

**Northern San Luis Valley Pronghorn Herd  
Data Analysis Unit PH-14  
Game Management Units 68, 79, 82, 681, 682, and 791  
March 2008**

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*Approved by the Colorado Wildlife Commission March 2008*

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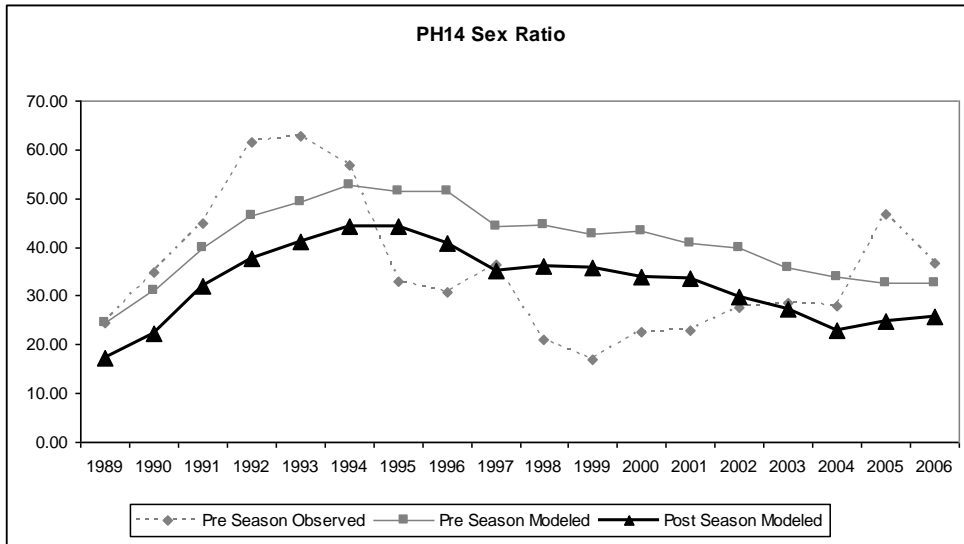
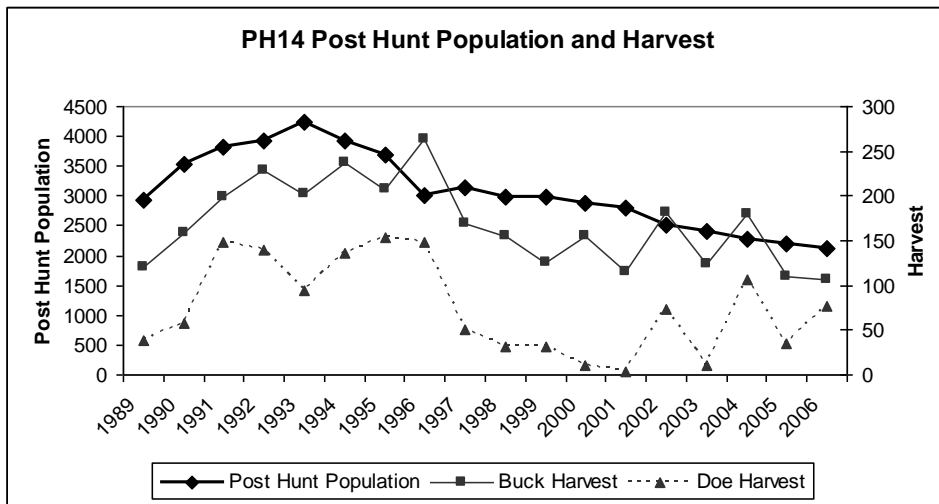
**Executive Summary**

Game Management Units 68, 79, 82, 681, 682, and 791

Post Season Population: 2006 Estimate 2100  
**Current Objective 2000 to 2500**

Post Season Sex Ratio: 2006 Modeled 26.0  
**Current Objective 27 to 33**

Land Ownership: 41% Private, 33% USFS, 14% BLM, 5% NPS, 3% USFWS, 5% State



This Data Analysis Unit (DAU) plan will merge three pronghorn DAUs. Previously these herds were managed under DAU A14 (GMU 82 & 681E), DAU A15 (GMU 68, 681 west, 7 682), and DAU A24 (GMU 79). The area of this plan is the northern portion of the San Luis Valley with Hwy 160 and the Alamosa/Costilla county Line as the south boundary.

