	239			
072	9	1	1	10	71	65	86	9		241			
073	10	1		8	38	46	52	6	1	151			
074	4				14	15	16	1	1	47			
075	8			4	86	93	118	5		306			
076	2			2	15	12	39	2		70			
077	1			3	35	27	43	1	1	110			
078	1		1	1	10	8	6	2		27			
079	1				13	4	12			29			
091	1					1	2			3	1,223	40%	1,273
081					4	9	20	4		37	37	65%	37
101	123	4	12	28	164	131	144	13	5	485			
102	334	9	20	39	272	245	234	28	6	824			
103	9			15	76	46	23	2	1	163			
104	6			6	47	32	21	3	1	110			
105					3	5	3	2		13			
106	1		1		8	3	6			17			

hunt returns thru 3/26/13

TABLE 1. 2012 MULE DEER HARVEST BY POINT CLASS AND UNIT FOR ALL HUNTS

Unit of Harvest	Does	Fawns		Bucks by Antler Points						Unit Buck Total	Unit Group Buck Total	% 4+ pts	TOTAL DEER
		Female	Male	1	2	3	4	5	6+				
107				4	2	2	2			10			
108	4		1	6	35	20	10		2	73			
109	17				11	6	4			21	1,716	30%	2,257
111	27		4	13	123	63	49	3	1	252			
112					4	3	9			16			
113	3			1	7	5	5	1		19	287	24%	321
114	10		3	2	13	4	11	2	1	33			
115	17			3	16	14	19		2	54	87	40%	117
121	3			16	84	46	37	5		188	188	22%	191
131	6	1	1	4	63	51	74	9	3	204			
132					9	10	14	4	2	39			
133					2	2	4			8			
134					2	1	5	1		9	260	45%	268
141	4			4	29	26	32	7	2	100			
142				1	10	5	3			19			
143				1	19	12	8			40			
144	5	3		9	61	46	30	1		147			
145	1	1		3	16	7	9			35	341	27%	355
151	7			9	54	44	43			150			
152	5			5	46	40	59	4	1	155			
153				2	12	14	13			41			
154	3			5	28	35	23	2	2	95			
155	1			3	26	25	20		1	75			
156	2			1	2	7	2			12	528	32%	546
161	13		1	5	37	41	32	4		119			
162	4		1	4	25	39	35	4		107			
163	4			1	8	8	8	1		26			
164	2				2	6	4		1	13	265	34%	290
171	8		1	4	22	21	19	1		67			
172	2	1		4	20	11	8			43			
173	23			12	71	47	43	3		176	286	26%	321
181	2		1	3	5	11	11	2	2	34			
182				1	3	2				6			
183	1			2	6	10	11	1	1	31			
184	1				12	5	7			24	95	37%	100
192	4			1	15	14	17	3	1	51	51	41%	55
194					4	17	46	10	4	81			
196	1				4	12	27	3	1	47	128	71%	129
195				2	11	5	8	1		27	27	33%	27
201	3			2	15	16	17	2	1	53			
204	1				6	7	11	2		26	79	42%	83
202	1			1	16	19	13	1		50			
205						3	2			5			

hunt returns thru 3/26/13

TABLE 1. 2012 MULE DEER HARVEST BY POINT CLASS AND UNIT FOR ALL HUNTS

Unit of Harvest	Does	Fawns		Bucks by Antler Points						Unit Buck Total	Unit Group Buck Total	% 4+ pts	TOTAL DEER
		Female	Male	1	2	3	4	5	6+				
206				2		5		1		8	63	27%	64
203	4		1	2	13	25	14	4	2	60	60	33%	65
211					7	5	9			21			
212					7	9	8	1		25	46	39%	46
221	4			3	34	28	40	5	6	116			
222	14		2	4	53	37	58	5	2	159			
223	3			2	18	6	11	5		42	317	42%	340
231	7	1		4	43	49	97	12	8	213	213	55%	221
241		1		1	2	7	16	6	3	35			
242	2				6	9	17	2	2	36			
243						1	3			4			
245					3	2	1			6	81	62%	84
251	2				3	3	9			15			
252					1					1	16	56%	18
261					2	2		1		5			
262		2	1	1	8	12	12	1		34			
263					2	1				3			
265							1			1	43	35%	46
271		1			2		6	1	1	10			
272					1	8	2	2	1	14	24	54%	25
291	2			1	16	23	11			51	51	22%	53
TOTAL	**1,023**	**31**	**72**	**352**	**2,693**	**2,595**	**2,934**	**309**	**100**	**8,983**		**37%**	**10,109**

Total Antlerless Harvest 1,126

SPECIAL TAGHOLDER HARVEST BY UNIT

HUNT	UNIT	#
PIW	022	1
PIW	065	1
PIW	081	1
PIW	194	6
PIW	196	2
PIW	221	1
PIW	222	1
PIW	223	1
SILVER	061	1
DREAM	021	1

TABLE 2. FOUR-POINT OR BETTER MULE DEER HARVEST BY UNIT GROUP, 2003-2012

Unit Group	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
011- 013	59%	55%	59%	51%	47%	59%	56%	51%	56%	40%
014	50%	62%	61%	59%	38%	49%	60%	51%	48%	54%
015	70%	46%	59%	52%	40%	50%	44%	53%	59%	47%
021	65%	48%	69%	63%	60%	50%	48%	42%	56%	47%
022	55%	56%	51%	50%	48%	48%	50%	48%	73%	67%
031	38%	52%	51%	51%	44%	46%	54%	46%	36%	39%
032	42%	27%	45%	36%	39%	34%	43%	38%	24%	27%
033	57%	49%	53%	51%	45%	38%	44%	51%	49%	26%
034	37%	45%	64%	59%	49%	36%	75%	62%	56%	45%
035	39%	40%	59%	46%	49%	63%	60%	67%	40%	39%
041, 042	29%	39%	47%	42%	41%	55%	58%	55%	43%	21%
043 - 046	31%	38%	43%	38%	47%	49%	47%	47%	34%	32%
051	34%	34%	36%	34%	39%	39%	46%	33%	29%	27%
061,062,064,066-068	37%	46%	45%	44%	47%	47%	47%	44%	49%	46%
065	32%	58%	53%	60%	64%	72%	64%	65%	71%	58%
071 - 079, 091	26%	30%	39%	42%	41%	38%	43%	41%	40%	40%
081	54%	61%	42%	59%	58%	59%	84%	71%	78%	65%
101 - 108	31%	35%	30%	34%	33%	33%	39%	39%	37%	30%
111 - 113	27%	22%	32%	29%	21%	27%	32%	27%	31%	24%
114, 115	46%	59%	53%	57%	43%	44%	46%	48%	59%	40%
121	28%	39%	30%	32%	20%	31%	32%	28%	32%	22%
131 - 134	40%	50%	45%	50%	43%	44%	53%	43%	56%	45%
141 - 145	31%	31%	32%	28%	29%	37%	36%	40%	35%	27%
151, 152, 154, 155	39%	33%	38%	38%	40%	48%	54%	49%	42%	32%
161 - 164	35%	43%	36%	40%	29%	46%	47%	34%	35%	34%
171 - 173	43%	38%	39%	36%	33%	41%	45%	33%	36%	26%
181 - 184	26%	37%	38%	28%	37%	49%	41%	40%	39%	37%
192	45%	50%	51%	43%	51%	35%	35%	46%	17%	41%
194, 196	58%	62%	73%	66%	61%	62%	59%	54%	68%	64%
195	65%	60%	38%	49%	35%	35%	46%	52%	38%	66%
201, 204	29%	37%	31%	39%	43%	30%	45%	17%	25%	42%
202, 205, 206	24%	39%	37%	43%	31%	44%	46%	38%	53%	27%
203	48%	29%	39%	37%	38%	28%	34%	26%	35%	33%
211, 212	24%	63%	47%	24%	29%	33%	42%	64%	30%	39%
221 - 223	36%	57%	46%	47%	37%	48%	48%	48%	48%	42%
231	45%	49%	50%	57%	51%	61%	69%	61%	65%	55%
241 - 245	68%	69%	62%	52%	56%	66%	65%	76%	74%	62%
251 - 253	68%	44%	67%	40%	54%	72%	54%	31%	65%	56%
261 - 268	29%	48%	41%	13%	7%	25%	40%	52%	27%	35%
271, 272	50%	73%	73%	57%	35%	55%	70%	90%	44%	54%
291	56%	44%	43%	42%	51%	40%	41%	46%	23%	22%
Statewide	**36%**	**39%**	**40%**	**40%**	**38%**	**41%**	**46%**	**42%**	**42%**	**37%**

*Includes harvest from all hunts and weapon classes

TABLE 3. 2012 MULE DEER JUNIOR HUNT RESULTS BY UNIT GROUP

UNIT GROUP	Apps*	1st Draw tag sales	Tags Sold	Tags Avail	Draw Odds*	% Return**	# Succ. Hunters	% Hunter Success***	% Bucks
011 - 013	100	68	68	67	2 to 1	99%	34	50%	79%
014	61	30	30	30	3 to 1	100%	23	77%	91%
015	30	15	15	15	2 to 1	93%	7	47%	57%
021	36	13	13	13	3 to 1	92%	9	69%	89%
022	25	10	10	10	3 to 1	100%	8	80%	100%
031	73	67	67	67	1 to 1	96%	55	84%	93%
032	43	40	40	40	1 to 1	93%	25	65%	88%
033	31	24	24	24	2 to 1	88%	14	63%	100%
034	8	8	8	8	1 to 1	88%	3	38%	100%
035	40	40	40	40	1 to 1	90%	28	75%	93%
041, 042	19	15	15	15	2 to 1	100%	8	53%	75%
043 - 046[A]	99	86	86	86	2 to 1	95%	54	64%	85%
051	94	94	122	122	1 to 1	90%	54	47%	70%
061, 062, 064, 066 - 068	402	400	400	399	1 to 1	94%	246	64%	80%
065	16	16	16	16	1 to 1	94%	11	69%	91%
071 - 079, 091	349	348	397	397	1 to 1	94%	271	71%	82%
081	21	13	13	13	2 to 1	85%	9	77%	100%
101 - 108	240	240	303	302	1 to 1	91%	166	57%	56%
111 - 113	181	176	176	176	1 to 1	94%	113	66%	70%
114, 115	83	83	83	83	1 to 1	98%	37	45%	68%
121	91	88	88	88	1 to 1	90%	45	55%	93%
131 - 134	142	100	100	100	2 to 1	94%	68	70%	88%
141 - 145	114	114	114	114	1 to 1	95%	74	67%	81%
151, 152, 154, 155	123	123	147	147	1 to 1	91%	89	63%	80%
161 - 164	129	129	142	142	1 to 1	96%	86	62%	71%
171 - 173	128	128	178	178	1 to 1	93%	82	48%	57%
181 - 184	66	65	65	65	1 to 1	97%	22	34%	77%
192	36	24	24	24	2 to 1	96%	18	75%	78%
194, 196	135	34	34	34	4 to 1	100%	31	91%	100%
195	18	9	9	9	2 to 1	100%	6	67%	83%
201, 204	46	27	27	27	2 to 1	89%	17	67%	76%
202, 205, 206	40	34	34	34	2 to 1	88%	14	44%	93%
203	27	23	23	23	2 to 1	100%	13	57%	62%
211, 212	10	10	10	10	1 to 1	100%	7	70%	100%
221 - 223	205	151	151	151	2 to 1	91%	83	58%	72%
231	145	60	60	60	3 to 1	97%	47	80%	85%
241 - 245	91	28	28	28	4 to 1	100%	19	68%	84%
251 - 253	17	17	28	28	1 to 1	93%	10	36%	80%
261 - 268	38	16	16	16	3 to 1	94%	13	81%	77%
271, 272	24	8	8	8	3 to 1	88%	3	38%	67%
291	26	16	16	16	2 to 1	100%	8	50%	75%
TOTALS	**3,602**	**2,990**	**3,228**	**3,225**	**2 to 1**	**93%**	**1,930**	**62%**	**78%**

Apps - # of 1st choice applicants plus successful applicants as 2nd - 5th choice

Tags Sold - total tags sold from first 2 draws and tags sold during the first come first serve process; Commission approved tag quota in 2012 was 3,625 for the Junior 1107 Hunt

** % Return - Percent of hunter return cards received compared to total tags sold

*** % Hunter Success - based on # of successful hunters divided by total tags sold

TABLE 4. 2012 MULE DEER HUNT RESULTS BY HUNT AND UNIT GROUP

UNIT GROUP	Apps	Tags Sold	Tags Avail	Draw Odds*	% Return**	# Succ. Hunters	% Hunter Success***	% 4+pts
RESIDENT PIW ANTLERED MULE DEER ANY LEGAL WEAPON HUNT 1000								
STATEWIDE	2,990	22	22	136 to 1	95%	15	68%	80%
HERITAGE MULE DEER ANY LEGAL WEAPON HUNT 1100 AND 1201								
STATEWIDE		2	2		100%	0	0%	--
SILVER STATE MULE DEER ANY LEGAL WEAPON HUNT 1300								
STATEWIDE	1,830	1	1	1830 to 1	100%	1	100%	100%
DREAM TAG MULE DEER ANY LEGAL WEAPON HUNT 1500								
STATEWIDE		1	1		100%	1	100%	0%
RESIDENT AND NONRESIDENT MULE DEER LANDOWNER DAMAGE COMPENSATION HUNT 1115 AND 1215								
011, 013		6	6		83%	4	67%	75%
015		1	1		100%	0	0%	--
031		16	16		100%	11	69%	55%
032		5	5		100%	3	60%	0%
034		9	9		100%	9	100%	56%
035		10	10		100%	7	70%	29%
051		8	8		100%	6	75%	67%
062		4	4		75%	1	25%	100%
065		2	2		100%	2	100%	50%
073		4	4		100%	3	75%	33%
081		1	1		100%	0	0%	--
101 -103		45	45		93%	30	69%	48%
111		2	2		100%	1	50%	100%
114, 115		9	9		100%	4	44%	100%
131, 132		11	11		100%	5	45%	100%
141 - 144		14	14		93%	10	71%	70%
152, 154		5	5		100%	4	80%	75%
163		1	1		100%	0	0%	--
223		1	1		100%	1	100%	100%
231		61	61		95%	32	54%	81%
241, 242, 245		11	11		100%	5	45%	80%
TOTALS		**226**	**226**		**96%**	**138**	**62%**	64%
RESIDENT ANTLERED MULE DEER ANY LEGAL WEAPON HUNT 1331								
011 - 013 Early	560	197	183	3 to 1	97%	82	42%	32%
011 - 013 Late	339	49	47	7 to 1	100%	26	53%	46%
014 Early	335	78	76	5 to 1	100%	56	72%	59%
014 Late	367	26	25	15 to 1	100%	19	73%	63%
015	166	30	30	6 to 1	97%	7	23%	57%

hunt returns thru 3/26/13

TABLE 4. 2012 MULE DEER HUNT RESULTS BY HUNT AND UNIT GROUP

UNIT GROUP	Apps	Tags Sold	Tags Avail	Draw Odds*	% Return**	# Succ. Hunters	% Hunter Success***	% 4+pts
021	294	47	46	7 to 1	94%	27	60%	41%
022	292	52	52	6 to 1	96%	30	60%	77%
031	517	128	98	5 to 1	96%	55	44%	38%
032	169	80	78	3 to 1	98%	47	60%	33%
033 Early	108	54	35	2 to 1	100%	17	31%	12%
033 Late	177	25	19	8 to 1	100%	11	44%	18%
034	78	20	20	4 to 1	80%	4	25%	25%
035	143	56	55	3 to 1	100%	35	63%	46%
041, 042	179	34	33	6 to 1	94%	13	38%	15%
043 - 046 Early	448	171	168	3 to 1	91%	75	46%	29%
043 - 046 Late	219	55	54	4 to 1	89%	17	33%	24%
051 Early	371	213	210	2 to 1	94%	85	41%	22%
051 Late	112	24	23	5 to 1	100%	10	42%	20%
061, 062, 064, 066 - 068 E	2,215	1,715	1,677	2 to 1	94%	756	45%	40%
061, 062, 064, 066 - 068 L	810	181	174	5 to 1	94%	105	60%	62%
065	302	70	70	5 to 1	99%	39	56%	59%
071 - 079, 091 Early	1,606	1,271	1,247	2 to 1	95%	630	51%	34%
071 - 079. 091 Late	794	219	216	4 to 1	97%	135	63%	53%
081	293	53	53	6 to 1	92%	19	38%	74%
101 - 109 Early	1,674	1,656	1,640	1 to 1	92%	487	31%	20%
101 - 109 Mid	1,480	1,553	1,540	1 to 1	92%	490	33%	39%
101 - 109 Late	679	414	411	2 to 1	95%	173	43%	25%
111 - 113 Early	807	425	420	2 to 1	93%	129	32%	13%
111 - 113 Late	256	48	47	6 to 1	100%	31	65%	39%
114, 115 Early	125	62	59	3 to 1	94%	24	40%	33%
114, 115 Late	59	16	16	4 to 1	94%	3	19%	67%
121 Early	328	199	196	2 to 1	96%	101	52%	17%
121 Late	138	10	10	14 to 1	90%	7	70%	29%
131 - 134 Early	637	234	225	3 to 1	95%	138	60%	36%
131 - 134 Late	293	13	13	23 to 1	85%	10	85%	70%
141 - 145 Early	516	425	417	2 to 1	93%	165	40%	21%
141 - 145 Late	144	50	39	3 to 1	94%	21	44%	43%
151 - 156 Early	861	749	742	2 to 1	94%	301	41%	28%
151 - 156 Late	185	91	91	3 to 1	98%	44	48%	41%
161 - 164 Early	562	319	318	2 to 1	94%	139	45%	29%
161 - 164 Late	235	37	37	7 to 1	86%	22	65%	55%
171 - 173 Early	616	459	449	2 to 1	93%	117	26%	21%
171 - 173 Late	266	114	112	3 to 1	90%	44	40%	32%
181 - 184	359	184	184	2 to 1	97%	65	36%	37%
192	176	44	43	4 to 1	100%	28	64%	46%
194, 196	1,234	75	75	17 to 1	99%	67	89%	73%
195	150	20	20	8 to 1	100%	13	65%	23%
201, 204	312	92	91	4 to 1	99%	54	59%	39%

hunt returns thru 3/26/13

TABLE 4. 2012 MULE DEER HUNT RESULTS BY HUNT AND UNIT GROUP

UNIT GROUP	Apps	Tags Sold	Tags Avail	Draw Odds*	% Return**	# Succ. Hunters	% Hunter Success***	% 4+pts
202, 205, 206	215	81	81	3 to 1	99%	38	47%	32%
203	150	69	68	3 to 1	99%	39	57%	33%
211, 212	96	42	42	3 to 1	95%	26	64%	38%
221 - 223 Early	1,118	560	546	2 to 1	94%	190	35%	33%
221 - 223 Late	559	30	28	19 to 1	90%	14	50%	71%
231	1,418	177	175	9 to 1	97%	111	64%	48%
241 - 245	777	97	91	9 to 1	99%	49	51%	59%
251 - 253	71	36	35	2 to 1	94%	4	11%	75%
261 - 268	362	44	44	9 to 1	93%	26	61%	35%
271, 272	108	36	35	3 to 1	100%	17	47%	47%
291	237	65	64	4 to 1	100%	36	55%	25%
TOTALS	**28,097**	**13,374**	**13,093**	**3 to 1**	**94%**	**5523**	**42%**	34%
RESIDENT ANTLERED MULE DEER MUZZLELOADER HUNT 1371								
011 - 013	30	8	6	4 to 1	100%	3	38%	33%
014	54	11	7	5 to 1	100%	4	36%	75%
015	16	5	3	4 to 1	100%	1	20%	0%
021	14	3	3	5 to 1	100%	2	67%	0%
022	12	2	1	6 to 1	100%	1	50%	100%
031	23	7	6	4 to 1	71%	2	29%	0%
032	12	7	7	2 to 1	100%	4	57%	25%
033	9	5	3	2 to 1	100%		0%	--
034	4	2	2	2 to 1	100%	1	50%	0%
035	5	4	4	2 to 1	75%		0%	--
041, 042	10	3	2	4 to 1	100%	2	67%	50%
043 - 046	43	24	24	2 to 1	92%	10	42%	60%
051	50	38	38	2 to 1	97%	15	39%	13%
061, 062, 064, 066 - 068	185	134	129	2 to 1	98%	45	34%	40%
065	22	5	5	5 to 1	100%	3	60%	67%
071 - 079, 091	165	147	145	2 to 1	95%	56	39%	30%
081	32	6	6	6 to 1	83%	4	67%	75%
101 - 109	228	377	374	1 to 1	93%	95	26%	20%
111 - 113	70	30	29	3 to 1	97%	12	40%	25%
114, 115	146	46	44	4 to 1	96%	15	33%	53%
121	44	19	19	3 to 1	95%	14	74%	21%
131 - 134	136	32	32	5 to 1	94%	20	66%	60%
141 - 145	42	34	34	2 to 1	100%	20	59%	25%
151 - 156	83	79	78	1 to 1	96%	33	43%	33%
161 - 164	51	32	32	2 to 1	88%	7	25%	43%
171 - 173	145	136	133	1 to 1	91%	35	27%	14%
181 - 184	15	11	11	2 to 1	100%	2	18%	100%
192	9	4	4	3 to 1	100%		0%	--
194, 196	54	5	5	11 to 1	100%	5	100%	20%