The post season population in the proposed DAU reached a peak of 4200 (estimated) in 1993 and has since declined to its current estimated population of 2100. Causes of this are poor recruitment which reached a low in 2002 during extreme drought conditions. The underlying factors of this are unknown. Age ratios have begun to increase and the population is expected to remain stable or start increasing in the near future.

Modeled post season sex ratios have been fairly stable over the past 5 years at the current 26 bucks:100 does. They peaked in 1995 at 44 bucks: 100 does and then gradually declined. The previous DAU plans had post season sex ratios objectives of 20 in GMU 68 & 681W, 40 in GMU 82 & 681E, and 45 in GMU 79. Sex ratio objectives could be better balanced to provide quality hunting and hunting opportunity. 136 buck licenses were available in 2007 for GMU in the proposed DAU.

Harvest in the DAU is most influenced by the ability to acquire a license as is typical with pronghorn. Buck licenses are available on a limited basis and in high demand with minimum of 7 preference points required for a resident hunter to potentially draw a license. There are also some doe licenses available in GMU 82 where the population has done well along San Luis Creek. Buck hunter and doe hunter success rates have consistently been above 65%.

The two biggest factors limiting this population are limited water on the overall range and winter habitat. Areas that have available water and succulent vegetation such as along San Luis Creek and center pivot irrigated alfalfa fields have experience good reproduction rates. Those areas that are more arid have seen poor recruitment especially during the peak of the drought in 2002. Availability of winter range continues to dissipate with increased number of homes on private land and competition with domestic live stock.

Game damage issues have been predominant in this population. This is especially true in the center pivot irrigated fields located between Del Norte and Center. Landowners have been intolerant of the presence of pronghorn on their fields. The number of pronghorn involved is a small proportion of the overall population numbering from approximately 60 to 150 animals. This issue has been addressed by the issuance of dispersal doe licenses to landowners affected with limited success. Another area encountering conflicts is the area around Villa Grove. General doe licenses and dispersal doe licenses have been used to reduce the population size in this area.

### **Management Alternatives**

Three alternatives for PH-14 are being considered for the post season population size and sex ratio objectives.

Population Objective Alternatives:

- 1) 1500 to 2000 (15% decrease in current population)
- 2) 2000 to 2500 (current population)
- 3) 2500 to 3000 (15% increase in current population)

Sex Ratio Objective Alternatives:

- 1) 22 to 27 bucks: 100 does
- 2) 27 to 33 bucks: 100 does
- 3) 35 to 40 bucks: 100 does

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## 1. DAU Plans and Wildlife Management by Objectives

The growing human demand for a finite wildlife resource dictates wise management of Colorado's resources. The Colorado Division of Wildlife (DOW) employs a management by objectives approach to big game populations (Figure 1). The DOW's Long Range Plan provides direction and broad objectives for the DOW to meet a system of policies, objectives and management plans such as the Data Analysis Unit Plan. It also directs the actions the DOW takes to meet the legislative and Wildlife Commission mandates.