hunt returns thru 3/26/13

TABLE 4. 2012 MULE DEER HUNT RESULTS BY HUNT AND UNIT GROUP

UNIT GROUP	Apps	Tags Sold	Tags Avail	Draw Odds*	% Return**	# Succ. Hunters	% Hunter Success***	% 4+pts
195	13	3	3	5 to 1	100%		0%	--
201, 204	3	3	3	1 to 1	100%	3	100%	33%
202, 205, 206	10	5	5	2 to 1	100%	3	60%	33%
211, 212	10	6	6	2 to 1	100%	1	17%	0%
221 - 223	75	30	28	3 to 1	87%	7	27%	100%
231	102	20	19	6 to 1	95%	7	35%	71%
241 - 245	28	3	3	10 to 1	100%	3	100%	67%
251 - 253	3	2	2	2 to 1	100%		0%	--
261 - 268	15	3	3	5 to 1	100%	1	33%	0%
271, 272	6	3	3	2 to 1	100%	1	33%	0%
291	14	7	7	2 to 1	100%	4	57%	0%
TOTALS	**1,988**	**1,301**	**1,268**	**2 to 1**	**94%**	**441**	**35%**	32%
RESIDENT ANTLERED MULE DEER ARCHERY HUNT 1341								
011 - 013	71	51	49	2 to 1	96%	10	20%	40%
014	44	13	13	4 to 1	100%	8	62%	25%
015	5	3	3	2 to 1	100%		0%	--
021	26	15	13	2 to 1	93%		0%	--
022	20	6	6	4 to 1	100%		0%	--
031	33	23	21	2 to 1	100%	5	22%	40%
032	28	27	27	1 to 1	89%	5	19%	20%
033	20	16	16	2 to 1	100%	1	6%	0%
034	10	7	7	2 to 1	100%		0%	--
035	7	6	6	2 to 1	83%		0%	--
041, 042	17	12	10	2 to 1	100%	2	17%	0%
043 - 046	53	49	48	1 to 1	96%	8	16%	38%
051	82	80	80	1 to 1	95%	16	20%	31%
061, 062, 064, 066 - 068	234	214	213	1 to 1	94%	42	20%	50%
065	9	7	7	2 to 1	100%	1	14%	100%
071 - 079, 091 Early	239	286	283	1 to 1	92%	38	14%	39%
071 - 079. 091 Late	72	55	55	2 to 1	95%	19	36%	53%
081	4	2	1	2 to 1	100%	1	50%	0%
101 - 109 Early	224	286	282	1 to 1	91%	38	14%	42%
101 - 109 Late	353	342	333	1 to 1	94%	50	15%	24%
111 - 113	77	47	47	2 to 1	94%	10	21%	10%
114, 115	65	64	63	1 to 1	91%	12	20%	17%
121 Early	30	21	20	2 to 1	100%	10	48%	30%
121 Late	15	8	8	2 to 1	100%	2	25%	50%
131 - 134	97	28	27	4 to 1	86%	13	50%	38%
141 - 145	82	138	138	1 to 1	95%	29	22%	24%
151 - 156	96	140	139	1 to 1	91%	27	20%	26%
161 - 164	155	115	114	2 to 1	95%	14	12%	21%
171 - 173	162	191	188	1 to 1	92%	15	8%	27%

hunt returns thru 3/26/13

TABLE 4. 2012 MULE DEER HUNT RESULTS BY HUNT AND UNIT GROUP

UNIT GROUP	Apps	Tags Sold	Tags Avail	Draw Odds*	% Return**	# Succ. Hunters	% Hunter Success***	% 4+pts
181 - 184	65	68	68	1 to 1	91%	5	7%	40%
192 Early	19	14	14	2 to 1	100%	3	21%	0%
192 Late	12	5	5	3 to 1	100%	2	40%	50%
194, 196 Early	61	12	12	6 to 1	92%	3	25%	67%
194, 196 Late	51	10	10	6 to 1	90%	6	60%	67%
195	21	8	8	3 to 1	100%	5	63%	40%
201, 202, 204 - 206 Early	7	5	5	2 to 1	100%	2	40%	0%
201, 204 Late*	13	7	7	2 to 1	100%	1	14%	100%
202, 205, 206* Late*	8	7	7	2 to 1	86%	2	29%	0%
203	69	67	67	1 to 1	78%	6	10%	17%
211, 212	16	19	17	1 to 1	95%	6	32%	33%
221 - 223	129	86	84	2 to 1	93%	17	21%	47%
231	116	32	31	4 to 1	94%	13	41%	46%
241 - 245	34	14	14	3 to 1	93%	4	29%	75%
251 - 253	5	6	6	1 to 1	100%	1	17%	100%
261 - 268	23	5	5	5 to 1	100%	2	40%	50%
271, 272[A]	10	6	6	2 to 1	100%	0	0%	--
291	8	7	7	2 to 1	100%	0	0%	--
TOTALS	**2,997**	**2,630**	**2,590**	**2 to 1**	**93%**	**454**	**18%**	35%

[A]Extra tag issued from leftover NR archery tag in 1st draw

RESIDENT ANTLERLESS MULE DEER DEPREDATION HUNT 1101

114, 115	25	30	29	1 to 1	100%	18	60%

RESIDENT ANTLERLESS MULE DEER ANY LEGAL WEAPON HUNT 1181

051	25	10	10	3 to 1	90%	6	60%
062, 064, 066 - 068	153	339	337	1 to 1	94%	201	61%
101, 102, 109	143	923	923	1 to 1	93%	468	53%
TOTALS	**321**	**1,272**	**1,270**		**93%**	**675**	**55%**

NONRESIDENT PIW ANTLERED MULE DEER ANY LEGAL WEAPON HUNT 1200

STATEWIDE	2,409	3	3	803 to 1	100%	0	0%	100%

NONRESIDENT GUIDED ANTLERED MULE DEER ANY LEGAL WEAPON HUNT 1235

011 - 013 Early	4	4	4	1 to 1	100%	2	50%	50%
011 - 013 Late	2	1	1	2 to 1	100%	0	0%	--
014 Early	5	2	2	3 to 1	100%	1	50%	100%
014 Late	15	1	1	15 to 1	100%	0	0%	--
015	1	1	1	1 to 1	100%	1	100%	0%
021	6	1	1	6 to 1	100%	0	0%	--
022	2	1	0	2 to 1	100%	0	0%	--
031	6	6	3	1 to 1	100%	1	17%	0%
032	3	3	3	1 to 1	100%	2	67%	50%

hunt returns thru 3/26/13

TABLE 4. 2012 MULE DEER HUNT RESULTS BY HUNT AND UNIT GROUP

UNIT GROUP	Apps	Tags Sold	Tags Avail	Draw Odds*	% Return**	# Succ. Hunters	% Hunter Success***	% 4+pts
033 Early	2	1	0	2 to 1	100%	0	0%	--
033 Late	4	1	1	4 to 1	100%	0	0%	--
034	11	1	1	11 to 1	100%	1	100%	0%
035	6	2	2	3 to 1	100%	1	50%	100%
041, 042	8	1	1	8 to 1	100%	0	0%	--
043 - 046 Early	8	8	8	1 to 1	75%	4	63%	25%
043 - 046 Late	2	2	2	1 to 1	100%	1	50%	100%
051 Early	5	5	5	1 to 1	100%	4	80%	75%
051 Late	1	1	1	1 to 1	100%	0	0%	--
061, 062, 064, 066 - 068 E	32	29	28	2 to 1	97%	19	66%	68%
061, 062, 064, 066 - 068 L	89	3	2	30 to 1	100%	2	67%	100%
065	1	1	1	1 to 1	100%	1	100%	100%
071 - 079, 091 Early	34	30	30	2 to 1	100%	21	70%	86%
071 - 079. 091 Late	11	5	5	3 to 1	100%	5	100%	60%
081	21	1	1	21 to 1	100%	0	0%	--
101 - 109, Early	45	27	27	2 to 1	96%	15	56%	73%
101 - 109 Mid	44	43	43	1 to 1	95%	23	56%	57%
101 - 109, Late	25	12	11	3 to 1	100%	10	83%	90%
111 - 113 Early	11	11	11	1 to 1	100%	6	55%	17%
111 - 113 Late	11	2	2	6 to 1	100%	1	50%	100%
114, 115 Early	4	2	1	2 to 1	100%	1	50%	100%
114, 115 Late	5	1	1	5 to 1	100%	0	0%	--
121 Early	6	6	5	1 to 1	100%	5	83%	60%
121 Late	3	1	1	3 to 1	100%	1	100%	100%
131 - 134 Early	13	8	8	2 to 1	100%	5	63%	80%
131 - 134 Late	6	1	1	6 to 1	100%	0	0%	--
141 - 145 Early	12	11	11	1 to 1	100%	9	82%	56%
141 - 145 Late	2	1	1	2 to 1	100%	0	0%	--
151 - 156 Early	15	11	11	2 to 1	100%	2	18%	
151 - 156 Late	3	1	1	3 to 1	100%	0	0%	--
161 - 164 Early	9	9	9	1 to 1	78%	3	33%	33%
161 - 164 Late	2	1	1	2 to 1	100%	1	100%	100%
171 - 173 Early	9	9	9	1 to 1	100%	5	56%	60%
171 - 173 Late	4	3	3	2 to 1	100%	1	33%	0%
181 - 184	6	6	6	1 to 1	100%	1	17%	0%
192			0	to 1			--	
194, 196	10	2	2	5 to 1	100%	1	50%	100%
201, 204			0	to 1			--	
202, 205, 206	2	2	2	1 to 1	100%	0	0%	--
203	1	1	1	1 to 1	100%	0	0%	--
211, 212	1	1	1	1 to 1	100%	1	100%	0%
221 - 223 Early	43	17	16	3 to 1	88%	8	53%	100%
221 - 223 Late	105	1	1	105 to 1	100%	1	100%	100%

hunt returns thru 3/26/13

TABLE 4. 2012 MULE DEER HUNT RESULTS BY HUNT AND UNIT GROUP

UNIT GROUP	Apps	Tags Sold	Tags Avail	Draw Odds*	% Return**	# Succ. Hunters	% Hunter Success***	% 4+pts
231	30	6	6	5 to 1	100%	0	0%	--
241 - 245	113	2	2	57 to 1	100%	0	0%	--
251 - 253			0	to 1			--	
261 - 268	1	1	1	1 to 1	100%	1	100%	0%
271, 272	2	1	1	2 to 1	100%	1	100%	100%
291			0	to 1			--	
TOTALS	**822**	**311**	**300**	**3 to 1**	**97%**	**168**	**55%**	66%
NONRESIDENT ANTLERED MULE DEER ANY LEGAL WEAPON HUNT 1331								
011 - 013 Early	128	18	18	8 to 1	89%	13	78%	46%
011 - 013 Late	132	4	4	33 to 1	100%	4	100%	50%
014 Early	38	7	7	6 to 1	100%	6	86%	50%
014 Late	93	2	2	47 to 1	100%	2	100%	0%
015	111	2	2	56 to 1	100%	0	0%	--
021	78	4	4	20 to 1	100%	2	50%	100%
022	30	5	5	6 to 1	100%	5	100%	80%
031	153	8	6	20 to 1	88%	5	63%	20%
032	45	6	6	8 to 1	100%	4	67%	0%
033 Early	39	5	3	8 to 1	100%	2	40%	50%
033 Late	126	2	2	63 to 1	100%	2	100%	50%
034	38	2	2	19 to 1	50%	1	100%	100%
035	43	4	3	11 to 1	75%	0	0%	--
041, 042	24	3	1	8 to 1	100%	0	0%	--
043 - 046 Early	56	11	11	6 to 1	100%	6	55%	17%
043 - 046 Late	31	4	4	8 to 1	100%	2	50%	0%
051 Early	77	18	15	5 to 1	94%	10	56%	40%
051 Late	33	2	2	17 to 1	100%	2	100%	50%
061, 062, 064, 066 - 068 Early	453	160	138	3 to 1	97%	79	50%	62%
061, 062, 064, 066 - 068 Late	670	17	14	40 to 1	100%	12	71%	83%
065	66	7	2	10 to 1	100%	2	29%	50%
071 - 079, 091 Early	312	111	107	3 to 1	95%	66	61%	50%
071 - 079. 091 Late	334	19	18	18 to 1	89%	11	63%	82%
081	284	5	5	57 to 1	100%	2	40%	50%
101 - 109, Early	340	158	154	3 to 1	91%	52	35%	37%
101 - 109, Mid[A]	201	149	144	2 to 1	95%	75	52%	61%
101 - 109, Late	270	33	31	8 to 1	97%	22	67%	68%
111 - 113 Early	115	36	36	4 to 1	92%	16	47%	69%
111 - 113 Late	53	3	2	18 to 1	100%	1	33%	0%
114, 115 Early	29	5	3	6 to 1	100%	0	0%	--
114, 115 Late	41	2	2	21 to 1	100%	1	50%	0%
121 Early	45	16	15	3 to 1	88%	4	25%	25%
121 Late	31	2	2	16 to 1	50%	0	0%	--

hunt returns thru 3/26/13

TABLE 4. 2012 MULE DEER HUNT RESULTS BY HUNT AND UNIT GROUP

UNIT GROUP	Apps	Tags Sold	Tags Avail	Draw Odds*	% Return**	# Succ. Hunters	% Hunter Success***	% 4+pts
131 - 134 Early	108	18	13	6 to 1	94%	7	39%	57%
131 - 134 Late	124	2	2	62 to 1	100%	2	100%	100%
141 - 145 Early	78	36	33	3 to 1	94%	16	44%	19%
141 - 145 Late	18	5	5	4 to 1	100%	3	60%	33%
151 - 156 Early	113	74	69	2 to 1	96%	28	39%	36%
151 - 156 Late	36	9	9	4 to 1	100%	6	67%	50%
161 - 164 Early	82	26	25	4 to 1	96%	13	50%	54%
161 - 164 Late	44	3	2	15 to 1	100%	2	67%	100%
171 - 173 Early	69	42	39	2 to 1	93%	15	38%	73%
171 - 173 Late	37	10	10	4 to 1	90%	1	10%	100%
181 - 184	40	14	13	3 to 1	100%	5	36%	40%
192	18	5	5	4 to 1	100%	3	60%	33%
194, 196	444	6	6	74 to 1	100%	4	67%	100%
195	7	2	2	4 to 1	100%	1	50%	0%
201, 204	40	10	9	4 to 1	100%	5	50%	100%
202, 205, 206	32	7	7	5 to 1	86%	3	43%	0%
203	17	7	7	3 to 1	100%	4	57%	50%
211, 212	24	4	4	6 to 1	100%	3	75%	33%
221 - 223 Early	158	45	33	4 to 1	98%	15	33%	53%
221 - 223 Late	1,661	2	2	831 to 1	100%	1	50%	100%
231	395	14	14	29 to 1	100%	8	57%	63%
241 - 245	269	9	6	30 to 1	100%	3	33%	67%
251 - 253	14	4	4	4 to 1	100%	2	50%	50%
261 - 268	18	4	4	5 to 1	100%	2	50%	0%
271, 272	30	3	3	10 to 1	100%	2	67%	100%
291	14	7	7	2 to 1	100%	4	57%	0%
TOTALS	**8,409**	**1,198**	**1,103**	**8 to 1**	**95%**	**567**	**49%**	53%

[A]Extra tags sold from leftover resident rifle tags from 1st draw

NONRESIDENT ANTLERED MULE DEER MUZZLELOADER HUNT 1371

011 - 013	15	2	2	8 to 1	100%	2	100%	100%
014	11	2	2	6 to 1	100%	2	100%	100%
015	24	2	2	12 to 1	100%	2	100%	50%
021	27	2	2	14 to 1	100%	2	100%	0%
022	16	2	2	8 to 1	100%	2	100%	50%
031	10	2	2	5 to 1	100%	1	50%	100%
032	5	2	2	3 to 1	100%	2	100%	50%
033	10	2	2	5 to 1	100%	2	100%	50%
034	7	2	2	4 to 1	100%	1	50%	100%
035	7	2	2	4 to 1	100%	0	0%	--
041, 042	5	2	2	3 to 1	100%	1	50%	0%
043 - 046	4	2	2	2 to 1	100%	1	50%	100%
051	8	3	3	3 to 1	100%	2	67%	100%
061, 062, 064, 066 - 068	66	9	8	8 to 1	100%	3	33%	100%

hunt returns thru 3/26/13

TABLE 4. 2012 MULE DEER HUNT RESULTS BY HUNT AND UNIT GROUP

UNIT GROUP	Apps	Tags Sold	Tags Avail	Draw Odds*	% Return**	# Succ. Hunters	% Hunter Success***	% 4+pts
065	4	2	2	2 to 1	100%	2	100%	50%
071 - 079, 091	24	9	9	3 to 1	89%	4	44%	50%
081	110	2	1	55 to 1	100%	1	50%	0%
101 - 109[A]	65	60	58	3 to 1	85%	22	40%	27%
111 - 113	6	2	2	3 to 1	100%	0	0%	--
114, 115	78	3	3	26 to 1	67%	1	33%	100%
121	7	2	2	4 to 1	100%	2	100%	50%
131 - 134	32	4	4	8 to 1	100%	1	25%	100%
141 - 145	8	4	4	2 to 1	100%	2	50%	0%
151 - 156	16	9	9	2 to 1	100%	4	44%	50%
161 - 164	14	4	4	4 to 1	50%	1	50%	0%
171 - 173	13	10	9	2 to 1	90%	2	20%	50%
181 - 184	7	2	2	4 to 1	100%	0	0%	--
192	3	2	1	2 to 1	100%	0	0%	--
194, 196	8	2	2	4 to 1	100%	2	100%	50%
195	3	2	2	2 to 1	100%	2	100%	0%
201, 204	14	2	1	7 to 1	100%	1	50%	100%
202, 205, 206	7	2	2	4 to 1	100%	2	100%	50%
211, 212	3	2	2	2 to 1	100%	2	100%	50%
221 - 223	40	2	0	20 to 1	100%	0	0%	--
231	55	2	2	28 to 1	100%	1	50%	100%
241 - 245	27	2	1	14 to 1	100%	1	50%	100%
251 - 253	5	2	1	3 to 1	100%	1	50%	0%
261 - 268	3	2	0	2 to 1	100%	0	0%	--
271, 272	3	2	2	2 to 1	100%	0	0%	--
291	5	2	2	3 to 1	100%	1	50%	0%
TOTALS	**775**	**175**	**162**	**6 to 1**	**92%**	**78**	**46%**	47%

[A]Extra tags sold from leftover resident muzzleloader tags from 1st draw

NONRESIDENT ANTLERED MULE DEER ARCHERY HUNT 1341								
011 - 013	23	6	6	4 to 1	83%	0	0%	--
014	14	2	2	7 to 1	100%	1	50%	100%
015	11	2	2	6 to 1	100%	0	0%	--
021	7	2	2	4 to 1	100%	1	50%	100%
022	6	2	1	3 to 1	100%	1	50%	0%
031	10	3	3	4 to 1	100%	1	33%	100%
032	8	3	3	3 to 1	100%	3	100%	0%
033	8	2	2	4 to 1	100%	1	50%	0%
034	6	2	2	3 to 1	100%	0	0%	--
035	3	2	2	2 to 1	100%	0	0%	--
041, 042	3	2	2	2 to 1	100%	0	0%	--
043 - 046	10	5	5	2 to 1	80%	2	40%	50%
051	20	9	9	3 to 1	89%	0	0%	--
061, 062, 064, 066 - 068	78	21	21	4 to 1	95%	4	19%	25%
065	7	2	2	4 to 1	100%	0	0%	--

TABLE 4. 2012 MULE DEER HUNT RESULTS BY HUNT AND UNIT GROUP

UNIT GROUP	Apps	Tags Sold	Tags Avail	Draw Odds*	% Return**	# Succ. Hunters	% Hunter Success***	% 4+pts
071 - 079, 091 Early[A]	65	60	58	3 to 1	95%	12	20%	58%
071 - 079. 091 Late	31	5	5	7 to 1	80%	2	40%	100%
081	16	2	2	8 to 1	50%	0	0%	--
101 - 109 Early[A]	154	154	148	2 to 1	89%	29	20%	59%
101 - 109 Late	103	33	30	4 to 1	100%	12	36%	42%
111 - 113	16	5	5	4 to 1	100%	1	20%	0%
114, 115	12	7	6	2 to 1	86%	1	14%	100%
121 Early	6	2	1	3 to 1	100%	0	0%	--
121 Late	4	2	2	2 to 1	100%	0	0%	--
131 - 134	25	3	1	9 to 1	100%	0	0%	--
141 - 145[A]	18	24	24	1 to 1	92%	6	25%	0%
151 - 156[A]	28	35	35	1 to 1	94%	8	23%	50%
161 - 164	28	13	13	3 to 1	92%	2	15%	50%
171 - 173[A]	29	25	25	2 to 1	76%	5	24%	60%
181 - 184	3	4	4	1 to 1	100%	0	0%	--
192 Early	3	2	2	2 to 1	50%	0	0%	--
192 Late	9	2	2	5 to 1	100%	1	50%	0%
194, 196 Early	14	2	1	7 to 1	100%	1	50%	100%
194, 196 Late	72	2	1	36 to 1	50%	0	0%	--
195	2	2	2	1 to 1	100%	1	50%	0%
201, 202, 204 - 206 Early	2	2	2	1 to 1	100%	0	0%	--
201, 204 Late	4	2	1	2 to 1	100%	1	50%	0%
202, 205, 206* Late	6	2	2	3 to 1	100%	1	50%	0%
203	3	4	4	1 to 1	75%	3	100%	33%
211, 212	2	2	1	1 to 1	100%	0	0%	--
221 - 223	89	10	9	9 to 1	90%	1	10%	100%
231	97	4	2	25 to 1	100%	1	25%	100%
241 - 245	19	2	2	10 to 1	100%	0	0%	--
251 - 253	5	1	1	5 to 1	0%		--	
261 - 268	3	2	2	2 to 1	100%	0	0%	--
271, 272	1	1	1	1 to 1	100%	1	100%	100%
291	2	2	2	1 to 1	100%	0	0%	--
TOTALS	**1,085**	**483**	**460**	**3 to 1**	**91%**	**103**	**22%**	49%

[A]Extra tags sold from leftover resident archery tags from 1st draw

Apps - # of 1st choice applicants plus successful applicants as 2nd - 5th choice

Tags Sold - accounts for tags available after 1st draw that may be sold to either residents or nonresidents and for tags returned for medical, military, or death reasons that are not reissued.

Tags Avail - Available tags at season opener - accounts for tags returned for any reason

* Draw Odds - # of 1st choice applicants plus successful applicants for every one tag sold

** % Return - Percent of hunter return cards received compared to total tags sold

*** % Hunter Success - based on # of successful hunters divided by total tags sold (includes did not hunts; a portion of nonreturns are assumed to be successful based on past trends of hunt records not yet returned)

hunt returns thru 3/26/13

TABLE 5. 2012 PRONGHORN HARVEST BY GENDER BY UNIT FOR ALL HUNTS

UNIT	Does	Fawns		Yrlg Bucks	Adult Bucks	Bucks Only Unit Group Total	All Pronghorn Unit Total	All Pronghorn Unit Group Total
		Female	Male					
011					89	89	89	89
012					62		62	
013					25		25	
014					35	122	35	122
015					55	55	55	55
021					21		21	
022					15	36	15	36
031	47	2	2	11	86	86	148	148
032	9			3	95		107	
034	2			1	40		43	
035	17				54	189	71	221
033					62	62	62	62
041					88		88	
042					72	160	72	160
043					5		5	
044					6		6	
046						11	0	11
051					59	59	59	59
061	4		1	3	24		32	
062	10	1	1	1	38		51	
064	3	1		4	14		22	
071	10				17		27	
073	10			1	19	112	30	162
065					44		44	
142					2		2	
144						46	0	46
066					17	17	17	17
067	14	1	2	1	42		60	
068	25			6	57	99	88	148
072					24		24	
074					11		11	
075					17	52	17	52
076					10		10	
077					11		11	
079					1		1	
081							0	
091					1	23	1	23
078					4		4	
105					4		4	
106					5		5	
107							0	
121	14			2	23	36	39	52

hunt returns thru 3/26/13

TABLE 5. 2012 PRONGHORN HARVEST BY GENDER BY UNIT FOR ALL HUNTS

UNIT	Does	Fawns		Yrlg Bucks	Adult Bucks	Bucks Only Unit Group Total	All Pronghorn Unit Total	All Pronghorn Unit Group Total
		Female	Male					
101					13		13	
102					13		13	
103					5		5	
104					27		27	
108					22		22	
109					2		2	
144					11	93	11	93
111	25	2	3	5	55		90	
112	2				4		6	
113	1				7		8	
114	4		1	4	17	83	26	130
115	3				11		14	
231					9		9	
242						20	0	23
131					47		47	
145					10		10	
163					11		11	
164					6	74	6	74
132					27		27	
133					13		13	
134							0	
245					5	45	5	45
141					65		65	
143					10		10	
151					19		19	
152					13		13	
153					12		12	
154					5		5	
155					29		29	
156					19	172	19	172
161					26		26	
162					20	46	20	46
171					19		19	
172					15		15	
173					7	41	7	41
181					11		11	
182					6		6	
183					13		13	
184					27	57	27	57
202							0	
204					2	2	2	2

hunt returns thru 3/26/13

TABLE 5. 2012 PRONGHORN HARVEST BY GENDER BY UNIT FOR ALL HUNTS

UNIT	Does	Fawns		Yrlg Bucks	Adult Bucks	Bucks Only Unit Group Total	All Pronghorn Unit Total	All Pronghorn Unit Group Total
		Female	Male					
203					1		1	
291					1	2	1	2
205					9		9	
206					10	19	10	19
211							0	
212					4	4	4	4
221					5		5	
222					4		4	
223					6		6	
241					2	17	2	17
251					35	35	35	35
TOTAL	**200**	**7**	**10**	**42**	**1,964**			**2,223**

HERITAGE, SILVER STATE, DREAM AND PIW TAGHOLDER HARVEST BY UNIT

HUNT	UNIT	#	HUNT	UNIT	#
PIW	021	1	Heritage	022	1
PIW	042	1	Silver	033	1
PIW	072	1	Dream	162	1
PIW	251	2			

TABLE 6. 2012 PRONGHORN HUNT RESULTS BY HUNT AND UNIT GROUP

UNIT GROUP	Apps	Tag Quota	Tags Sold	Tags Avail	Draw Odds*	% Return**	# Succ. Hunters	% Hunter Success***
RESIDENT PIW ANTELOPE ANY LEGAL WEAPON HUNT 2000								
STATEWIDE	1,682	5	5	5	337 to 1	100%	5	100%
HERITAGE ANTELOPE ANY LEGAL WEAPON HUNT 2100 & 2200								
STATEWIDE		2	2	2		100%	1	50%
SILVER STATE ANTELOPE ANY LEGAL WEAPON HUNT 2300								
STATEWIDE	1,656	1	1	1	1656 to 1	100%	1	100%
DREAM TAG ANTELOPE ANY LEGAL WEAPON HUNT 2500								
STATEWIDE		1	1	1	0 to 1	100%	1	100%
RESIDENT AND NONRESIDENT BUCK ANTELOPE LANDOWNER COMPENSATION HUNT 2115 AND 2215								
031			7	7		86%	5	71%
032, 034, 035			15	15		100%	13	87%
041			1	1		100%	1	100%
051			1	1		100%	1	100%
065			1	1		100%	1	100%
068			5	5		100%	4	80%
144			1	1		0%		--
141			1	1		100%	1	100%
153, 156			5	5		100%	4	80%
161			2	2		100%	2	100%
172, 173			8	8		100%	8	100%
184			1	1		100%	1	100%
245			1	1		100%	1	100%
251			1	1		100%	1	100%
TOTALS			50	50		96%	43	86%
RESIDENT BUCK ANTELOPE ANY LEGAL WEAPON HUNT 2151								
011*	510	116	115	109	5 to 1	97%	66	58%
012 - 014	981	155	155	146	7 to 1	98%	88	57%
015	503	110	110	78	5 to 1	100%	38	35%
021, 022	730	35	35	30	21 to 1	100%	25	71%
031*	614	122	121	102	6 to 1	97%	62	52%
032, 034, 035	941	261	261	243	4 to 1	95%	149	59%
033 Early*	548	43	42	30	14 to 1	95%	24	60%
033 Late	167	43	43	34	4 to 1	98%	24	56%
041, 042 Early	682	88	88	83	8 to 1	99%	68	77%
041, 042 Late	219	88	88	87	3 to 1	93%	60	70%
043 - 046	54	14	14	12	4 to 1	100%	8	57%

hunt returns thru 3/26/13

TABLE 6. 2012 PRONGHORN HUNT RESULTS BY HUNT AND UNIT GROUP

UNIT GROUP	Apps	Tag Quota	Tags Sold	Tags Avail	Draw Odds*	% Return**	# Succ. Hunters	% Hunter Success***
051	265	58	58	58	5 to 1	97%	46	81%
061, 062, 064, 071, 073*	905	127	126	123	8 to 1	95%	90	73%
065, 142, 144	326	49	49	48	7 to 1	94%	39	82%
066	106	18	18	17	6 to 1	94%	15	83%
067, 068	441	107	107	105	5 to 1	96%	79	76%
072, 074, 075	306	60	60	58	6 to 1	93%	37	63%
076, 077, 079, 081, 091	254	24	24	24	11 to 1	88%	17	75%
078, 105 - 107, 121	225	39	39	39	6 to 1	97%	30	77%
101 – 104, 108, 109, 144	303	96	96	96	4 to 1	98%	73	77%
111 – 114	732	90	90	87	9 to 1	98%	68	77%
115, 231, 242	285	28	28	26	11 to 1	100%	17	61%
131, 145, 163, 164	326	74	74	73	5 to 1	91%	56	80%
132 – 134, 245	361	49	49	49	8 to 1	100%	35	71%
141, 143, 151 - 156	454	196	196	190	3 to 1	95%	140	73%
161, 162	203	45	45	45	5 to 1	98%	38	84%
171 - 173	173	41	41	39	5 to 1	88%	28	73%
181 - 184	169	47	47	47	4 to 1	96%	39	85%
202, 204	43	7	7	7	7 to 1	100%	2	29%
203, 291	26	7	7	6	4 to 1	100%	2	29%
205, 206	91	29	29	29	4 to 1	93%	14	52%
211, 212	34	2	2	2	17 to 1	100%	2	100%
221 – 223, 241	249	21	21	21	12 to 1	86%	13	67%
251	207	27	27	27	8 to 1	100%	24	89%
TOTALS	12,433	2,316	2,312	2,170	6 to 1	96%	1,516	67%

*Alternate tag from medical/military case returned too late to be resold;

RESIDENT BUCK ANTELOPE MUZZLELOADER HUNT 2171

011	7	5	5	5	2 to 1	80%	3	60%
012 - 014	19	7	7	7	3 to 1	100%	4	57%
015	9	6	6	6	2 to 1	100%	0	0%
021, 022	13	2	2	1	7 to 1	100%	0	0%
033	11	5	5	3	3 to 1	100%	2	40%
078, 105 - 107, 121	10	2	2	2	5 to 1	100%	2	100%
111 – 114	13	7	7	7	2 to 1	100%	3	43%
115, 231, 242	10	1	1	1	10 to 1	100%	0	0%
131, 145, 163, 164	10	5	5	5	2 to 1	80%	2	40%
132 - 134, 245	5	2	2	1	3 to 1	100%	1	50%
221 – 223, 241	5	1	1	1	5 to 1	100%	0	0%
TOTALS	112	43	43	39	3 to 1	95%	17	40%

RESIDENT BUCK ANTELOPE ARCHERY HUNT 2161

011	46	33	33	31	2 to 1	97%	10	30%
012 - 014	75	33	33	33	3 to 1	100%	16	48%

hunt returns thru 3/26/13

TABLE 6. 2012 PRONGHORN HUNT RESULTS BY HUNT AND UNIT GROUP

UNIT GROUP	Apps	Tag Quota	Tags Sold	Tags Avail	Draw Odds*	% Return**	# Succ. Hunters	% Hunter Success***
015	57	34	34	33	2 to 1	91%	8	24%
021, 022	51	13	13	13	4 to 1	92%	4	31%
031	25	14	14	14	2 to 1	93%	6	43%
032, 034, 035	103	93	93	90	2 to 1	90%	7	8%
033	31	12	12	10	3 to 1	100%	5	42%
041, 042**	56	19	18	16	4 to 1	100%	10	56%
051	36	31	31	30	2 to 1	100%	4	13%
061, 062, 064, 071, 073	63	50	50	48	2 to 1	100%	9	18%
065, 142, 144**	9	9	8	8	2 to 1	100%	1	13%
066	4	4	4	4	1 to 1	100%		0%
067, 068**	38	48	46	43	1 to 1	89%	7	15%
072, 074, 075	39	35	35	34	2 to 1	91%	7	20%
076, 077, 079, 081, 091	18	9	9	7	2 to 1	100%	3	33%
078, 105 - 107, 121	13	6	6	6	3 to 1	100%	2	33%
101 – 104, 108, 109, 144	41	40	40	39	2 to 1	93%	9	23%
111 – 114	48	13	13	13	4 to 1	100%	2	15%
115, 231, 242	22	7	7	7	4 to 1	71%	1	14%
131, 145, 163, 164*	24	16	18	17	2 to 1	94%	11	61%
132 – 134, 245	29	8	8	7	4 to 1	100%	4	50%
141, 143, 151 - 156*	33	50	53	49	1 to 1	94%	12	23%
161, 162	11	5	5	4	3 to 1	100%		0%
171 - 173*	12	7	8	8	2 to 1	88%	2	25%
181 - 184	23	18	18	17	2 to 1	94%	10	56%
203, 291	6	2	2	2	3 to 1	100%		0%
205, 206*	15	15	17	16	1 to 1	94%	2	12%
211, 212	5	2	2	2	3 to 1	100%	2	100%
221 – 223, 241	19	6	6	6	4 to 1	100%	1	17%
251	31	6	6	6	6 to 1	100%	5	83%
TOTALS	983	638	642	613	2 to 1	95%	160	25%

***Nonresident tags sold as resident tags in second draw

**Alternate tag from medical/military case returned too late to be resold;

RESIDENT DOE ANTELOPE ANY LEGAL WEAPON HUNT 2181

031	374	87	87	86	5 to 1	98%	62	72%
032, 034, 035	246	44	44	44	6 to 1	91%	32	77%
061 - 064, 071, 073	269	62	62	60	5 to 1	98%	50	81%
067, 068	191	68	68	68	3 to 1	100%	49	72%
111 - 114	169	56	56	55	4 to 1	100%	44	79%
114, 115[A] Baker Ranch	35	15	15	14	3 to 1	87%	6	47%
121	43	17	17	17	3 to 1	100%	16	94%
TOTALS	1,327	349	349	344	4 to 1	97%	259	75%

hunt returns thru 3/26/13

TABLE 6. 2012 PRONGHORN HUNT RESULTS BY HUNT AND UNIT GROUP

UNIT GROUP	Apps	Tag Quota	Tags Sold	Tags Avail	Draw Odds*	% Return**	# Succ. Hunters	% Hunter Success***
NONRESIDENT BUCK ANTELOPE ANY LEGAL WEAPON HUNT 2251								
011	119	13	13	13	10 to 1	100%	9	69%
012 – 014	166	17	17	17	10 to 1	100%	13	76%
015*	208	12	11	10	19 to 1	100%	7	64%
021, 022	166	4	4	4	42 to 1	100%	4	100%
031	165	14	14	12	12 to 1	100%	11	79%
032, 034, 035	267	31	31	30	9 to 1	97%	19	61%
033 Early	1,064	6	6	5	178 to 1	100%	3	50%
033 Late	129	6	6	6	22 to 1	83%	2	33%
041, 042 Early	190	10	10	8	19 to 1	100%	8	80%
041, 042 Late	41	10	10	10	5 to 1	100%	9	90%
043 - 046	10	2	2	2	5 to 1	100%	2	100%
051	39	6	6	6	7 to 1	100%	6	100%
061 - 064, 071, 073*	80	14	13	13	7 to 1	100%	12	92%
065, 142, 144	17	5	5	5	4 to 1	100%	5	100%
066	17	2	2	2	9 to 1	100%	2	100%
067, 068	37	12	12	10	4 to 1	100%	8	67%
072, 074, 075	36	7	7	7	6 to 1	100%	6	86%
076, 077, 079, 081, 091	65	3	3	3	22 to 1	100%	3	100%
078, 105 - 107, 121	19	4	4	4	5 to 1	100%	3	75%
101 – 104, 108, 109, 144	39	11	11	11	4 to 1	91%	9	82%
111 – 114	44	10	10	10	5 to 1	100%	9	90%
115, 231, 242	48	3	3	2	16 to 1	100%	2	67%
131, 145, 163, 164	28	8	8	8	4 to 1	88%	5	63%
132 - 134, 245	17	5	5	5	4 to 1	100%	4	80%
141, 143, 151 - 156	45	22	22	22	3 to 1	100%	15	68%
161, 162	18	5	5	5	4 to 2	100%	5	100%
171 - 173	13	5	5	5	3 to 2	80%	4	100%
181 - 184	14	5	5	5	3 to 1	100%	4	80%
205, 206	14	3	3	3	5 to 1	100%	3	100%
221 – 223, 241	27	2	2	2	14 to 1	100%	2	100%
251	20	3	3	3	7 to 1	100%	3	100%
TOTALS	3,162	260	258	248	13 to 1	98%	197	77%

*Alternate tag from medical/military case returned too late to be resold;

NONRESIDENT BUCK ANTELOPE ARCHERY HUNT 2261								
011	14	4	4	4	4 to 1	100%	2	50%
012 – 014	19	4	4	3	5 to 1	100%	1	25%
015	25	4	4	4	7 to 1	100%	2	50%
021, 022	5	1	1	1	5 to 1	100%	1	100%
031	7	2	2	2	4 to 1	100%	2	100%
032, 034, 035	17	10	10	9	2 to 1	100%	2	20%
033	76	1	1	1	76 to 1	100%	1	100%
041, 042	15	2	2	2	8 to 1	100%	2	100%

hunt returns thru 3/26/13

TABLE 6. 2012 PRONGHORN HUNT RESULTS BY HUNT AND UNIT GROUP

UNIT GROUP	Apps	Tag Quota	Tags Sold	Tags Avail	Draw Odds*	% Return**	# Succ. Hunters	% Hunter Success***
051	4	3	3	2	2 to 1	100%	2	67%
061 - 064, 071, 073**	6	6	5	5	2 to 1	100%	2	40%
065, 142, 144	1	1	1	0	1 to 1	100%	0	0%
067, 068*	6	5	6	5	1 to 1	100%	2	33%
072, 074, 075	6	4	4	4	2 to 1	75%	1	25%
076, 077, 079, 081, 091	4	1	1	1	4 to 1	100%	0	0%
101 – 104, 108, 109, 144**	5	4	3	3	2 to 1	100%	1	33%
111 – 114	6	1	1	1	6 to 1	100%		
131, 145, 163, 164	0	2	0	0	to 1			
132 - 134, 245	3	1	1	0	3 to 1	100%	0	0%
141, 143, 151 - 156	3	6	3	3	1 to 1	67%	1	33%
171 - 173	0	1	0	0	to 1			
181 - 184	2	2	2	2	1 to 1	100%	2	100%
205, 206	0	2	0	0	to 1			
221 – 223, 241	2	1	1	1	2 to 1	100%	1	100%
TOTALS	226	68	59	53	4 to 1	97%	25	42%

*Resident tag sold as nonresident tag in second draw

**Alternate tag from medical/military case returned too late to be resold;

Apps - # of unsuccessful 1st choice applicants plus successful applicants as 1st - 5th choice

Tags Avail - Available tags at season opener - accounts for tags returned for any reason

* Draw Odds - # of "Apps" for every one tag sold.