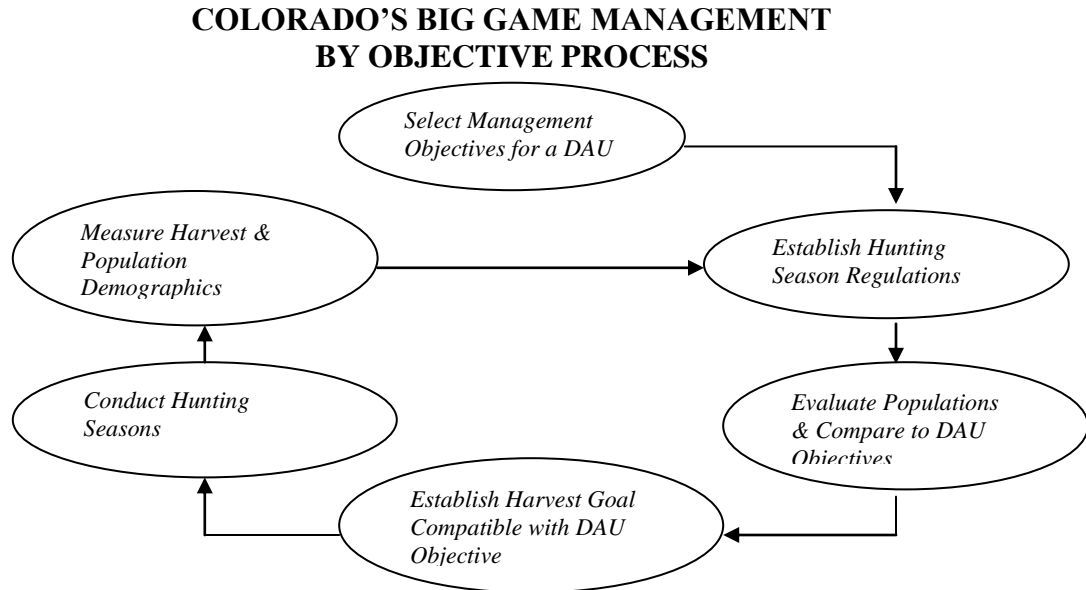


Figure 1. Management by objectives process used by the CDOW to manage big game populations on a DAU basis.

Data analysis units (DAUs) are used to manage herds of big game animals. The DAUs are generally geographically discrete big game populations. The Data Analysis Unit Plans are designed to support and accomplish the objective of the Long Range Plan and meet the public's objectives for big game. The DAU Plan establishes the short and long term herd objectives. The objective approach is the guiding direction to a long term cycle of information collection, information analysis, and decision making. One of the products of this process is hunting seasons for big game.

The DAU Plan process is designed to incorporate public demands, habitat capabilities, and herd capabilities into a management scheme for the big game herds. The public, sportsmen, federal land management agencies, landowners, and agricultural interests are involved in the determination of the plan objectives through goals, public meetings, comments on draft plans, and the Colorado Wildlife Commission.

Individual DAUs are managed with the goal of meeting the herd objectives. This is done by gathering data and then inputting it into population models to get a population estimate. The parameters used in the model include harvest data which is tabulated from hunter surveys, sex and age composition of the herd which is acquired by aerial inventories, and mortality factors such as wounding loss and winter severity which are generally acquired from field observations. Once these variables are entered into the population models a population estimate is obtained. The resultant computer population projection is compared to the herd objective, and a harvest calculated to align the population with the herd objective.

## 2. Description of the Data Analysis Unit

This plan will merge three pronghorn DAUs. Previously these herds were managed under DAU A14 (GMU 82 & 681E), DAU A15 (GMU 68, 681 west, 7 682), and DAU A24 (GMU 79).

## 2.1 Location

The DAU for the Northern San Luis Valley pronghorn herd is in south central Colorado, on the North side of the San Luis Valley. It consists of Game Management Units (GMUs) 68, 79, 82, 681, 682, and 791 (Figure 2). It encompasses portions of Rio Grande, Saguache, Alamosa, and Mineral Counties although there are rarely any pronghorn in the Mineral County portion of the DAU. Its primary drainages are the Rio Grande, Saguache Creek, Carnero Creek, and San Luis Creek.