** % Return - Percent of hunter return cards received compared to total tags sold

*** % Hunter Success - based on # of successful hunters divided by total tags sold (includes did not hunts; a portion of nonreturns are assumed to be successful based on past trends of hunt results of records not yet returned)

TABLE 7. 2012 PRONGHORN BUCK HORN LENGTH BY UNIT AND UNIT GROUP

	BUCK HORN LENGTH IN INCHES													Unit Group	% 15+
Unit	4	6	7	8	9	10	11	12	13	14	15	16	17+	Totals	inches
011			2		1		5	4	23	24	21	6	1	87	32%
012				2	1	3		6	14	15	10	7	4		
013		1				1	1	1	3	11	5	1	1		
014								6	9	8	7	4		121	32%
015		1			2	2	3	7	11	12	10	4	3	55	31%
021				2					1	8	2	4	3		
022									3	6	1	3	1	34	41%
031*				1	2	3	3	15	18	17	18	3	1	81	27%
032*			2	1	5	7	3	6	17	20	16	7	3		
034*				3	1	1		2	8	13	6	4	1		
035*					1	3	3	8	14	13	5	1	1	175	25%
033					1			4	11	23	12	9	1	61	36%
041					1	1		11	20	19	21	10	4		
042				1	3	3	1	5	8	22	19	5	5	159	40%
043*						1		2				1			
044*								1	1	1	2	1			
046														10	40%
051					2	1	1	2	17	22	7	4		56	20%
061				2		1	2	3	4	7	5				
062			1			3	1	4	4	11	6	6	1		
064						1	1		3	5	4				
071						1		2	4	5	5				
073						1		5	6	5	2			111	26%
065					1		1	2	4	20	9	3	3		
142									1	1					
144														45	33%
066							1	2	6	3	3	1	1	17	29%
067					1	1	4	4	10	12	6	2	2		
068				1		1	3	6	12	14	6	10		95	27%
072						1	2	5	4	7	4	1			
074								1	4	3	2	1			
075						1	1	1	5	6	3			52	21%
076							1		2	2	2	2	1		
077								1	4	1	3		2		
079										1					
081															
091									1					23	43%
078							1	1	1	1					
105									1		2				
106									1	2		2			
107															
121				1				6	3	8	4	1		35	26%

hunt returns thru 3/26/13

TABLE 7. 2012 PRONGHORN BUCK HORN LENGTH BY UNIT AND UNIT GROUP

	BUCK HORN LENGTH IN INCHES													Unit Group	% 15+
Unit	4	6	7	8	9	10	11	12	13	14	15	16	17+	Totals	inches
101				1					3	4	4	1			
102				1				2	3	3	2	1	1		
103						1	2		1	1					
104	1	1				1	1	2	7	9	3	1			
108						2	2	4	6	5	3				
109			1						1						
144					1	1		2		4	3			92	21%
111	1	1	1	4	1		5	8	14	15	4	1			
112							1		2	1					
113		1					1	2		2	1				
114							3	1	5	3	4	1		83	13%
115								3	2	2	4				
231								1	3	1	3	1			
242														20	40%
131				1		5	4	8	7	15	5	1	1		
145							1		1	6	2				
163						1				4	4	1	1		
164					1		1	2		2				74	31%
132				2		2	1	2	4	7	7	1	1		
133						1		1	2	5	2	2			
134															
245				1		1		1			1			44	32%
141				1		1	3	6	11	18	19	5			
143					1	2		1	2	2	2				
151						1	1	1	6	4	4	1	1		
152				1				1	3	3	2	3			
153							1	3	3	1	1				
154								1	1	2		1			
155		1		1			1	3	7	10	6				
156	1							2	2	7	4	2		167	31%
161				1			1	4	5	5	4	4			
162			2	1		1		2	3	5	5		1	44	32%
171*					1	1	2	2	6	5	2				
172*				1				3	2	2	1				
173*					1				2	2		1		34	12%
181				1	1		1	2	2	4					
182								1	3	1	1				
183					1			2	3	5	2				
184				2	3	3	1	2	4	6	2	1	1	55	13%
202															
204						1			1					2	0%

hunt returns thru 3/26/13

TABLE 7. 2012 PRONGHORN BUCK HORN LENGTH BY UNIT AND UNIT GROUP

	BUCK HORN LENGTH IN INCHES													Unit Group	% 15+
Unit	4	6	7	8	9	10	11	12	13	14	15	16	17+	Totals	inches
203					1										
291							1							2	0%
205					1		2		1	4	1				
206					1			1	4	1	1	1		18	17%
211															
212					1			1			2			4	50%
221								1	3			1			
222					2				1	1					
223						1		3	2						
241										1	1			17	12%
251					1		1	1	3	10	11	5	2	34	53%
TOTALS	**3**	**6**	**9**	**33**	**40**	**63**	**75**	**205**	**399**	**536**	**351**	**139**	**48**	**1,907**	28%

Horn length measured by hunter of the longest horn to the nearest inch for bucks harvested from Horns Longer than Ear Hunts. Statewide 97% response rate on measuring the horn.

*> 5% of successful hunters for that unit didn't provide horn measurement

TABLE 8. 2012 ELK HARVEST BY UNIT AND UNIT GROUP FOR ALL HUNTS

	Female		Male	Number of Left Antler Points							Unit Bull	Unit Group		TOTAL
Unit	Cows	Calves	Calves	1	2	3	4	5	6	7+	Total	Bull Total	% 6+ pts	ELK
061	57	1	6	3	1	2	1	15	16	2	40			
071	106	4	3	4			6	17	34	3	64	104	53%	281
062	45	2	2	1		1	1	4	28	4	39			
064	5		1					4	4	2	10			
066	7			2				2	3		7			
067	14		1	1				3	6	1	11			
068	38		4	1			1	1	16	3	22	89	75%	208
072	146	9	4			1	1	15	77	12	106			
074	40	2	2				2	2	10	3	17	123	83%	326
073	44	1	4					7	12		19	19	63%	68
075	42		3				2	2	23		27	27	85%	72
076	54	2	5	1			1	4	19	2	27			
077	53	2	3				1	8	14	2	25			
079	6							1	4		5			
081	124	4	11	1	1	1	1	8	25	1	38	95	71%	359
078	4		1						3		3			
105	12		1					2	8	2	12			
106	4													
107	1											15	87%	38
091									3		3	3	100%	3
101	5		1					6	7		13			
102	2							4	5	1	10			
103	4			1			3	7	5	3	19	42	50%	54
104	1								1	1	2			
108	5						1		2	2	5			
121	35		3				1	2	18	1	22	29	86%	73
108							1				1			
131	26						1	9	9	3	22			
132				1			1	2	3		7	30	50%	56
111	163	6	7			2	5	22	50	9	88			
112	5							1	4		5			
113	19	2						3	3	1	7			
114	26		1					3	12	3	18			
115	6							1	7	1	9	127	71%	362
221	22	1				1	1	6	31	5	44			
222	149	4	4	1			5	9	39	6	60	104	78%	284
145	2								4	1	5	5	100%	7
161	3						2	5	9	2	18			
162	21			1			4	1	18	2	26			
163									1		1			
164							1	1			2			
173											0	47	68%	71

hunt returns thru 3/26/13

TABLE 8. 2012 ELK HARVEST BY UNIT AND UNIT GROUP FOR ALL HUNTS

223	11		1					2	2	1	5			
231	89	2	5				2	15	41	12	70			
241	2								1		1			
242	4									1	1	77	71%	191
262							1	1	3	1	6	6	67%	6
TOTAL	**1402**	**42**	**73**	**18**	**2**	**8**	**46**	**195**	**580**	**93**	**942**		**71%**	**2,459**

Total Cows and Calves **1,517**

PIW, HERITAGE, and SILVER STATE TAGHOLDER HARVEST BY UNIT

HUNT	UNIT	#
PIW	114	1
Dream	076	1

HUNT	UNIT	#
Heritage	115	1
Heritage	222	1

HUNT	UNIT	#
Silver State	231	1

TABLE 9. 2012 ELK HUNT RESULTS BY HUNT AND UNIT GROUP

UNIT GROUP	Apps	Tags Sold	Tags Avail	Draw Odds*	% Return**	# Succ. Hunters	% Hunter Success***	%6+pts
PIW RESIDENT ANTLERED ELK ANY LEGAL WEAPON HUNT 4000								
STATEWIDE	2,263	2	2	1132 to 1	50%	1	100%	100%
HERITAGE ELK ANY LEGAL WEAPON HUNT 4100 and 4200								
STATEWIDE		2	2		100%	2	100%	100%
SILVER STATE ELK ANY LEGAL WEAPON HUNT 4300								
STATEWIDE	4,011	1	1	4011 to 1	100%	1	100%	100%
DREAM ELK ANY LEGAL WEAPON HUNT 4500								
STATEWIDE	3,219	1	1	3219 to 1	100%	1	100%	100%
ELK INCENTIVE ANY LEGAL WEAPON HUNT 4131 AND 4231								
061, 071		6	6		100%	5	83%	40%
062, 064, 066 - 068		3	3		100%	3	100%	67%
072, 074		4	4		75%	3	100%	100%
073		2	2		100%	1	50%	100%
075		5	5		80%	3	60%	100%
076, 077, 079, 081		28	28		93%	21	79%	76%
104, 108, 121		1	1		100%	1	100%	100%
108, 131, 132		1	1		0%	0	0%	--
111-115		2	2		100%	2	100%	100%
221, 222		8	8		100%	3	38%	100%
223, 231, 241, 242		4	4		75%	2	50%	100%
TOTALS		64	64		91%	44	72%	80%
ELK INCENTIVE MUZZLELOADER HUNT 4133 AND 4233								
062, 064, 066 - 068		1	1		100%	1	100%	100%
075		4	4		100%	4	100%	100%
076, 077, 079, 081		2	2		100%	1	50%	0%
223, 231, 241, 242		2	2		100%	1	50%	100%
TOTALS		9	9		100%	7	78%	86%
ELK INCENTIVE ARCHERY HUNT 4132 AND 4232								
061, 071		1	1		100%	1	100%	100%
076, 077, 079, 081		3	3		100%	0	0%	--
111 - 115		8	8		100%	4	50%	100%
221, 222		1	1		100%	1	100%	100%
223, 231, 241, 242		3	3		100%	1	33%	0%
TOTALS		16	16		100%	7	44%	86%

hunt returns thru 3/26/13

TABLE 9. 2012 ELK HUNT RESULTS BY HUNT AND UNIT GROUP

UNIT GROUP	Apps	Tags Sold	Tags Avail	Draw Odds*	% Return**	# Succ. Hunters	% Hunter Success***	%6+pts
RESIDENT ANTLERED ELK ANY LEGAL WEAPON DEPREDATION HUNT 4102								
101 - 103 Early	467	50	48	10 to 1	96%	27	56%	59%
101 - 103 Late	115	30	30	4 to 1	97%	15	50%	33%
145	226	10	10	23 to 1	100%	5	50%	100%
TOTALS	808	90	88	9 to 1	97%	47	53%	55%
RESIDENT ANTLERED ELK ANY LEGAL WEAPON HUNT 4151								
061, 071 Early	615	78	71	8 to 1	95%	34	45%	41%
061, 071 Late	307	87	81	4 to 1	98%	42	49%	48%
062, 064, 066 - 068 Early	389	46	46	9 to 1	93%	26	59%	77%
062, 064, 066 - 068 Late	257	47	46	6 to 1	91%	28	62%	71%
072, 074 Early[A]	694	3	3	232 to 1	100%	3	100%	100%
072, 074 Mid	215	70	65	4 to 1	99%	46	66%	80%
072, 074 Late	237	80	73	3 to 1	99%	43	54%	79%
073 Early	61	18	15	4 to 1	100%	7	39%	71%
073 Late	35	14	14	3 to 1	86%	7	57%	29%
075* Early	64	14	12	5 to 1	100%	11	79%	64%
075* Late	35	9	8	4 to 1	100%	5	56%	100%
076, 077, 079, 081 Early	759	39	38	20 to 1	97%	31	79%	68%
076, 077, 079, 081 Late	381	41	40	10 to 1	100%	29	71%	66%
078, 105 - 107, 109	94	14	13	7 to 1	100%	10	71%	80%
091	140	3	3	47 to 1	100%	3	100%	100%
104, 108, 121	229	30	29	8 to 1	100%	17	57%	82%
108, 131, 132 Late	231	34	29	7 to 1	94%	20	62%	40%
111 - 115 Early	1,357	80	73	17 to 1	96%	45	58%	69%
111 - 115 Late	477	64	61	8 to 1	97%	41	66%	59%
221, 222 Early	824	63	58	14 to 1	98%	42	67%	71%
221, 222 Late	309	51	51	7 to 1	94%	30	61%	70%
161-164, 171-173 Early	966	10	10	97 to 1	100%	9	90%	89%
161-164, 171-173 Mid	148	30	29	5 to 1	97%	19	63%	47%
161-164, 171-173 Late	145	22	20	7 to 1	95%	10	45%	60%
223, 231, 241, 242 Early	834	46	45	19 to 1	93%	23	52%	70%
223, 231, 241, 242 Late	363	42	42	9 to 1	98%	22	52%	73%
262	191	6	5	32 to 1	100%	4	67%	75%
TOTALS	10,357	1,041	980	10 to 1	97%	607	59%	67%

[A]1 tag issued for military deferment from 2011

RESIDENT ANTLERED ELK MUZZLELOADER HUNT 4156								
061, 071	114	18	16	7 to 1	100%	7	39%	86%
062, 064, 066 - 068	92	13	12	8 to 1	100%	8	62%	88%
072, 074	99	18	16	6 to 1	100%	11	61%	82%
073	22	4	3	6 to 1	100%	2	50%	100%

hunt returns thru 3/26/13

TABLE 9. 2012 ELK HUNT RESULTS BY HUNT AND UNIT GROUP

UNIT GROUP	Apps	Tags Sold	Tags Avail	Draw Odds*	% Return**	# Succ. Hunters	% Hunter Success***	%6+pts
075	9	2	2	5 to 1	100%	1	50%	100%
076, 077, 079, 081	29	3	3	10 to 1	100%	2	67%	100%
078, 104, 105 - 107	15	3	3	5 to 1	100%	1	33%	100%
104, 108, 121	34	7	7	5 to 1	86%	4	57%	75%
108, 131, 132	12	2	2	6 to 1	100%	2	100%	50%
111 – 115	86	12	12	8 to 1	100%	8	67%	50%
221, 222	57	9	9	7 to 1	89%	5	56%	80%
161 - 164, 171 - 173	32	5	5	7 to 1	100%	2	40%	100%
223, 231, 241, 242	75	11	11	7 to 1	100%	8	73%	88%
262	13	1	1	13 to 1	100%	1	100%	0%
TOTALS	689	108	102	7 to 1	98%	62	57%	79%
RESIDENT ANTLERED ELK ARCHERY HUNT 4161								
061, 071	115	27	25	5 to 1	100%	5	19%	100%
062, 064, 066 - 068	57	10	10	6 to 1	100%	4	40%	75%
072, 074	95	25	23	4 to 1	96%	3	12%	100%
073	14	5	4	3 to 1	100%	0	0%	--
075	13	2	1	7 to 1	100%	0	0%	--
076, 077, 079, 081	76	9	9	9 to 1	100%	2	22%	50%
078, 104, 105 - 107	33	6	5	6 to 1	100%	3	50%	100%
104, 108, 121	52	6	6	9 to 1	100%	4	67%	100%
108, 131, 132	47	3	3	16 to 1	100%	3	100%	100%
111 – 115	232	19	19	13 to 1	100%	10	53%	100%
221, 222	60	15	15	4 to 1	100%	11	73%	82%
161 - 164, 171 - 173	127	7	7	19 to 1	100%	1	14%	100%
223, 231, 241, 242	195	14	13	14 to 1	100%	7	50%	100%
262	26	1	1	26 to 1	100%	1	100%	100%
TOTALS	1,142	149	141	8 to 1	99%	54	36%	93%
EMERGENCY DEPREDATION ANTLERLESS ELK ANY LEGAL WEAPON HUNT 4104								
081 Early		22		0 to 1	100%	15	68%	
081 Mid		19		0 to 1	100%	12	63%	
081 Late		22		0 to 1	86%	6	32%	
106, 111, 121		12		0 to 1	100%	10	83%	
TOTALS	0	75	0	0 to 1	96%	43	59%	
EMERGENCY DEPREDATION ANY ELK ANY LEGAL WEAPON HUNT 4106								
066, 067		9	9	0 to 1	89%	5	56%	40%
068		18	18	0 to 1	89%	8	50%	83%
TOTALS	0	27	27	0 to 1	89%	13	52%	64%

hunt returns thru 3/26/13

TABLE 9. 2012 ELK HUNT RESULTS BY HUNT AND UNIT GROUP

UNIT GROUP	Apps	Tags Sold	Tags Avail	Draw Odds*	% Return**	# Succ. Hunters	% Hunter Success***	%6+pts
RESIDENT ANTLERLESS ELK ANY LEGAL WEAPON HUNT 4181								
061, 071 Early	399	218	215	2 to 1	95%	89	42%	
061, 071 Late	263	214	209	2 to 1	92%	56	28%	
062, 064, 066 - 068 Early	201	103	100	2 to 1	99%	38	37%	
062, 064, 066 - 068 Mid	129	105	102	2 to 1	96%	24	24%	
062, 064, 066 - 068 Late	118	85	85	2 to 1	91%	35	44%	
072 Early	239	190	185	2 to 1	93%	70	38%	
072 Mid	184	182	178	2 to 1	96%	50	28%	
073 Early	51	37	37	2 to 1	95%	14	38%	
073 Mid	32	31	31	2 to 1	97%	8	26%	
074 Early	57	40	39	2 to 1	98%	15	38%	
074 Mid	41	40	39	2 to 1	100%	8	20%	
075* Early	37	21	21	2 to 1	100%	14	67%	
075* Mid	21	21	21	1 to 1	100%	7	33%	
072 - 075 Late	301	196	195	2 to 1	90%	76	41%	
076, 077, 079	424	186	183	3 to 1	95%	103	57%	
078, 104, 105 - 107	46	25	25	2 to 1	100%	17	68%	
081	224	152	152	2 to 1	97%	92	62%	
101 - 103 1st	29	40	40	1 to 1	93%	3	8%	
101 - 103 2nd	12	40	40	1 to 1	98%	6	15%	
101 - 103 3rd	7	15	15	1 to 1	100%	2	13%	
101 - 103 4th	15	15	15	1 to 1	73%	1	7%	
104, 108, 121	116	60	60	2 to 1	97%	31	53%	
108, 131 Early	67	25	22	3 to 1	96%	12	48%	
108, 131 Late	33	18	16	2 to 1	100%	4	22%	
111, 112 Early	633	267	266	3 to 1	97%	99	38%	
111, 112 Late	296	48	47	7 to 1	94%	32	69%	
113 Early	19	6	2	4 to 1	100%	3	50%	
113 Late	59	47	46	2 to 1	89%	14	32%	
114, 115 Early	79	53	53	2 to 1	98%	19	36%	
114, 115 Late	30	13	13	3 to 1	85%	6	54%	
145	19	10	10	2 to 1	100%	2	20%	
161 - 164 Early	176	35	34	6 to 1	100%	10	29%	
161 - 164 Late	129	25	25	6 to 1		10	40%	
221 Early	144	37	37	4 to 1	92%	14	41%	
221 Late	48	8	8	6 to 1	100%	3	38%	
222 Early	237	80	79	3 to 1	96%	40	51%	
222 Late	426	310	306	2 to 1	94%	94	31%	
223, 231, 241, 242 Early	333	85	83	4 to 1	94%	27	33%	
223, 231, 241, 242 Late	311	230	229	2 to 1	92%	61	28%	
TOTALS	5,985	3,313	3,263	2 to 1	95%	1,209	38%	

hunt returns thru 3/26/13

TABLE 9. 2012 ELK HUNT RESULTS BY HUNT AND UNIT GROUP

UNIT GROUP	Apps	Tags Sold	Tags Avail	Draw Odds*	% Return**	# Succ. Hunters	% Hunter Success***	%6+pts
RESIDENT ANTLERLESS ELK MUZZLELOADER HUNT 4176								
061, 071	133	86	85	2 to 1	98%	22	26%	
062, 064, 066 - 068	43	34	34	2 to 1	94%	16	50%	
072	47	30	28	2 to 1	97%	8	27%	
073	20	20	20	1 to 1	100%	4	20%	
074	8	8	8	1 to 1	100%	2	25%	
075*	16	22	22	1 to 1	95%	8	36%	
076, 077, 079	46	23	23	2 to 1	100%	13	57%	
078, 104, 105 - 107	3	1	1	3 to 1	100%	1	100%	
081	22	18	18	2 to 1	100%	8	44%	
104, 108, 121	13	6	5	3 to 1	100%	4	67%	
108, 131	16	10	10	2 to 1	100%	4	40%	
111, 112, 221, 222	242	102	101	3 to 1	98%	38	37%	
113	8	5	5	2 to 1	100%	4	80%	
114, 115	13	9	8	2 to 1	100%	3	33%	
161 – 164	16	5	5	4 to 1	100%	2	40%	
223, 231, 241, 242	104	49	48	3 to 1	98%	12	24%	
TOTALS	750	428	421	2 to 1	98%	149	35%	
RESIDENT ANTLERLESS ELK ARCHERY HUNT 4111								
061, 071	76	90	90	1 to 1	93%	10	11%	
062, 064, 066 - 068	32	51	50	1 to 1	98%	5	10%	
072	42	46	46	1 to 1	96%	10	22%	
073	11	22	22	1 to 1	91%	1	5%	
074	2	8	8	1 to 1	88%	1	13%	
075*	12	20	20	1 to 1	100%	1	5%	
076, 077, 079	33	25	25	2 to 1	92%	9	36%	
078, 104, 105 - 107	8	4	4	2 to 1	100%	3	75%	
081	16	21	21	1 to 1	95%	5	24%	
104, 108, 121	15	14	14	2 to 1	100%	5	36%	
108, 131	23	15	14	2 to 1	100%	6	40%	
111, 112, 221, 222	188	117	116	2 to 1	97%	39	34%	
113	5	4	4	2 to 1	100%	0	0%	
114, 115	30	39	39	1 to 1	97%	5	13%	
161 – 164	25	8	8	4 to 1	88%	1	13%	
223, 231, 241, 242	92	81	78	2 to 1	94%	14	19%	
TOTALS	610	565	559	2 to 1	95%	115	21%	

hunt returns thru 3/26/13

TABLE 9. 2012 ELK HUNT RESULTS BY HUNT AND UNIT GROUP

UNIT GROUP	Apps	Tags Sold	Tags Avail	Draw Odds*	% Return**	# Succ. Hunters	% Hunter Success***	%6+pts
NONRESIDENT ANTLERED ELK ANY LEGAL WEAPON HUNT 4251								
061, 071 Early	179	9	7	20 to 1	100%	4	44%	100%
061, 071 Late	83	10	9	9 to 1	100%	7	70%	57%
062, 064, 066-068 Early	94	5	4	19 to 1	100%	4	80%	75%
062, 064, 066 - 068 Late	51	5	5	11 to 1	100%	4	80%	100%
072, 074 Early	292	7	7	42 to 1	100%	3	43%	100%
072, 074 Late	84	8	8	11 to 1	100%	8	100%	88%
073 Early	8	2	2	4 to 1	100%	1	50%	100%
073 Late	9	2	2	5 to 1	100%	1	50%	100%
075	13	3	3	5 to 1	100%	3	100%	100%
076, 077, 079, 081 Early	211	4	3	53 to 1	100%	3	75%	100%
076, 077, 079, 081 Late	119	5	5	24 to 1	100%	4	80%	75%
078, 104, 105 - 107	28	2	2	14 to 1	50%	1	100%	100%
104, 108, 121	74	3	3	25 to 1	100%	3	100%	100%
108, 131, 132	11	4	4	3 to 1	100%	3	75%	67%
111 - 115 Early	367	10	10	37 to 1	90%	5	50%	100%
111 - 115 Late	129	7	7	19 to 1	100%	7	100%	71%
221, 222 Early	163	7	7	24 to 1	100%	6	86%	100%
221, 222 Late	35	6	6	6 to 1	83%	3	50%	100%
161 - 164, 171-173 Early	1,676	1	1	1676 to 1	100%	1	100%	100%
161 - 164, 171 - 173 Mid	40	3	3	14 to 1	100%	3	100%	100%
161 - 164, 171 - 173 Late	56	2	2	28 to 1	100%	1	50%	100%
223, 231, 241, 242 Early	383	5	5	77 to 1	100%	4	80%	75%
223, 231, 241, 242 Late	72	5	5	15 to 1	100%	4	80%	75%
TOTALS	4,177	115	110	37 to 1	97%	83	73%	87%
NONRESIDENT ANTLERED ELK MUZZLELOADER HUNT 4256								
061, 071	126	2	0	63 to 1	100%	0	0%	--
072, 074	293	3	3	98 to 1	100%	3	100%	100%
076, 077, 079, 081	13	1	1	13 to 1	100%	1	100%	100%
108, 131, 132	5	1	1	5 to 1	100%	1	100%	0%
111 – 115	38	2	2	19 to 1	100%	1	50%	100%
221, 222	19	1	1	19 to 1	100%	1	100%	100%
161 - 164, 171 - 173	15	1	1	15 to 1	100%	1	100%	100%
223, 231, 241, 242	41	1	1	41 to 1	100%	1	100%	100%
TOTALS	550	12	10	46 to 1	100%	9	75%	89%

hunt returns thru 3/26/13

TABLE 9. 2012 ELK HUNT RESULTS BY HUNT AND UNIT GROUP

UNIT GROUP	Apps	Tags Sold	Tags Avail	Draw Odds*	% Return**	# Succ. Hunters	% Hunter Success***	%6+pts
NONRESIDENT ANTLERED ELK ARCHEY HUNT 4261								
061, 071	53	3	3	18 to 1	100%	0	0%	--
062, 064, 066 - 068	42	1	1	42 to 1	100%	0	0%	--
072, 074	139	3	3	47 to 1	100%	0	0%	--
073	3	1	1	3 to 1	100%	0	0%	--
076, 077, 079, 081	28	1	0	28 to 1	100%	0	0%	--
108, 131, 132	12	1	1	12 to 1	100%	1	100%	100%
111 – 115	158	2	2	79 to 1	100%	2	100%	100%
221 - 222	107	2	2	54 to 1	100%	2	100%	100%
161 - 164, 171 - 173	24	1	1	24 to 1	100%	0	0%	--
223, 231, 241, 242	318	2	2	159 to 1	100%	2	100%	50%
TOTALS	884	17	16	52 to 1	100%	7	41%	86%

Apps - # of 1st choice applicants plus successful applicants as 2nd - 5th choice

Tags Avail - # of Tags Sold minus tags returned for any reason that were not reallocated

* Draw Odds - # of 1st choice plus successful applicants for every one tag sold

** % Return - Percent of hunter return cards received compared to total tags sold

*** % Hunter Success - based on # of successful hunters divided by total tags sold (includes did not hunts; a portion of nonreturns are assumed to be successful based on past trends of hunt records not yet returned)

TABLE 10. 2012 BULL ELK HARVEST MAIN BEAM LENGTH* BY UNIT GROUP

	Count of Antlers by Class Size					Percent of Antlers by Class Size			
Unit Group	**5"- 29"**	**30"- 43"**	**44"-49"**	**50"+**	**Total**	**5"- 29"**	**30"- 43"**	**44"-49"**	**50"+**
061, 071	14	57	21	12	104	13%	55%	20%	12%
062, 064, 066 - 068	5	31	27	20	83	6%	37%	33%	24%
072, 074	6	32	40	42	120	5%	27%	33%	35%
073	1	11	4	3	19	5%	58%	21%	16%
075	0	4	13	10	27	0%	15%	48%	37%
076, 077, 079, 081	4	31	37	22	94	4%	33%	39%	23%
078, 104, 105 - 107	0	5	4	6	15	0%	33%	27%	40%
091	0	1	1	1	3	0%	33%	33%	33%
101, 102, 103	2	24	10	6	42	5%	57%	24%	14%
104, 108, 121	1	9	9	10	29	3%	31%	31%	34%
108, 131, 132	2	16	6	6	30	7%	53%	20%	20%
111-115	6	38	32	50	126	5%	30%	25%	40%
221, 222	4	31	38	31	104	4%	30%	37%	30%
145	0	2	1	2	5	0%	40%	20%	40%
161 - 164, 171 - 173	5	14	13	15	47	11%	30%	28%	32%
223, 231, 241, 242	2	19	24	32	77	3%	25%	31%	42%
262	0	3	1	2	6	0%	50%	17%	33%
TOTAL	**52**	**328**	**281**	**270**	**931**	**6%**	**35%**	**30%**	**29%**

*Antler length is from hunter measurement of the longest main beam to the nearest inch.
Statewide 99% response rate on measuring antler main beam.

TABLE 11. 2012 BIGHORN SHEEP HUNT RESULTS BY HUNT AND UNIT GROUP

Unit Group	Apps	Tags	Draw Odds*	% Returns**	# Succ. Hunters	% Hunter Success***	Avg Age	160+
RESIDENT PARTNERSHIP IN WILDLIFE (PIW) DESERT BIGHORN SHEEP HUNT 3000								
Statewide	1,925	1	1925 to 1	100%	1	100%	7.0	
HERITAGE DESERT BIGHORN SHEEP HUNT 3100 and 3200								
Statewide		1		100%	1	100%	7.0	
SILVER STATE DESERT BIGHORN SHEEP HUNT 3300								
Statewide	2,752	1	2752 to 1	100%	1	100%	9.0	1
DREAM DESERT BIGHORN SHEEP HUNT 3500								
Statewide		1		100%	1	100%	6.0	1
RESIDENT DESERT BIGHORN SHEEP HUNT 3151								
044,182	334	8	42 to 1	100%	7	88%	5.1	
045	84	2	42 to 1	100%	2	100%	8.0	1
131, 164	96	5	20 to 1	100%	5	100%	4.8	
132	44	2	22 to 1	100%	2	100%	7.5	1
133, 245	26	4	7 to 1	100%	3	75%	5.0	
134	97	6	17 to 1	100%	5	83%	4.6	
153	65	1	65 to 1	100%	0	0%		
161 Early	278	6	47 to 1	100%	4	67%	6.0	1
161 Late	86	4	22 to 1	100%	3	75%	6.0	1
162, 163	112	5	23 to 1	100%	6	120%	5.4	1
173	98	5	20 to 1	100%	5	100%	6.3	1
181	364	10	37 to 1	100%	9	90%	7.3	4
183	274	8	35 to 1	100%	8	100%	5.8	2
184 Early	170	3	57 to 1	100%	3	100%	4.5	
184 Late	71	3	24 to 1	100%	1	33%	4.5	
202, 204	108	4	27 to 1	100%	4	100%	6.5	
205 North	165	7	24 to 1	100%	7	100%	6.0	2
205 South	64	7	10 to 1	100%	7	100%	5.6	3
206	34	3	12 to 1	100%	2	67%	6.5	
211 North	94	9	11 to 1	100%	7	78%	6.4	
211 South	77	9	9 to 1	100%	8	89%	6.6	1
212	84	10	9 to 1	100%	9	90%	7.2	3
223, 241	69	6	12 to 1	100%	4	67%	5.8	
243	29	4	8 to 1	100%	1	25%	8.0	1
244	93	4	24 to 1	100%	3	75%	5.7	1
252	321	8	41 to 1	100%	8	100%	6.4	3
253 Specters	106	3	36 to 1	100%	3	100%	8.0	
253 Bares	1,156	7	166 to 1	100%	7	100%	8.4	5
261	98	8	13 to 1	100%	8	100%	7.1	3

TABLE 11. 2012 BIGHORN SHEEP HUNT RESULTS BY HUNT AND UNIT GROUP

Unit Group	Apps	Tags	Draw Odds*	% Returns**	# Succ. Hunters	% Hunter Success***	Avg Age	160+
262	228	5	46 to 1	100%	1	20%	8.5	1
263	544	8	68 to 1	100%	7	88%	6.8	5
264, 265	89	4	23 to 1	100%	4	100%	6.0	3
266	134	4	34 to 1	100%	3	75%	5.8	1
267	188	7	27 to 1	100%	7	100%	7.5	4
268	837	24	35 to 1	100%	23	96%	6.8	16
271	154	9	18 to 1	100%	7	78%	6.8	3
272	51	2	26 to 1	100%	1	50%	8.0	1
280	29	5	6 to 1	100%	3	60%	7.0	1
281	39	5	8 to 1	100%	3	60%	8.3	2
282	29	6	5 to 1	100%	5	83%	7.6	2
283, 284	54	6	9 to 1	100%	5	83%	7.0	2
286	14	3	5 to 1	100%	1	33%	5.0	1
TOTAL	**7,087**	**249**	**29 to 1**	**100%**	**211**	**85%**		**76**
NONRESIDENT DESERT BIGHORN SHEEP HUNT 3251								
044, 182	158	2	79 to 1	100%	2	100%	5.1	
161	382	2	191 to 1	100%	2	100%	6.0	1
173	86	1	86 to 1	100%	1	100%	6.3	1
181	379	1	379 to 1	100%	1	100%	7.3	4
183	103	1	103 to 1	100%	1	100%	5.8	2
184	35	1	35 to 1	100%	0	0%	4.5	
205 North	189	2	95 to 1	100%	2	100%	6.0	2
205 South	76	2	38 to 1	100%	2	100%	5.6	3
211 North	39	2	20 to 1	100%	2	100%	6.4	
211 South	46	1	46 to 1	100%	1	100%	6.6	1
261	76	1	76 to 1	100%	1	100%	7.1	3
262	351	1	351 to 1	100%	1	100%	8.5	1
263	3,107	2	1554 to 1	100%	1	50%	6.8	5
266	61	1	61 to 1	100%	1	100%	5.8	1
267	566	1	566 to 1	100%	1	100%	7.5	4
268	644	4	161 to 1	100%	4	100%	6.8	16
271	175	2	88 to 1	100%	2	100%	6.8	3
283, 284	60	1	60 to 1	100%	1	100%	7.0	2
TOTAL	**6,533**	**28**	**234 to 1**	**100%**	**26**	**93%**		
RESIDENT PARTNERSHIP IN WILDLIFE (PIW) CALIFORNIA BIGHORN SHEEP HUNT 8000								
Statewide	1,816	1	1816 to 1	100%	1	100%	8.0	

TABLE 11. 2012 BIGHORN SHEEP HUNT RESULTS BY HUNT AND UNIT GROUP

Unit Group	Apps	Tags	Draw Odds*	% Returns**	# Succ. Hunters	% Hunter Success***	Avg Age	160+
HERITAGE CALIFORNIA BIGHORN SHEEP HUNT 8100 & 8200								
Statewide		1		100%	1	100%	7.0	
DREAM CALIFORNIA BIGHORN SHEEP HUNT 8500								
Statewide		1		100%	1	100%	9.0	1
RESIDENT CALIFORNIA BIGHORN SHEEP HUNT 8151								
012	876	8	110 to 1	100%	4	50%	7.7	2
014	238	3	80 to 1	100%	3	100%	5.3	
021, 022	231	3	77 to 1	100%	3	100%	6.7	
031	1,689	7	242 to 1	100%	6	86%	7.4	3
032	854	8	107 to 1	100%	7	88%	8.8	2
033	268	4	67 to 1	100%	4	100%	6.2	
034	798	9	89 to 1	100%	9	100%	7.7	2
035	126	3	42 to 1	100%	3	100%	5.0	
051	211	2	106 to 1	100%	2	100%	7.5	1
068	400	4	100 to 1	100%	4	100%	3.5	
TOTAL	**5,691**	**51**	**112 to 1**	**100%**	**45**	**88%**		**10**
NONRESIDENT CALIFORNIA BIGHORN SHEEP HUNT 8251								
012	997	2	499 to 1	100%	2	100%	7.7	2
031	3,118	1	3118 to 1	100%	1	100%	7.4	3
032	810	1	810 to 1	100%	1	100%	8.8	2
033	523	1	523 to 1	100%	1	100%	6.2	
TOTAL	**5,448**	**5**	**1090 to 1**	**100%**	**5**	**100%**		
RESIDENT ROCKY MOUNTAIN BIGHORN SHEEP HUNT 9151							**Avg Age**	**170+**
074	2,061	3	687 to 1	100%	3	100%	7.0	1
091	557	2	279 to 1	100%	2	100%	9.0	
114	801	2	401 to 1	100%	1	50%	2.0	
115	452	1	452 to 1	100%	1	100%	8.0	1
TOTAL	**3,871**	**8**	**484 to 1**	**100%**	**7**	**88%**		**2**

Apps - # of unsuccessful 1st choice applicants plus successful applicants as 1st - 5th choice.

* Draw Odds - # of "Apps" for every one tag sold.

** % Return - Percent of hunter return records received compared to total tags sold

*** % Hunter Success - based on # of successful hunters divided by total tags sold (includes did not hunts; nonreturns are assumed to be unsuccessful).

Avg Age - Average age of rams from all tagholders for given unit group including early and late seasons and residents and nonresidents.

160+/170+ - # of rams scoring 160+/170+ B&C points from all tagholders (resident and nonresident) for given unit group including early and late seasons.

TABLE 12. BIGHORN SHEEP HARVEST HISTORY, 1993 - 2012

Year	# Tags Issued	Percent Success	Average Days Hunted	Average Age	Average B&C Score	Maximum B&C Score
DESERT BIGHORN						
1993	123	84%	7.4	6.4	150 3/8	178 6/8
1994	125	71%	8.6	6.1	149 4/8	179 4/8
1995	124	72%	7.9	6.3	150 5/8	171 4/8
1996	122	81%	7.4	5.4	144 6/8	177 3/8
1997	109	74%	7.9	6.1	145 5/8	170 6/8
1998	115	83%	7.3	5.8	152 1/8	172
1999	127	92%	5.8	6.0	147 4/8	179 2/8
2000	132	86%	5.9	6.3	147 4/8	173 2/8
2001	143	86%	5.8	6.2	150 5/8	178 2/8
2002	140	80%	6.4	6.3	148 4/8	183 2/8
2003	133	90%	6.2	6.4	150 7/8	173
2004	138	92%	6.1	6.1	150 3/8	174 6/8
2005	149	91%	4.7	6.5	153 1/8	176 5/8
2006	154	92%	5.5	6.7	152 3/8	177 6/8
2007	172	87%	6.1	6.4	149 5/8	172 7/8
2008*	173	88%	5.8	6.3	152 3/8	178 5/8
2009*	193	89%	5.2	6.2	153 4/8	177 4/8
2010*	216	86%	5.7	6.5	154 1/8	189 6/8
2011	222	87%	4.9	6.6	153 6/8	181 6/8
2012	281	86%	5.7	6.5	154	182 2/8
Total/Avg	**3,091**	**85%**	**6.2**	**6.3**	**151 1/8**	**189 6/8**

* Includes Rocky Mtn and hybrid Desert/Rocky Rams harvested in Unit 131

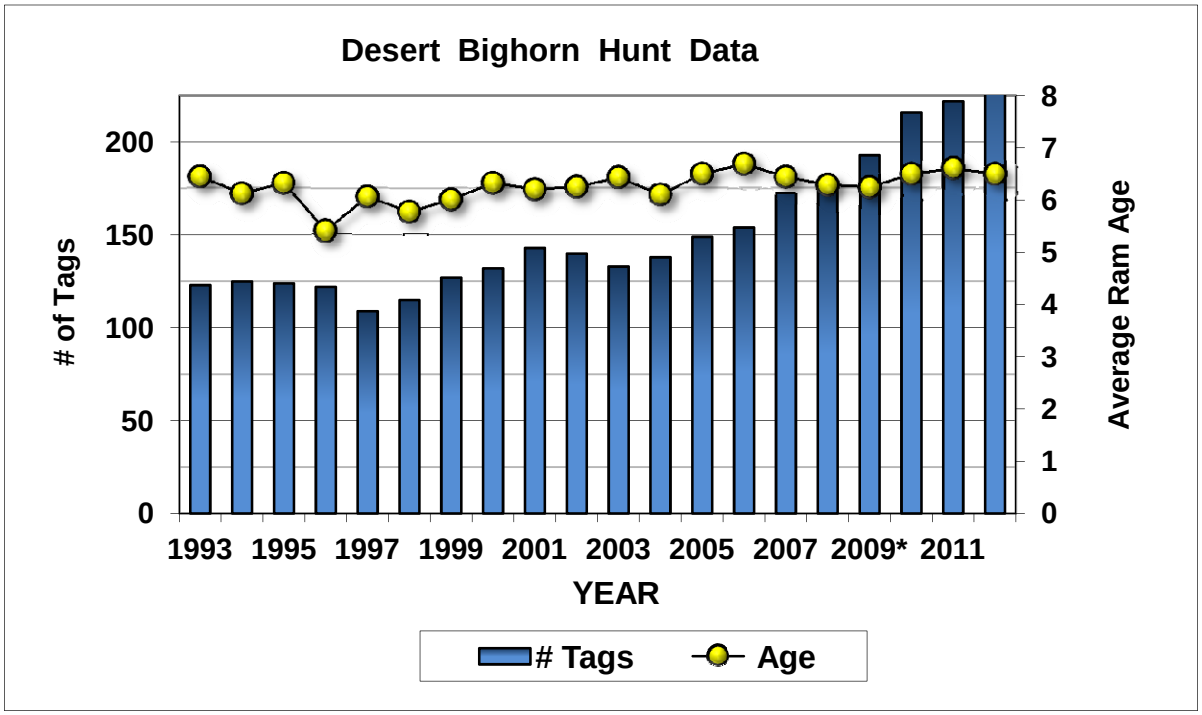


TABLE 12. BIGHORN SHEEP HARVEST HISTORY, 1993 - 2012

Year	# Tags Issued	Percent Success	Average Days Hunted	Average Age	Average B&C Score	Maximum B&C Score
DESERT BIGHORN						
044, 182	116	90%	6.6	5.4	144 7/8	162 5/8
045	6	100%	6.3	6.7	154 7/8	163 5/8
131*, 164	21	90%	5.1	6.1	149	189 6/8
132	14	79%	6.1	6.2	131 1/8	165 7/8
133, 245	37	59%	8.4	6.3	149 4/8	165 7/8
134	106	92%	5.0	5.8	150 4/8	170 6/8
161	158	86%	5.5	6.9	157	173
162, 163	46	96%	3.9	6.4	153 5/8	167
173	65	91%	5.0	5.8	144 7/8	175 3/8
181	63	94%	5.0	6.5	158 1/8	179 2/8
183	99	96%	4.8	5.9	152 7/8	171 4/8
184	97	80%	6.5	5.4	148 3/8	166
202	39	87%	5.5	5.0	139 3/8	164 7/8
204	9	89%	6.1	5.6	143 7/8	163 4/8
205	107	90%	5.7	5.9	145	166 3/8
205 North**	39	85%	5.4	6.2	149 7/8	173
205 South**	42	93%	5.0	5.6	146 5/8	164 7/8
206	44	86%	7.5	6.9	146 6/8	173 2/8
211 North	94	90%	3.9	5.8	137 1/8	157 3/8
211 South	64	86%	5.4	6.5	146 5/8	166
212	57	86%	5.6	7.0	149	164
221	19	84%	6.2	5.4	144 7/8	161 7/8
223, 241	54	72%	9.7	5.9	149 1/8	170 4/8
243	25	36%	10.4	7.6	148 6/8	166 4/8
244	69	80%	8.5	6.8	152 2/8	179 4/8
252	94	89%	7.3	6.5	159 4/8	180 3/8
253 Bares	73	97%	3.6	7.3	165 1/8	181 7/8
253 Specters	26	92%	6.9	7.4	150 2/8	162 7/8
261	77	87%	6.3	6.6	148 6/8	168 7/8
262	106	86%	7.2	6.8	155 4/8	174 3/8
263	144	95%	6.1	6.9	161 5/8	183 2/8
264, 265	60	77%	7.7	6.5	150 3/8	167 3/8
266	116	87%	6.5	5.6	145 4/8	170
267	178	95%	4.3	6.4	151 1/8	181 6/8
268	348	93%	4.9	6.9	153 5/8	182 2/8
271	134	81%	8.4	6.0	147 1/8	178 6/8
272	46	54%	9.1	5.3	144 3/8	176 2/8
280	28	54%	6.7	7.7	154 1/8	163 1/8
281	86	51%	7.4	7.1	154 2/8	177 3/8
282	50	64%	6.8	6.3	150 2/8	174
283, 284	89	65%	9.2	5.9	150 2/8	169 6/8
286	58	81%	8.2	5.7	152 2/8	171 6/8