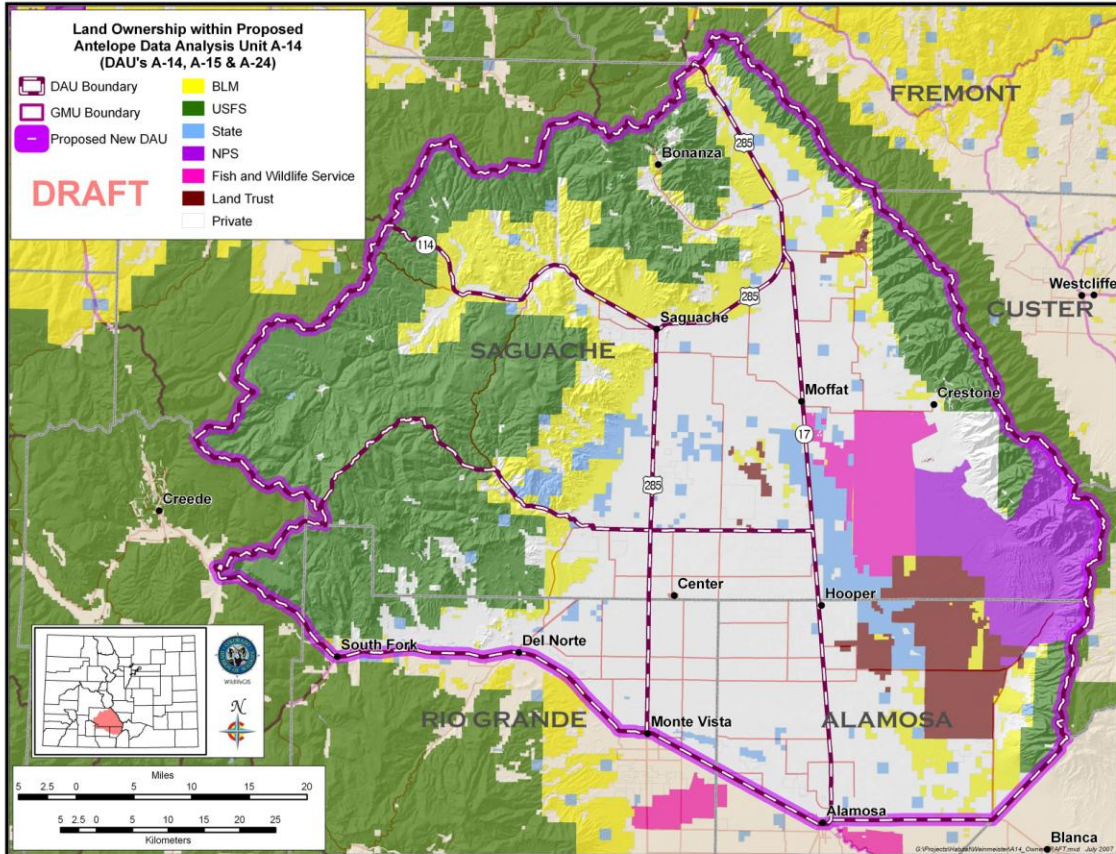


Figure 2. DAU map with landownership

The DAU is bonded on the east by the crest of the Sangre de Cristo Mountains, on the south by the Costilla-Alamosa county line and US Highway 160, on the west by the Continental Divide, and on the north by the divide between the Arkansas drainage and the San Luis Valley.

The DAU covers a total of 3226 square miles of which 1506 square miles is overall pronghorn range. The Sangre de Cristo Mountains on the east and the LaGarita mountains on the west rise to over 14,000 feet and the lowest portion of the DAU in the valley floor is 7,500 feet elevation.

The vegetation varies from grassland/shrub and agriculture at the lower elevations up through oakbrush, pinion-juniper, ponderosa pine, Douglas fir/aspen, lodgepole pine, spruce/fir and alpine tundra above 12,000 feet elevation.

The climate is highland or mountain climate with cool summers and very cold winters with heavy snow. A portion of the DAU is in the rain shadow of the San Juan Mountains. The higher elevations of the LaGarita Mountains and Sangre de Cristo mountains receive 30 inches of precipitation a year mostly in the form of winter snows and to lesser extent afternoon showers during the summer months. The foothills receive 10 to 12 inches and the valley floor gets only 7 to 8 inches annually and is considered a high desert.

## **2.2 Pronghorn Range and Movement**

The pronghorn in this DAU are generally found up to 9500 feet with the majority in the grassland/shrub type, but some are found in openings of the ponderosa, pinion-juniper, or oakbrush vegetation types. In GMU 79 it is not unusual to find pronghorn above 9,500 feet in large open parks such as Saguache Park and Blue Park. In 2002 during an extreme drought it was common to see pronghorn in pinion/juniper stands.

The winter migration in this DAU is usually a movement to south facing slopes and wind swept slopes. Timing and distance moved are a function of winter severity (snow depth). Movement to summer range is a general dispersal throughout the overall range during the summer and fall.

The highest concentration of pronghorn in the DAU occurs in the area along San Luis Creek near Villa Grove. Numerous drainages in the area provide a water source throughout the year and hay fields of native vegetation provide quality forage.

The habitat found in GMUs 68 and the western portion of 681 is the least favorable for pronghorn in the DAU. Nominal perennial water sources and minimal precipitation due to a rain shadow effect caused by the San Juan Range are two key factors.