* Includes Rocky Mtn and hybrid Desert/Rocky Rams

**Unit 205 was first split in 2007

TABLE 12. BIGHORN SHEEP HARVEST HISTORY, 1993 - 2012

Year	# Tags Issued	Percent Success	Average Days Hunted	Average Age	Average B&C Score	Maximum B&C Score
ROCKY MOUNTAIN BIGHORN						
1996	2	50%	10.0	10.0	165 6/8	165 6/8
1997	3	67%	7.3	8.5	164 6/8	169 1/8
1998	5	100%	1.4	7.6	169 6/8	176 2/8
1999	5	100%	6.4	7.4	159	176
2000	4	100%	4.3	7.5	164 2/8	173 3/8
2001	3	67%	5.7	6.0	174 2/8	178 1/8
2002	3	100%	3.0	6.7	167 6/8	183 1/8
2003	6	100%	4.7	6.8	168 1/8	183 4/8
2004	6	83%	3.2	8.0	176 7/8	189 4/8
2005	6	83%	8.5	7.4	174 5/8	178 2/8
2006	6	83%	2.7	7.0	170 1/8	190 5/8
2007	9	100%	3.2	6.1	172	190 5/8
2008	13	92%	6.4	6.8	169 4/8	191 5/8
2009	11	100%	3.8	7.9	172 2/8	195 4/8
2010	4	100%	3.0	5.8	153 6/8	160 1/8
2011	5	60%	8.0	7.7	159 5/8	167 2/8
2012	8	88%	5.1	7.0	158	174 7/8
Total	101	90%	4.9	7.2	167 7/8	195 4/8

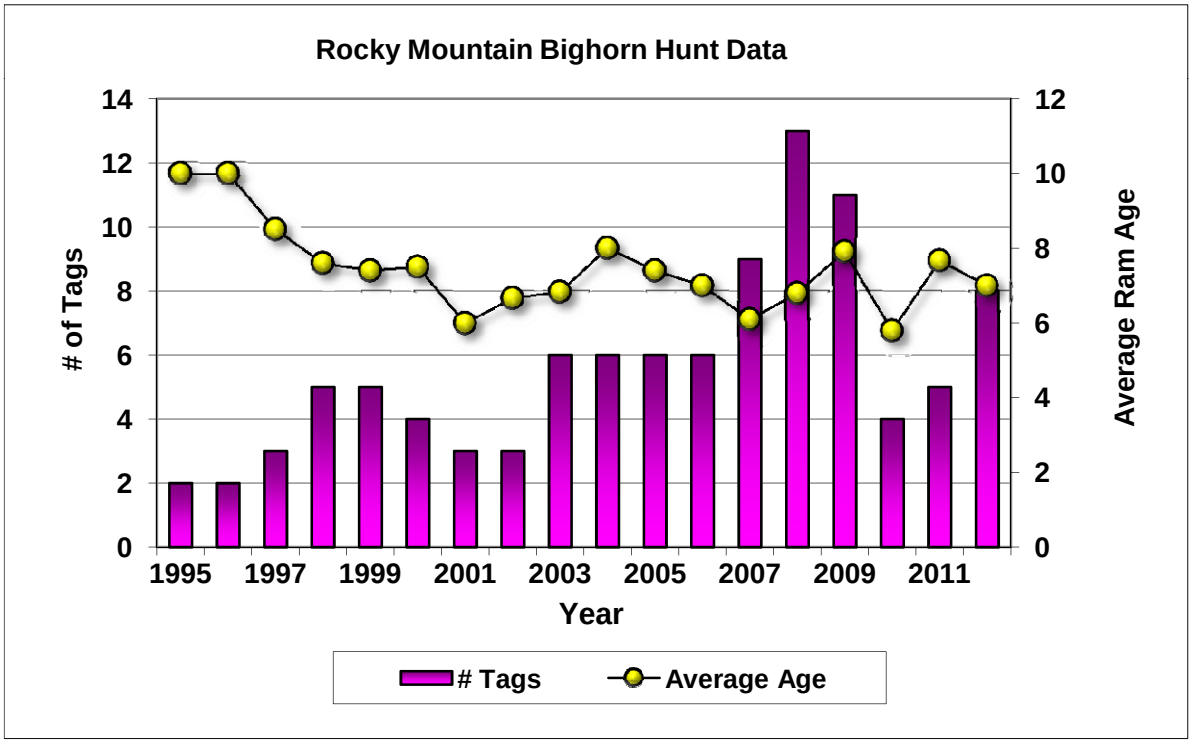


TABLE 12. BIGHORN SHEEP HARVEST HISTORY, 1993 - 2012

Year	# Tags Issued	Percent Success	Average Days Hunted	Average Age	Average B&C Score	Maximum B&C Score
ROCKY MOUNTAIN BIGHORN						
074	23	96%	4.6	7.2	159 4/8	176 7/8
091	4	75%	8.8	9.7	166 6/8	169 3/8
101	41	95%	3.7	6.8	173 5/8	195 4/8
102	20	85%	4.3	8.1	175 7/8	188 3/8
114	11	73%	9.7	6.1	146 2/8	161 2/8
115	2	100%	6.0	8.0	167 7/8	172 5/8
CALIFORNIA BIGHORN						
1992	10	90%	7.5	6.2	149	157 1/8
1993	12	100%	4.1	7.4	147 5/8	165 1/8
1994	20	70%	5.8	7.1	150	164 6/8
1995	25	76%	7.2	7.5	146 6/8	166 1/8
1996	33	88%	6.1	7.6	151 4/8	170 2/8
1997	36	86%	6.6	6.9	147 4/8	175 2/8
1998	41	78%	6.1	6.8	149 6/8	167
1999	47	77%	6.8	6.2	144 6/8	167 2/8
2000	43	91%	5.5	6.9	145 5/8	166 5/8
2001	37	92%	5.0	7.4	148 5/8	184 7/8
2002	41	83%	5.8	6.4	146 3/8	165 7/8
2003	39	87%	6.1	6.8	148 6/8	168 7/8
2004	35	91%	5.7	7.3	152 2/8	166
2005	39	90%	7.1	6.6	149 5/8	167 1/8
2006	42	88%	7.3	6.8	151 5/8	171 3/8
2007	43	100%	6.4	6.8	147 4/8	165 2/8
2008	42	95%	6.1	7.1	152 3/8	172 4/8
2009	48	98%	7.0	7.3	155 3/8	169 6/8
2010	52	100%	6.4	7.4	156	169 4/8
2011	57	95%	6.2	7.0	153 6/8	173 2/8
2012	59	90%	6.1	7.0	149	169 4/8
TOTAL	801	89%	6.3	7.0	150 1/8	184 7/8

TABLE 12. BIGHORN SHEEP HARVEST HISTORY, 1993 - 2012

Year	# Tags Issued	Percent Success	Average Days Hunted	Average Age	Average B&C Score	Maximum B&C Score
CALIFORNIA BIGHORN						
011, 013	25	84%	6.7	7.0	146 6/8	164 7/8
012	90	94%	5.8	7.4	153 2/8	169 7/8
014	45	87%	4.2	6.4	137	166 2/8
022	17	100%	7.5	6.1	146 7/8	159 4/8
031	70	96%	4.6	7.1	152 7/8	171 3/8
032	131	89%	6.1	7.2	150 6/8	175 1/8
033	68	96%	7.0	7.2	150 6/8	165.75
034	80	98%	4.6	7.6	157 3/8	172 4/8
035	86	74%	7.1	7.6	148 2/8	168 7/8
041	9	100%	6.8	7.6	155	184 7/8
051	105	90%	7.7	6.5	153 2/8	175 2/8
066, 068	74	81%	7.6	5.8	139 2/8	167 7/8
068	4	100%	4.3	3.5	133 6/8	149

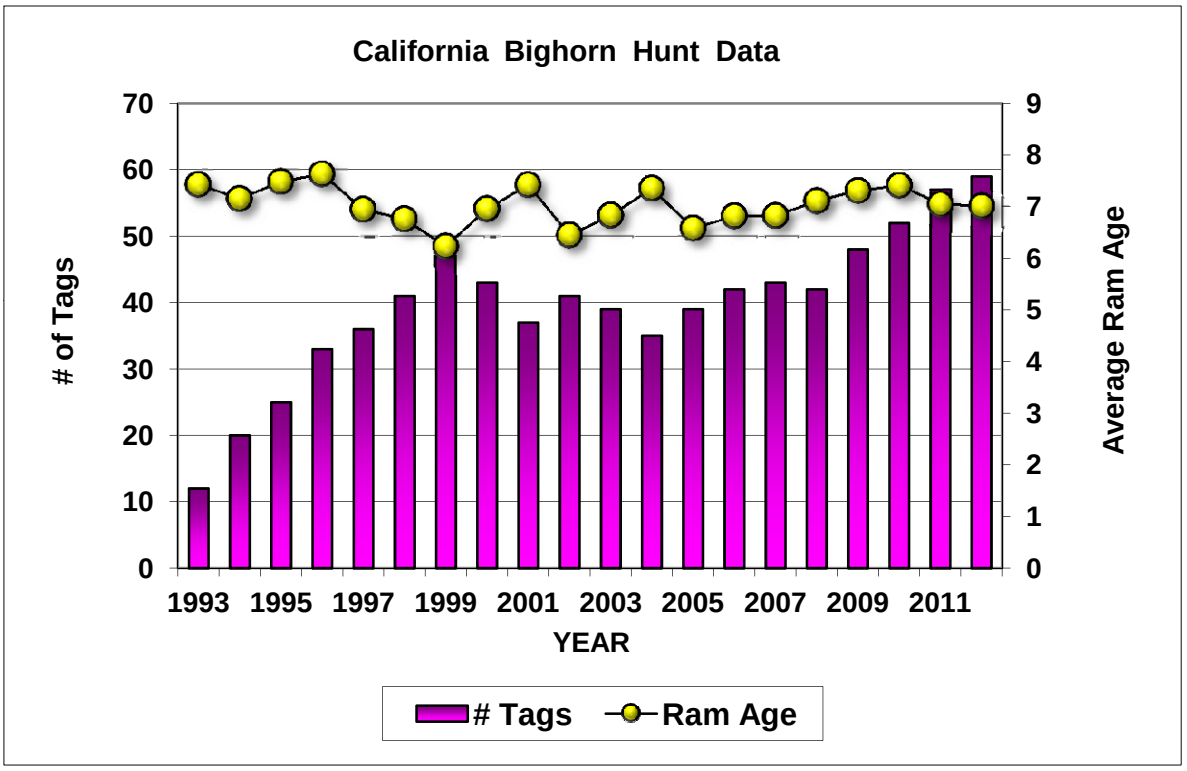


TABLE 13. 2012 MOUNTAIN GOAT HUNT RESULTS BY HUNT AND UNIT GROUP

UNIT GROUP	Apps	Tags	Draw Odds*	# Returns	% Returns**	# Succ. Hunters	% Hunter Success***
RESIDENT PIW MOUNTAIN GOAT HUNT 7000							
Statewide	1,076	1	1,076 to 1	1	100%	1	100%
RESIDENT MOUNTAIN GOAT HUNT 7151							
101	1,389	1	1,389 to 1	1	100%	1	100%
102	2,170	2	1,085 to 1	2	100%	2	100%
103	488	1	488 to 1	1	100%	1	100%
TOTAL	**4,047**	**4**	**1,012 to 1**	**4**	**100%**	**4**	**100%**
NONRESIDENT MOUNTAIN GOAT HUNT 7251							
101, 102	2,819	1	2,819 to 1	1	100%	1	100%

Apps - # of unsuccessful 1st choice applicants plus successful applicants as 1st - 5th choice.

* Draw Odds - # of "Apps" for every one tag sold.

** % Return - Percent of hunter return records received compared to total tags sold

*** % Hunter Success - based on # of successful hunters divided by total tags sold (includes did not hunts; nonreturns are assumed to be unsuccessful).

TABLE 14. MOUNTAIN GOAT HARVEST HISTORY BY UNIT AND YEAR, 1999 - 2012

Year	Harvest	Average Age	Average Left Horn	Average Right Horn	Average Days Hunted
Unit 101 - East Humboldt Range					
1999	4	2.3	7.3	7.6	2.5
2000	5	4.4	9.0	9.0	1.8
2001	6	6.5	8.9	8.9	2.7
2002	7	4.6	8.4	8.6	2.1
2003	8	3.5	8.6	8.6	1.9
2004	6	2.7	8.3	8.3	1.6
2005	5	3.0	7.9	7.9	2.2
2006	5	4.5	8.1	7.9	2.0
2007	5	4.8	8.8	8.9	1.8
2008	5	5.0	9.1	9.1	2.8
2009	7	7.0	9.2	9.3	1.7
2010	6	6.8	8.2	7.8	3.8
2011	3	3.0	8.3	8.3	2.0
2012	2	5.5	8.3	8.2	3.0
5-Year Avg.	**5**	**5.5**	**8.6**	**8.5**	**2.7**
Long-term Avg.	**5**	**4.5**	**8.5**	**8.5**	**2.3**
Unit 102 - Ruby Mountains					
1999	6	4.7	8.8	9.0	2.8
2000	9	4.6	8.7	8.7	8.9
2001	14	4.1	8.2	8.5	3.7
2002	11	5.1	9.1	9.0	2.9
2003	13	5.0	9.1	9.2	5.2
2004	12	5.3	8.6	8.9	5.1
2005	18	4.6	8.7	8.6	2.6
2006	18	4.0	8.5	8.7	3.9
2007	22	4.9	9.0	8.9	2.6
2008	21	3.9	8.6	8.4	4.4
2009	20	4.5	8.7	8.8	3.4
2010	13	5.6	8.6	8.9	3.9
2011	7	4.9	8.8	8.9	3.3
2012	3	4.7	8.4	8.6	6.7
5-Year Avg.	**13**	**4.7**	**8.6**	**8.7**	**4.3**
Long-term Avg.	**13**	**4.7**	**8.7**	**8.8**	**4.2**

TABLE 14. MOUNTAIN GOAT HARVEST HISTORY BY UNIT AND YEAR, 1999 - 2012

Unit 103 - Pearl Peak Area, Southern Ruby Mountains

Year	Harvest	Average Age	Average Left Horn	Average Right Horn	Average Days Hunted
2000	2	6.0	9.1	8.2	2.0
2001	2	4.0	8.4	8.4	2.5
2002	1	4.0	7.6	7.5	4.0
2003	1	2.0	7.8	7.5	2.0
2004	1	4.0	9.3	9.5	4.0
2005	1	5.0	7.0	9.0	1.0
2006	2	7.0	9.4	8.9	3.5
2007	2	4.5	9.0	8.9	3.0
2008	1	3.0	9.0	9.3	7.0
2009	1	8.0	9.3	9.3	3.0
2010	1	3.0	9.3	8.9	6.0
2011	1	5.0	9.0	9.0	3.0
2012	1	6.0	9.9	9.9	7.0
5-Year Avg.	**1**	**5.0**	**9.3**	**9.3**	**5.2**
Long-term Avg.	**1**	**4.7**	**8.8**	**8.8**	**3.7**

ALL UNITS

Year	Hunter Success	# of Tags	Harvest	# of Billies	# of Nannies	% Nannies
1999	91%	11	10	9	1	10%
2000	89%	18	16	15	1	6%
2001	96%	23	22	16	6	27%
2002	78%	23	18	17	1	6%
2003	96%	24	23	20	3	13%
2004	83%	24	20	17	3	15%
2005	85%	28	24	22	2	8%
2006	90%	29	26	23	3	12%
2007	100%	29	29	23	6	21%
2008	93%	29	27	21	6	22%
2009	96%	28	27	19	8	30%
2010	100%	20	20	12	8	40%
2011	100%	11	11	8	3	27%
2012	100%	6	6	5	1	17%
Total/Avg.	92%	303	279	227	52	19%

TABLE 15. 2012 BLACK BEAR DRAW AND HUNT RESULTS

RESIDENT BLACK BEAR HUNT 6151

UNIT GROUP	Apps	Tags	Draw Odds*	# Returns	% Returns**	# Succ. Hunters	% Hunter Success***
Statewide	1,691	41	42 to 1	41	100%	11	27%

NONRESIDENT BLACK BEAR HUNT 6251

UNIT GROUP	Apps	Tags	Draw Odds*	# Returns	% Returns**	# Succ. Hunters	% Hunter Success***
Statewide	71	4	18 to 1	4	100%	0	0%

BLACK BEAR HARVEST RESULTS

YEAR	Gender	Harvest	Mean Age	3-yr Average Age	Hunter Effort of Successful Tagholders
2012	Males	10	6.3	NA	8.9 days/kill
	Females	1	12	NA	

Apps - # of unsuccessful applicants plus successful applicants.

* Draw Odds - # of "Apps" for every one tag sold.

** % Return - Percent of hunter return records received compared to total tags sold

*** % Hunter Success - based on # of successful hunters divided by total tags sold

TABLE 16. FALL 2012 AND SPRING 2013 MULE DEER SURVEY COMPOSITION

UNIT GROUP	2012 FALL TOTAL	2012 Bucks/ 100 Does	2012 Fawns/ 100 Does	2012 Fawns/ 100 Adults	2013 Spring Adults	2013 Spring Fawns	2013 Spring TOTAL	2013 Fawns/ 100 Adults	*2012 Fawns/ 100 Adult*
011 - 013	675	31	62	**47**	181	71	252	**39**	*43*
014	722	32	57	**43**	205	82	287	**40**	*41*
015	--	--	--	**--**	202	81	283	**40**	--
021	--	--	--	**--**	271	93	364	**34**	*41*
022	--	--	--	**--**	88	30	118	**34**	*42*
031	270	60	53	**33**	514	137	651	**27**	*48*
032, 034	945	43	45	**32**	402	125	527	**31**	*40*
033	229	43	46	**32**	111	41	152	**37**	*46*
035	201	41	56	**40**	306	104	410	**34**	*46*
041, 042	--	--	--	**--**	68	18	86	**26**	*39*
043 - 046	1,201	44	32	**22**	645	136	781	**21**	*39*
051	590	39	39	**28**	375	121	496	**32**	*52*
061,062,064, 066-068	3,922	37	74	**54**	3,074	1,134	4,208	**37**	*53*
065	--	--	--	**--**	41	11	52	**27**	*44*
071 - 079, 091	4,243	25	54	**43**	2,246	703	2,949	**31**	*35*
081	--	--	--	**--**	21	7	28	**33**	--
101 - 109	6,927	29	56	**43**	6,111	1,682	7,793	**28**	*24*
111 - 113	2,234	29	52	**40**	1,545	464	2,009	**30**	*31*
114 - 115	658	39	48	**35**	342	79	421	**23**	*39*
121	--	--	--	**--**	1,554	499	2,053	**32**	*54*
131 - 134	--	--	--	**--**	1,311	400	1,711	**31**	*38*
141 - 145	1,386	30	51	**39**	996	327	1,323	**33**	*44*
151, 152, 154-156	1,286	38	56	**41**	981	176	1,157	**18**	*55*
161 - 164	1,163	36	49	**36**	594	140	734	**24**	*44*
171 - 173	1,611	37	52	**38**	456	120	576	**26**	*36*
181 - 184	165	48	51	**34**	82	28	110	**34**	*32*
192	381	27	45	**35**	100	43	143	**43**	--
194, 196	549	41	48	**34**	286	135	421	**47**	--
195	--	--	--	**--**	--	--	--	**--**	--
201 - 208	1,187	18	33	**28**	707	138	845	**20**	*30*
203	--	--	--	**--**	--	--	--	**--**	*37*
211 - 213	--	--	--	**--**	--	--	--	**--**	--
221 - 223	1,788	37	60	**44**	750	315	1,065	**42**	*49*
231	1,184	25	55	**44**	869	354	1,223	**41**	*48*
241 - 244	382	29	50	**39**	87	31	118	**36**	*48*
251 - 254	--	--	--	**--**	--	--	--	**--**	--
261 - 268	--	--	--	**--**	--	--	--	**--**	--
271, 272	--	--	--	**--**	--	--	--	**--**	--
291	--	--	--	**--**	--	--	--	**--**	--
2012-13 TOTALS	**33,899**	**32**	**54**	**41**	**25,521**	**7,825**	**33,346**	**31**	
2011-12 TOTALS	*27,031*	*32*	*59*	***45***	*18,452*	*6,785*	*25,237*	***37***	

Spring fawn/100 adults ratios that are higher than its fall ratio are assumed to be biased high.

Units with (--) were not surveyed.

TABLE 17. LATE SUMMER/FALL/WINTER 2012 PRONGHORN SURVEY COMPOSITION

UNIT GROUP	BUCKS	DOES	FAWNS	TOTAL	2012 BUCKS/ 100 DOES	2012 FAWNS/ 100 DOES	*2011 FAWNS/ 100 DOES*
011	78	262	110	450	30	**42**	*40*
012 - 014	102	357	128	587	29	**36**	*39*
015	87	166	81	334	52	**49**	*44*
021 - 022	30	77	21	128	39	**27**	*42*
031	38	120	38	196	32	**32**	*39*
032, 034, 035	50	249	94	393	20	**38**	*39*
033	75	251	74	400	30	**30**	*34*
041, 042	152	433	145	730	35	**34**	*52*
043, 044, 046	28	49	19	96	57	**39**	*31*
051	45	132	57	234	34	**43**	*19*
061 - 064, 071, 073	185	467	196	848	40	**42**	*33*
065, 142, 144	*53*	*87*	*23*	163	61	**26**	*36*
066	*76*	*115*	*45*	236	66	**39**	*16*
067 - 068	252	657	195	1,104	38	**30**	*46*
072, 074, 075	58	136	87	281	43	**64**	*25*
076, 077, 079, 081, 091	31	54	13	98	57	**24**	*16*
078, 105 - 107, 121	92	226	60	378	41	**27**	*21*
101 - 104, 108	123	389	67	579	32	**17**	*35*
111 - 114	262	784	171	1,217	33	**22**	*34*
115, 231, 242	78	250	28	356	31	**11**	*18*
131, 145, 163, 164	114	328	58	500	35	**18**	*53*
132 - 134, 245	82	243	35	360	34	**14**	*46*
141, 143, 151 - 155	241	631	256	1,128	38	**41**	*57*
161, 162	57	170	29	256	34	**17**	*38*
171 - 173	36	88	13	137	41	**15**	*58*
181 - 184	86	232	55	373	37	**24**	*54*
202, 204	15	76	7	98	20	**9**	*32*
203, 291	10	26	3	39	39	**12**	*31*
205, 206	10	26	3	39	39	**12**	*50*
211 - 213				--	--	**--**	
221 - 223, 241	43	166	37	246	26	**22**	*36*
251	58	72	4	134	81	**6**	*49*
2012 TOTALS	**2,647**	**7,319**	**2,152**	**12,118**	**36**	**29**	
2011	*2,322*	*6,604*	*2,453*	*11,379*	*35*	*37*	

Units with (--) were not surveyed.

TABLE 18. LATE SUMMER/FALL 2012 DESERT BIGHORN SHEEP SURVEY COMPOSITION

UNIT GROUP	RAMS	EWES	LAMBS	TOTAL	2012 RAMS/ 100 EWES	2012 LAMBS/ 100 EWES	*2011 LAMBS/ 100 EWES*
044, 182	38	94	43	175	40	**46**	*46*
045	20	34	19	73	59	**56**	*57*
131, 164	39	91	13	143	43	**14**	*15*
132	6	32	10	48	19	**31**	*33*
133, 245				--	--	**--**	*52*
134	68	141	2	211	48	**1**	*9*
153				--	--	**--**	*13*
161	35	92	60	187	38	**65**	*--*
162				--	--	**--**	*--*
163	35	78	33	146	45	**42**	*--*
173	15	36	3	54	42	**8**	*--*
181	77	106	20	203	73	**19**	*50*
183	46	100	38	184	46	**38**	*23*
184	13	34	13	60	38	**38**	*43*
195	9	11	8	28	82	**73**	*--*
202	17	38	16	71	45	**42**	*--*
204	23	31	14	68	74	**45**	*77*
205, 207	88	152	71	311	58	**47**	*35*
206	28	29	16	73	97	**55**	*--*
211 Silver Peaks				--	--	**--**	*54*
213 (Monte Cristos)	105	186	47	338	57	**25**	*--*
212				--	--	**--**	*50*
221				--	--	**--**	*--*
223, 241	19	39	13	71	49	**33**	*37*
243	17	40	15	72	43	**38**	*42*
244				--	--	**--**	*--*
252				--	--	**--**	*38*
253 (Bares)				--	--	**--**	*73*
254 (Specters)				--	--	**--**	*--*
261				--	--	**--**	*47*
262	59	144	31	234	41	**22**	*--*
263	57	152	22	231	38	**15**	*40*
264	40	65	23	128	62	**35**	*--*
265				--	--	**--**	*--*
266				--	--	**--**	*53*
267				--	--	**--**	*--*
268				--	--	**--**	*63*
269 (River Mtns)	82	127	46	255	65	**36**	*35*
271	55	102	24	181	54	**24**	*--*
272				--	--	**--**	*46*
280	23	36	6	65	64	**17**	*17*
281	12	28	9	49	43	**32**	*70*
282	27	52	4	83	52	**8**	*42*
283, 284	51	122	16	189	42	**13**	*--*
286	32	43	9	84	74	**21**	*--*
2012 TOTALS	**1,136**	**2,235**	**644**	**4,015**	**51**	**29**	
2011 TOTALS	*1,122*	*1,798*	*745*	*3,665*	*62*	*41*	

Units with (--) were not surveyed.

TABLE 19. LATE SUMMER/FALL 2012 CALIFORNIA BIGHORN SHEEP SURVEY COMPOSITION

UNIT GROUP	RAMS	EWES	LAMBS	TOTAL	2012 RAMS/ 100 EWES	2012 LAMBS/ 100 EWES	*2011 LAMBS/ 100 EWES*
011, 013	2	17	10	29	12	59	--
012	26	54	16	96	48	30	*43*
014	8	36	15	59	22	42	*23*
021, 022	7	35	18	60	20	51	*40*
031	43	69	28	140	62	41	40
032	54	90	42	186	60	47	43
033	23	29	5	57	79	17	46
034	40	81	31	152	49	38	42
035	10	21	13	44	48	62	64
041	4	11	8	23	36	73	33
051	13	51	30	94	26	59	42
066	--	--	--	--	--	--	--
068	22	48	13	83	46	27	*44*
2012 TOTALS	**252**	**542**	**229**	**1023**	**46**	**42**	
2011 TOTALS	*263*	*480*	*209*	952	55	44	

TABLE 20. SUMMER/WINTER/EARLY SPRING 2012 - 2013 ROCKY MOUNTAIN BIGHORN SHEEP SURVEY COMPOSITION

UNIT GROUP	RAMS	EWES	LAMBS	TOTAL	2012-13 RAMS/ 100 EWES	2012-13 LAMBS/ 100 EWES	*2011-12 LAMBS/ 100 EWES*
074	9	10	5	24	90	50	*50*
091	16	25	1	42	64	4	*0*
101	--	--	--	--	--	--	--
102	--	--	--	--	--	--	--
114	7	22	5	34	32	23	*27*
115	8	11	5	24	73	46	--
2012-13 TOTALS	**40**	**68**	**16**	**124**	**59**	**24**	
2011-12 TOTALS	*49*	*50*	*12*	*111*	*98*	*24*	

Units with (--) were not surveyed.

TABLE 21. JANUARY 2013 MOUNTAIN GOAT SURVEY COMPOSITION

UNIT GROUP	ADULTS	KIDS	TOTAL	**2013 KIDS/ 100 ADULTS**	*2012* KIDS/ 100 ADULTS
101	104	0	104	0	*5*
102	114	23	**137**	20	*7*
103	10	5	**15**	50	*22*
2013 TOTALS	**228**	**28**	**256**	**12**	
2012 TOTALS	*180*	*13*	*193*	*7*	

TABLE 22. FALL/WINTER 2012 - 2013 ROCKY MOUNTAIN ELK SURVEY COMPOSITION

UNIT GROUP	BULLS	COWS	CALVES	TOTAL	**2012-2013 BULLS/ 100 COWS**	**2012-2013 CALVES/ 100 COWS**	*2011-2012 CALVES/ 100 COWS*
061, 071	438	1,126	615	2,179	39	55	*45*
062,064, 066-068	230	246	151	627	94	61	*54*
072, 074	268	347	178	793	77	51	*49*
073	162	505	280	947	32	55	*43*
075	74	104	59	237	71	57	*45*
076, 077,079, 081	238	925	414	1,577	26	45	*52*
078,104, 105-107	64	115	23	202	56	20	*31*
091	29	58	34	121	50	59	*47*
104,108,121	79	286	112	477	28	39	*51*
108,131-132	65	222	82	369	29	37	*44*
111-115, 221, 222	528	1,765	562	2,855	30	32	*38*
161 - 164	90	375	147	612	24	39	*31*
171 - 173	6	26	9	41	23	35	
223, 231,241,242	63	212	91	366	30	43	*54*
262	15	40	15	70	38	38	*23*
2012-2013 Totals	**2,349**	**6,352**	**2,772**	**11,473**	**37**	**44**	
2011-2012 Totals	*2,351*	*5,559*	*2,444*	10,354	42	44	

Units with (--) were not surveyed.

TABLE 23. 2013 MULE DEER POPULATION ESTIMATES

UNIT GROUP	2013 ESTIMATE*	*2012 ESTIMATE**	
011 - 013	2,100	2,100	
014	1,500	1,400	
015**	280	290	
021**	360	580	
022	660	700	
031	1,800	1,900	
032***	1,200	1,200	
033	950	950	seems high
034***	300	290	
035	850	1,000	
041, 042***	800	800	
043 - 046	3,200	3,400	no model
051	3,000	3,000	
061,062,064, 066 - 068	9,900	9,300	
065	700	700	
071 - 079, 091	13,000	13,300	
081	900	900	
101 - 108	23,000	23,000	
111 - 113	4,400	4,700	
114 - 115	1,600	2,100	
121	2,500	2,500	
131 - 134	3,500	3,400	
141 - 145	4,200	4,800	
151, 152 ,154, 155	3,900	4,900	
161 - 164	3,900	3,800	
171 - 173	4,400	4,500	
181 - 184	1,500	1,500	
192**	370	390	
194, 196**	750	800	
195	500	400	
201, 204 **	900	950	
202, 205 - 208 **	700	800	
203	650	700	no model
211, 213	400	400	
221 - 223	4,300	4,400	
231	3,300	3,300	
241 - 245	800	1,100	
251 - 254	400	400	

TABLE 23. 2013 MULE DEER POPULATION ESTIMATES

261 - 268	400	400
271, 272	240	240
291	500	450
TOTAL	**109,000**	*112,000*
Percent Change	**-3%**	

*Estimates - Values generated from computer models that reconstruct age and sex classes based on sampled herd composition, harvest data, and population demographic variables. The confidence limits around these estimates may be as high as + or - 20%.

**Estimate based on apportionment of an interstate herd

***Estimate includes deer that primarily inhabit agricultural fields

TABLE 24. 2013 ROCKY MOUNTAIN ELK POPULATION ESTIMATES

UNIT GROUP	**2013 ESTIMATE***	*2012 ESTIMATE**
061, 071	3,100	2,700
062, 064, 066 - 068	850	800
065	120	35
072, 073, 074	2,400	2,300
075	300	270
076, 077, 079, 081	1,800	1,600
078, 105 - 107, 109	390	350
091	320	220
104, 108, 121	700	650
108, 131, 132	450	350
111 - 115, 221, 222	4,500	4,300
145	40	
161 - 164	800	700
171 - 173	100	100
223, 231, 241, 242**	650	620
262	160	160
TOTAL	**16,500**	*15,000*
Percent Change	**10%**	

*Estimates - Values generated from computer models that reconstruct age and sex classes based on sampled herd composition, harvest data, and population demographic variables. The confidence limits around these estimates may be as high as + or - 20%.

**2013 population estimate corrected 4/29/13

TABLE 25. 2013 PRONGHORN POPULATION ESTIMATES

UNIT GROUP	**2013 ESTIMATE***	*2012 ESTIMATE**
011	1,400	1,400
012-014	2,400	2,400
015	1,600	1,600
021, 022	470	470
031	1,500	1,500
032, 034, 035	3,000	3,000
033	1,400	1,500
041, 042	1,900	1,900
043-046	250	210
051	800	700
061, 062, 064, 071, 073	1,100	1,100
065, 142, 144	550	500
066	380	360
067, 068	1,100	1,000
072, 074, 075	1,200	1,000
076, 077, 079, 081, 091	420	440
078, 105 - 107, 121	950	1,000
101 - 104, 108, 109, 144	800	900
111 - 114	1,400	1,400
115, 231, 242	400	430
131, 145, 163, 164	700	700
132 - 134, 245	490	500
141, 143, 151 - 156	1,700	1,600
161, 162	390	440
171 - 173	340	390
181 - 184	600	600
202, 204	160	150
203, 291	80	80
205 - 208	320	330
211 - 213	70	70
221 - 223, 241	280	300
251	200	230
TOTAL	**28,500**	*28,000*
Percent Change	**2%**	

*Estimates - Values generated from computer models that reconstruct age and sex classes based on sampled herd composition, harvest data, and population demographic variables. The confidence limits around these estimates may be as high as + or - 20%.

TABLE 26. 2013 DESERT BIGHORN POPULATION ESTIMATES

UNIT GROUP	2013 ESTIMATE*	*2012 ESTIMATE**
044, 182	280	250
045	130	100
131, 164	170	150
132	100	100
133, 245	100	110
134	250	260
153	30	20
161	370	340
162	30	20
163	200	180
173	170	180
181	270	250
183	280	280
184	150	190
195	60	40
202	120	120
204	70	60
205, 207	520	480
206, 208	160	100
211 (Silver Peaks)	360	360
212	350	350
213 (Monte Cristos)	380	360
221	10	20
223, 241	220	230
243	160	150
244	130	130
252	330	330
253 (Bares)	220	210
254 (Specters)	70	80
261	180	180
262	220	170
263	240	250
264	130	100
265, 266	200	200
267, 268	850	900
269 (River Mtns)	220	210
271	300	290
272	130	130
280	100	100
281	180	170
282	110	130
283, 284	210	230
286	110	110
TOTAL	*8,900*	*8,600*
Percent Change	**3%**	

*Estimates - Values generated from computer models that reconstruct age and sex classes based on sampled herd composition, harvest data, and population demographic variables. The confidence limits around these estimates may be as high as + or - 20%.

TABLE 27. 2013 CALIFORNIA BIGHORN POPULATION ESTIMATES

UNIT GROUP	2013 ESTIMATE*	*2012 ESTIMATE**
012	280	280
011, 013	90	60
014	120	110
021, 022	120	110
031	200	190
032	260	270
033	160	180
034	200	220
035	160	130
041	40	30
051	230	210
066	60	60
068	140	140
TOTAL	**2,100**	*2,000*
Percent Change	**5%**	

TABLE 28. 2013 ROCKY MOUNTAIN BIGHORN POPULATION ESTIMATES

UNIT GROUP	2013 ESTIMATE*	*2012 ESTIMATE**
074	70	70
091	50	40
101	20	0
102	30	20
114	60	60
115	30	20
TOTAL	**260**	*210*
Percent Change	**24%**	

TABLE 29. 2013 MOUNTAIN GOAT POPULATION ESTIMATES

UNIT GROUP	2013 ESTIMATE*	*2012 ESTIMATE**
101	130	100
102	180	160
103	30	30
TOTAL	**340**	*290*
Percent Change	**17%**	

*Estimates - Values generated from computer models that reconstruct age and sex classes based on sampled herd composition, harvest data, and population demographic variables. The confidence limits around these estimates may be as high as + or - 20%.

TABLE 30. BIG GAME POPULATION ESTIMATE HISTORY, 1978 - 2013

YEAR	MULE DEER	ANTELOPE	ELK	DESERT BIGHORN	CALIFORNIA BIGHORN	ROCKY MOUNTAIN BIGHORN	MOUNTAIN GOAT
1978	122,000						
1979	113,000						
1980	127,500			2,900			
1981	135,500	9,800		3,000			
1982	140,000	10,500		3,100			
1983	120,000	11,000		3,200			
1984	129,500	11,500		3,100			
1985	155,500	12,000		3,300			
1986	180,000	12,500		3,500			
1987	220,000	13,000		3,500			
1988	240,000	13,500		3,600			
1989	212,000	14,000		3,700			
1990	202,000	15,000	2,000	3,800	480	140	
1991	180,000	16,500	2,400	4,000	530	150	
1992	183,500	18,000	2,700	4,100	650	190	190
1993	148,500	16,000	2,900	4,800	700	210	200
1994	115,000	15,000	3,100	4,700	800	220	210
1995	118,000	15,500	3,500	4,500	900	230	220
1996	120,000	15,000	4,000	4,900	1,000	230	230
1997	125,000	14,500	4,600	5,000	1,100	240	170
1998	132,000	15,000	5,000	5,200	1,200	250	200
1999	134,000	14,500	5,500	5,300	1,300	250	240
2000	133,000	16,000	5,900	4,900	1,400	210	280
2001	129,000	17,000	6,400	4,900	1,400	190	320
2002	108,000	18,000	6,600	5,300	1,500	210	340
2003	109,000	18,000	7,200	5,000	1,500	240	350
2004	105,000	18,500	7,400	5,200	1,500	290	370
2005	107,000	20,000	8,000	5,500	1,500	340	400
2006	110,000	21,500	8,200	5,800	1,600	360	410
2007	114,000	24,000	9,400	6,200	1,700	480	420
2008	108,000	24,000	9,500	6,600	1,700	500	450
2009	106,000	24,500	10,900	7,000	1,800	550	470
2010	107,000	26,000	12,300	7,400	1,900	240	340
2011	109,000	27,000	13,500	7,600	2,100	230	310
2012	112,000	28,000	15,100	8,600	2,000	220	290
2013	109,000	28,500	16,500	8,900	2,100	260	340
10-YR AVG	*109,000*	*24,000*	*11,100*	*6,900*	*1,800*	*350*	*380*
% Diff to AVG	**0%**	**19%**	**49%**	**29%**	**17%**	**-26%**	**-11%**

TABLE 31. BIG GAME TAG SALES AND HARVEST HISTORY BY SPECIES, 1984 - 2012

	DEER		ANTELOPE		ELK		DESERT BIGHORN		CALIFORNIA BIGHORN		ROCKY MTN BIGHORN		MOUNTAIN GOAT	
YEAR	TAGS	HARVEST	TAGS	HARVEST	TAGS	HARVEST	TAGS	HARVEST	TAGS	HARVEST	TAGS	HARVEST	TAGS	HARVEST
1984	25,118	11,794	718	444	49	46	119	85	3	3	--	--	--	--
1985	34,667	19,520	891	589	95	82	126	109	3	3	3	2	3	2
1986	42,933	21,845	976	658	103	89	130	100	3	3	4	3	2	2
1987	39,347	21,497	1,039	722	129	105	134	112	3	3	2	0	2	2
1988	51,011	26,784	1,342	949	182	91	136	114	4	3	2	2	2	1
1989	34,847	17,782	1,378	980	200	103	133	111	3	3	2	0	4	4
1990	31,346	16,715	1,475	1,115	243	141	134	91	3	3	2	2	4	4
1991	26,584	12,442	1,913	1,311	240	141	126	85	5	5	1	1	6	6
1992	28,138	14,273	1,925	1,416	210	164	113	92	10	10	--	--	6	5
1993	16,017	6,276	1,569	1,020	215	176	123	102	12	12	--	--	7	7
1994	17,460	7,315	1,299	979	240	157	125	87	20	14	--	--	10	10
1995	20,014	8,114	1,387	878	306	183	126	90	25	19	2	2	12	11
1996	24,717	11,070	1,211	820	510	292	126	94	32	28	2	1	9	8
1997	20,186	8,263	1,173	805	783	389	113	85	35	30	3	2	6	6
1998	24,077	9,672	1,283	871	1,119	468	113	93	41	33	5	5	12	12
1999	24,023	11,020	1,521	1,173	1,274	577	126	110	47	36	5	5	11	10
2000	26,420	12,499	1,615	1,191	1,621	804	132	113	43	39	4	4	18	16
2001	23,813	9,791	1,518	1,121	1,359	701	143	124	37	34	3	2	23	22
2002	17,484	6,899	1,682	1,166	1,836	887	140	112	41	34	3	3	23	18
2003	14,892	5,982	1,846	1,278	1,821	1,055	133	119	39	34	6	6	23	22
2004	16,010	6,560	1,921	1,323	1,972	1,008	138	127	35	32	6	5	24	23
2005	16,920	7,112	2,393	1,608	2,616	1,246	148	135	38	34	6	5	28	24
2006	18,167	8,346	2,705	1,876	2,360	1,161	154	142	41	36	6	5	29	26
2007	18,599	8,743	2,737	1,847	3,080	1,396	172	150	43	43	9	9	29	29
2008	16,997	7,025	2,476	1,638	2,723	1,315	175	152	42	40	13	12	29	27
2009	16,728	6,837	2,757	1,814	2,972	1,420	193	172	48	47	11	11	28	27
2010	17,134	6,949	2,987	1,928	3,545	1,680	216	186	52	52	4	4	20	20
2011	14,919	5,834	3,121	1,973	4,838	2,007	222	194	57	54	5	3	11	11
2012	24,257	10,112	3,721	2,225	6,035	2,461	281	241	59	53	8	7	6	6
10-YR AVG	17,462	7,350	2,666	1,751	3,196	1,475	183	162	45	43	7	7	23	22
% Difference	39%	38%	40%	27%	89%	67%	53%	49%	30%	25%	8%	4%	-74%	-72%

TABLE 32. MOUNTAIN LION HARVEST BY SEX, AGE AND MANAGEMENT AREA, MARCH 1, 2012 – FEBRUARY 28, 2013

Management Areas	Sport Hunter Harvest				Depredation Take				NDOW Pred Project				Other Mortalities				Management Area Totals			
	Male	Female	Unk	Total	Male	Female	Unk	Total	Male	Female	Unk	Total	Male	Female	Unk	Total	Male	Female	Unk	Total
1	1	3	0	4	0	0	0	0	3	3	0	6	0	0	0	0	4	6	0	10
2	0	1	0	1	0	0	0	0	1	0	0	1	0	0	1	1	1	1	1	3
3	2	2	0	4	0	1	0	1	1	0	0	1	0	0	0	0	3	3	0	6
4	2	4	0	6	0	0	0	0	0	0	0	0	0	0	0	0	2	4	0	6
5	2	3	0	5	0	0	0	0	0	0	0	0	0	0	0	0	2	3	0	5
6	11	9	0	20	0	0	0	0	0	0	0	0	0	0	0	0	11	9	0	20
7	3	4	0	7	0	0	1	1	0	0	0	0	0	1	0	1	3	5	1	9
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	15	16	0	31	0	2	0	2	0	0	0	0	1	0	0	1	16	18	0	34
11	20	12	0	32	4	3	0	7	2	3	0	5	0	0	0	0	26	18	0	44
12	4	2	0	6	0	0	0	0	0	0	0	0	0	0	0	0	4	2	0	6
13	1	4	0	5	0	4	0	4	0	0	0	0	0	0	0	0	1	8	0	9
14	3	4	0	7	0	0	0	0	0	0	0	0	0	1	0	1	3	5	0	8
15	1	1	0	2	1	0	0	1	0	0	0	0	0	0	0	0	2	1	0	3
16	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
17	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
18	1	5	0	6	2	1	0	3	0	0	0	0	0	1	0	1	3	7	0	10
19	1	4	0	5	0	0	0	0	0	0	0	0	0	3	0	3	1	7	0	8
20	3	2	0	5	1	0	0	1	0	0	0	0	0	0	0	0	4	2	0	6
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	8	4	0	12	0	0	0	0	0	0	0	0	0	0	0	0	8	4	0	12
23	5	3	0	8	0	1	0	1	0	0	0	0	0	0	0	0	5	4	0	9
24	3	1	0	4	0	0	0	0	2	0	0	2	0	0	0	0	5	1	0	6
25	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
26	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	2	2	0	4	0	0	0	0	0	0	0	0	0	1	0	1	2	3	0	5
Totals	**96**	**86**	**0**	**182**	**8**	**12**	**1**	**21**	**9**	**6**	**0**	**15**	**1**	**7**	**1**	**9**	**114**	**111**	**2**	**227**

TABLE 33. NEVADA MOUNTAIN LION HARVEST AND MORTALITY TYPE - MARCH 1, 2012 – FEBRUARY 28, 2013

Region	Sport Hunters	Guided Sport Hunters	Illegal Harvest	Human Conflict Depredation	NDOW Pred Project	Other: Road Kill, Etc.	Totals
Western	40	9	0	5	8	6	**14**
Eastern	110	48	0	15	5	3	**8**
Southern	32	11	0	1	2	0	**2**
Totals	**182**	**68**	**0**	**21**	**15**	**9**	**24**

Note: Guided Sport Hunters are a subset of Sport Hunters and are not included in total.

TABLE 34. NEVADA MOUNTAIN LION TAG SALES, SPORT HARVEST AND HUNTER SUCCESS, 1973 - 2012

	Tag Sales			Sport Harvest			Hunter Success		
Year	Resident	Nonresident	Total	Resident	Nonresident	Total	Resident	Nonresident	Total
1973 - 1974	314	114	428	52	39	91	17%	34%	21%
1974 - 1975	281	46	327	57	30	87	20%	65%	27%
1975 - 1976	221	40	261	37	17	54	17%	43%	21%
1976 - 1977	98	8	106	9	2	11	9%	25%	10%
1977 - 1978	129	16	145	15	6	21	12%	38%	14%
1978 - 1979	146	38	184	18	8	26	12%	21%	14%
1979 - 1980	235	46	281	30	17	47	13%	37%	17%
1980 - 1981	313	61	374	24	14	38	8%	23%	10%
1981 - 1982	527	62	589	36	24	60	7%	39%	10%
1982 - 1983	519	61	580	41	20	61	8%	33%	11%
1983 - 1984	329	50	379	57	21	78	17%	42%	21%
1984 - 1985	352	107	459	60	46	106	17%	43%	23%
1985 - 1986	394	96	490	54	29	83	14%	30%	17%
1986 - 1987	345	114	459	51	36	87	15%	32%	19%
1987 - 1988	416	91	507	41	37	78	10%	41%	15%
1988 - 1989	383	124	507	65	53	118	17%	43%	23%
1989 - 1990	439	184	623	75	77	152	17%	42%	24%
1990 - 1991	318	112	430	55	33	88	17%	29%	20%
1991 - 1992	507	112	619	78	47	125	15%	42%	20%
1992 - 1993	348	149	497	75	75	150	22%	50%	30%
1993 - 1994	405	139	544	99	74	173	24%	53%	32%
1994 - 1995	403	151	554	89	72	161	22%	48%	29%
1995 - 1996	432	186	618	73	61	134	17%	33%	22%
1996 - 1997	480	137	617	80	63	143	17%	46%	23%
1997 - 1998	870	137	1,007	122	88	210	14%	64%	21%
1998 - 1999	643	124	767	73	67	140	11%	54%	18%
1999 - 2000	680	109	789	71	55	126	10%	50%	16%
2000 - 2001	883	169	1,052	104	90	194	12%	53%	18%
2001 - 2002	838	98	936	104	63	167	12%	64%	18%
2002 - 2003	1,060	131	1,191	89	39	128	8%	30%	11%
2003 - 2004	1,133	221	1,354	119	73	192	11%	33%	14%
2004 - 2005	1,186	206	1,392	62	43	105	5%	21%	8%
2005 - 2006	1,021	162	1,183	70	46	116	7%	28%	10%
2006 - 2007	1,366	121	1,487	95	39	134	7%	32%	9%
2007 - 2008	1,521	200	1,721	94	51	145	6%	26%	8%
2008 - 2009	3,484	284	3,768	83	34	117	2%	12%	3%
2009 - 2010	3,873	302	4,175	80	51	131	2%	19%	3%
2010 - 2011	3,942	275	4,217	96	50	146	2%	18%	3%
2011 - 2012	4,067	297	4,364	72	31	103	2%	10%	2%
2012 - 2013	4,735	354	5,089	122	60	182	3%	17%	4%
Totals	**39,636**	**5,434**	**45,070**	**2,727**	**1,781**	**4,508**			
Avg. (39 yrs)	**991**	**136**	**1127**	**68**	**45**	**113**			
10-Year Avg.	**2490**	**232**	**2722**	**89**	**47**	**136**			
5-Year Avg.	**3604**	**285**	**3889**	**91**	**46**	**137**			

TABLE 35. NEVADA MOUNTAIN LION DEPREDATION HARVEST
(Conducted by US Department of Agriculture – Wildlife Services)

Year			Males	Females	Unknown	Total
1971	-	1972	8	5	1	14
1972	-	1973	4	7	0	11
1973	-	1974	8	4	0	12
1974	-	1975	10	10	0	20
1975	-	1976	14	5	0	19
1976	-	1977	10	7	1	18
1977	-	1978	17	7	0	24
1978	-	1979	16	8	0	24
1979	-	1980	12	11	0	23
1980	-	1981	19	3	0	22
1981	-	1982	20	17	0	37
1982	-	1983	11	10	0	21
1983	-	1984	13	12	0	25
1984	-	1985	12	16	0	28
1985	-	1986	16	9	0	25
1986	-	1987	22	15	0	37
1987	-	1988	21	20	0	41
1988	-	1989	26	23	0	49
1989	-	1990	23	24	0	47
1990	-	1991	37	20	0	57
1991	-	1992	27	22	0	49
1992	-	1993	32	17	0	49
1993	-	1994	21	15	0	36
1994	-	1995	16	8	0	24
1995	-	1996	13	10	0	23
1996	-	1997	11	9	0	20
1997	-	1998	12	10	0	22
1998	-	1999	8	3	0	11
1999	-	2000	8	8	0	16
2000	-	2001	5	10	0	15
2001	-	2002	8	11	0	19
2002*	-	2003	7	6	0	13
2003*	-	2004	16	12	0	28
2004*	-	2005	9	7	0	16
2005*	-	2006	15	4	0	19
2006*	-	2007	10	9	0	19
2007*	-	2008	18	19	0	37
2008*	-	2009	10	16	0	26
2009*	-	2010	16	15	0	31
2010	-	2011	13	17	2	32
2011	-	2012	12	17	1	30
2012	-	2013	8	12	1	21
Total			614	490	6	1110
AVG			**15**	**12**	**0**	**26**

*includes lions taken for NDOW predator management projects

TABLE 36. NEVADA MOUNTAIN LION SEASON HISTORY, 1970-2012

Year	Harvest Year	Dates	Season Length	Season Type	Regulations	Bag Limit	Harvest Objective	Male	Female	Total
1970	1970/71	Oct 1- March 31	171	open hunting season / statewide / hunting license and tag required	mandatory check in w/in 72 hrs	**1 lion**	**no quota**	22	20	42
1971	1971/72	year-round		open hunting season / year-round and statewide / hunting license and tag required /				24	17	41
1972	1972/73							36	36	72
1973	1973/74							42	48	90
1974	1974/75	?	6 mos.	open hunting season / statewide / hunting license and tag required /				32	48	80
1975	1975/76	year-round		open hunting season / year-round and statewide / hunting license and tag required				16	37	53
1976	1976/77	Oct 1 - Mar 31	6 mos.	**Tag quota by management area** (ie limited entry) (hunters were limited to a hunt unit)			111	8	3	11
1977	1977/78	Oct 1 - Apr 30	7 mos.				151	16	6	22
1978	1978/79						202	11	15	26
1979	1979/80						234	24	23	47
1980	1980/81						237	16	22	38
1981	1981/82	Oct 1 - Apr 30		**Quota by management unit**/ unlimited # of tags sold/ hunters could hunt any open unit/ harvest objective			135	23	37	60
1982	1982/83	year-round					135	43	21	64
1983	1983/84	Oct 1 - Apr 30	7 mos.				173	46	32	78
1984	1984/85						184	53	55	108
1985	1985/86						195	45	43	88
1986	1986/87						197	49	38	87
1987	1987/88						206	50	30	80
1988	1988/89						216	68	47	115
1989	1989/90						222	86	62	148
1990	1990/91						219	61	28	89
1991	1991/92						218	82	43	125
1992	1992/93						225	89	60	149
1993	1993/94						226	110	62	172
1994	1994/95						251	99	62	161
1995	1995/96						240	87	47	134
1996	1996/97						273	87	60	147
1997	1997/98					1per tag - maximum 2 tags per hunter	292	118	96	214
1998	1998/99						305	85	55	140
1999	1999/00						287	77	49	126
2000	2000/01	Aug 1 - April 30	9 months	Quota by management unit / unlimited # of tags sold/ hunters could hunt any open unit/ harvest objective			303	104	93	197
2001	2001/02	year-round					322	95	71	166
2002	2002/03	Aug 1 - Feb 28	7 months				349	79	49	128
2003	2003/04	**Year-round** - corresponds to license year (first day in March to last day in February of the ensuing year)		Quota by Region / unlimited # of tags sold/ hunters could hunt any open unit/ harvest objective			349	98	95	193
2004	2004/2005						349	83	55	138
2005	2005/2006						349	87	59	146
2006	2006/2007						349	92	76	168
2007	2007/2008						349	104	85	189
2008	2008/2009						349	90	62	152
2009	2009/2010						306	90	79	169
2010	2010/2011						306	109	83	197*
2011	2011/2012						500	93	79	173*
2012	2012/2013						**500**	**114**	**111**	**227***

**Discrepancies in total lions for 2010, 2011 and 2012 are due to unknown gender lions of 5, 1 and 2 respectively.*

TABLE 37. HUNT NUMBER DESCRIPTIONS

HUNT NUMBER	HUNT DESCRIPTION
1000	RESIDENT PARTNERSHIP IN WILDLIFE ANTLERED MULE DEER ALL WEAPONS
1100	RESIDENT WILDLIFE HERITAGE ANY MULE DEER ANY LEGAL WEAPON
1101	RESIDENT DEPREDATION ANTLERLESS MULE DEER ANY LEGAL WEAPON
1104	RESIDENT EMERGENCY DEPREDATION ANTLERLESS MULE DEER
1107	RESIDENT JUNIOR ANY MULE DEER ALL WEAPONS
1115	RESIDENT LANDOWNER DAMAGE COMPENSATION ANTLERED MULE DEER ALL WEAPONS
1181	RESIDENT ANTLERLESS MULE DEER ANY LEGAL WEAPON
1300	SILVER STATE ANY MULE DEER ANY LEGAL WEAPON
1331	RESIDENT ANTLERED MULE DEER ANY LEGAL WEAPON
1341	RESIDENT ANTLERED MULE DEER ARCHERY
1371	RESIDENT ANTLERED MULE DEER MUZZLELOADER
1200	NONRESIDENT PARTNERSHIP IN WILDLIFE ANTLERED MULE DEER ALL WEAPONS
1201	NONRESIDENT WILDLIFE HERITAGE ANY MULE DEER ANY LEGAL WEAPON
1215	NONRESIDENT LANDOWNER DAMAGE COMPENSATION ANTLERED MULE DEER ALL WEAPONS
1235	NONRESIDENT GUIDED ANTLERED MULE DEER ANY LEGAL WEAPON
1331	NONRESIDENT ANTLERED MULE DEER ANY LEGAL WEAPON
1341	NONRESIDENT ANTLERED MULE DEER ARCHERY
1371	NONRESIDENT ANTLERED MULE DEER MUZZLELOADER
1400	RESIDENT EMERGENCY ANTLERLESS MULE DEER ANY LEGAL WEAPON
1401	RESIDENT EMERGENCY ANTLERLESS MULE DEER ANY LEGAL WEAPON
1500	NEVADA DREAM ANTLERED MULE DEER ALL WEAPONS
2000	RESIDENT PARTNERSHIP IN WILDLIFE HORNS LONGER THAN EARS ANTELOPE ALL WEAPONS
2100	RESIDENT WILDLIFE HERITAGE ANY ANTELOPE ANY LEGAL WEAPON
2104	RES. EMERGENCY HORNS SHORTER THAN EARS ANTELOPE ANY LEGAL WEAPON
2106	RES. EMERGENCY HORNS LONGER THAN EARS ANTELOPE ANY LEGAL WEAPON
2101	RESIDENT DEPREDATION HORNS SHORTER THAN EARS ANTELOPE
2115	RESIDENT LANDOWNER DAMAGE COMPENSATION HORNS LONGER THAN EARS ANTELOPE ALL WEAPONS
2151	RESIDENT HORNS LONGER THAN EARS ANTELOPE ANY LEGAL WEAPON
2161	RESIDENT HORNS LONGER THAN EARS ANTELOPE ARCHERY
2171	RESIDENT HORNS LONGER THAN EARS ANTELOPE MUZZELOADER
2181	RESIDENT HORNS SHORTER THAN EARS ANTELOPE ANY LEGAL WEAPON
2200	NONRESIDENT WILDLIFE HERITAGE ANY ANTELOPE ANY LEGAL WEAPON
2215	NONRESIDENT LANDOWNER DAMAGE COMPENSATION HORNS LONGER THAN EARS ANTELOPE ALL WEAPONS
2251	NONRESIDENT HORNS LONGER THAN EARS ANTELOPE ANY LEGAL WEAPON
2261	NONRESIDENT HORNS LONGER THAN EARS ANTELOPE ARCHERY
2300	SILVER STATE ANY ANTELOPE ANY LEGAL WEAPON
2500	NEVADA DREAM HORNS LONGER THAN EARS ANTELOPE ALL WEAPONS
3000	RESIDENT PARTNERSHIP IN WILDLIFE ANY RAM NELSON (DESERT) BIGHORN
3100	RESIDENT WILDLIFE HERITAGE ANY RAM NELSON (DESERT) BIGHORN SHEEP
3151	RESIDENT ANY RAM NELSON (DESERT) BIGHORN SHEEP ANY LEGAL WEAPON

TABLE 37. HUNT NUMBER DESCRIPTIONS

HUNT NUMBER	HUNT DESCRIPTION
3200	NONRESIDENT WILDLIFE HERITAGE ANY RAM NELSON (DESERT) BIGHORN
3251	NONRESIDENT ANY RAM NELSON (DESERT) BIGHORN ANY LEGAL WEAPON
3500	NEVADA DREAM ANY RAM NELSON (DESERT) BIGHORN SHEEP ALL WEAPONS
4000	RESIDENT PARTNERSHIP IN WILDLIFE ANTLERED ELK ALL WEAPONS
4100	RESIDENT WILDLIFE HERITAGE ELK WITH AT LEAST ONE ANTLER
4102	RESIDENT DEPREDATION ANTLERED ELK
4104	RESIDENT EMERGENCY DEPREDATION ANTLERLESS ELK
4106	RESIDENT EMERGENCY DEPREDATION ANY ELK
4111	RESIDENT ANTLERLESS ELK ARCHERY
4131	RESIDENT INCENTIVE ANY ELK ANY LEGAL WEAPON
4132	RESIDENT INCENTIVE ANY ELK ARCHERY
4133	RESIDENT INCENTIVE ANY ELK MUZZLELOADER
4151	RESIDENT ANTLERED ELK ANY LEGAL WEAPON
4156	RESIDENT ANTLERED ELK MUZZLELOADER
4161	RESIDENT ANTLERED ELK ARCHERY
4176	RESIDENT ANTLERLESS ELK MUZZLELOADER
4181	RESIDENT ANTLERLESS ELK ANY LEGAL WEAPON
4200	NONRESIDENT WILDLIFE HERITAGE ELK WITH AT LEAST ONE ANTLER
4211	NONRESIDENT ANTLERLESS ELK ARCHERY
4231	NONRESIDENT INCENTIVE ANY ELK ANY LEGAL WEAPON
4232	NONRESIDENT INCENTIVE ANY ELK ARCHERY
4233	NONRESIDENT INCENTIVE ANY ELK MUZZLELOADER
4251	NONRESIDENT ANTLERED ELK ANY LEGAL WEAPON
4256	NONRESIDENT ANTLERED ELK MUZZLELOADER
4261	NONRESIDENT ANTLERED ELK ARCHERY
4276	NONRESIDENT ANTLERLESS ELK MUZZLELOADER
4281	NONRESIDENT ANTLERLESS ELK ANY LEGAL WEAPON
4300	SILVER STATE ANY ELK ANY LEGAL WEAPON
4500	NEVADA DREAM ANTLERED ELK ALL WEAPONS
5132	RESIDENT EITHER SEX MOUNTAIN LION
5232	NONRESIDENT EITHER SEX MOUNTAIN LION
7000	RESIDENT PARTNERSHIP IN WILDLIFE ANY MOUNTAIN GOAT
7151	RESIDENT ANY MOUNTAIN GOAT ANY LEGAL WEAPON
7251	NONRESIDENT ANY MOUNTAIN GOAT ANY LEGAL WEAPON
8000	RESIDENT PARTNERSHIP IN WILDLIFE ANY RAM CALIFORNIA BIGHORN SHEEP
8100	RESIDENT WILDLIFE HERITAGE ANY RAM CALIFORNIA BIGHORN SHEEP
8151	RESIDENT ANY RAM CALIFORNIA BIGHORN SHEEP ANY LEGAL WEAPON
8200	NONRESIDENT WILDLIFE HERITAGE ANY RAM CALIFORNIA BIGHORN SHEEP
8251	NONRESIDENT ANY RAM CALIFORNIA BIGHORN ANY LEGAL WEAPON
8500	NEVADA DREAM ANY RAM CALIFORNIA BIGHORN SHEEP ALL WEAPONS
9151	RESIDENT ANY RAM ROCKY MOUNTAIN BIGHORN SHEEP ANY LEGAL WEAPON
9251	NONRESIDENT ANY RAM ROCKY MOUNTAIN BIGHORN SHEEP ANY LEGAL WEAPON

NEVADA HUNT UNIT REFERENCE MAP