## **3. Herd Management History**

Pronghorn had been exploited by the early 1900's, like much of Colorado's big game animals, due to market hunting and individual settlers who were obtaining food (Warren 1910). In 1907 data was gathered on pronghorn number and distribution in the San Luis Valley (Cary 1911). The majority of the herd which Carey estimates conservatively at 50 to 75 was located from Creston south to Fort Garland.

Although indigenous to the area several releases of pronghorn were made in to the DAU beginning in the early 60's (appendix A). During the early 80's close to a 1000 pronghorn were trapped and moved within or from the DAU boundaries (appendix B).

All hunting licenses are limited. Archery licenses became limited in 1999 and muzzleloader licenses went from a statewide license to a license valid for all GMUs in the San Luis Valley in 2007. At the same time muzzleloader doe licenses were disposed of.

### **3.1 Post-hunt Population Size**

Post-hunt population size is determined using the best information available at the time in conjunction with a spreadsheet model as described in section one of this plan. Changes are made as new and better information becomes available. Computer modeling is not an exact science and may not produce a final number that is exactly correct. Population models do represent trends well and these trends are a tool used by biologist to make management decisions concerning big game herds.

The population size for A14 most like reached is peak in 1993 at just over 4200 animals (Figure 3). Since that time the population model shows a gradual decrease to the current population size of 2100 with sharpest decrease in the mid 90's. The cause of this decline is unknown. Drought conditions in 2002 exasperated the decline with poor recruitment.

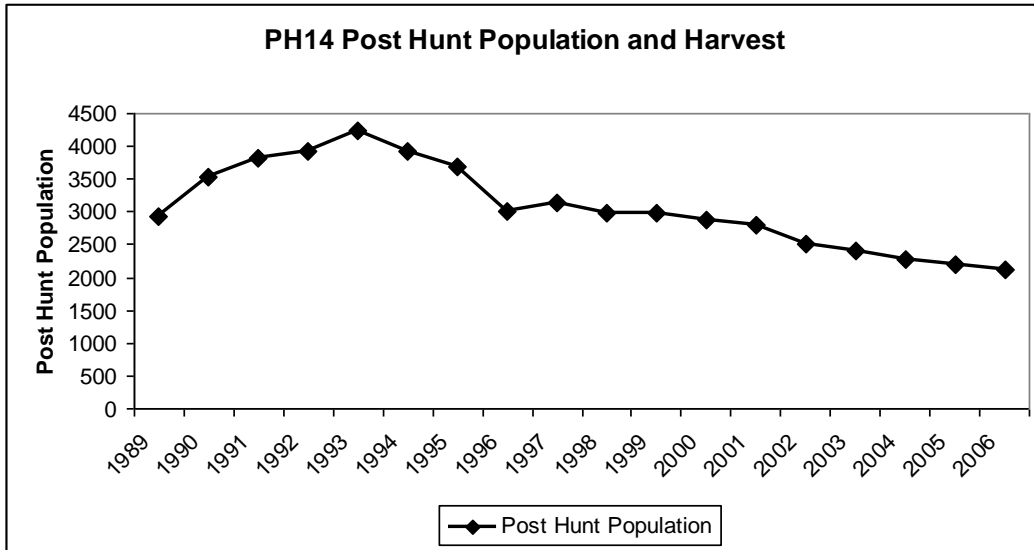


Figure 3. Posthunt population estimate for 1989 to 2006

### 3.2 Pre-hunt herd Composition

The herd composition data are gathered through prehunt aerial surveys, usually the first part of August in a fixed wing aircraft. The surveys are not done to count the total number of animals, but to obtain sex and age ratios. Aerial surveys are subject to variability due to weather, ground cover, sample size and observers. Management objectives are based on posthunt ratios even though surveys are done prehunt. This allows the CDOW's DAU plans to be kept in a standard format.

Modeled post hunt sex ratios peaked in 1995 at 44 bucks per 100 does (Figure 4). The low since 1989 was in 1989 at 17 bucks per 100 does and averaged 32:100 for the past 17 years. The 2006 modeled ratio was 26:100. The sex ratio appears to be stable.

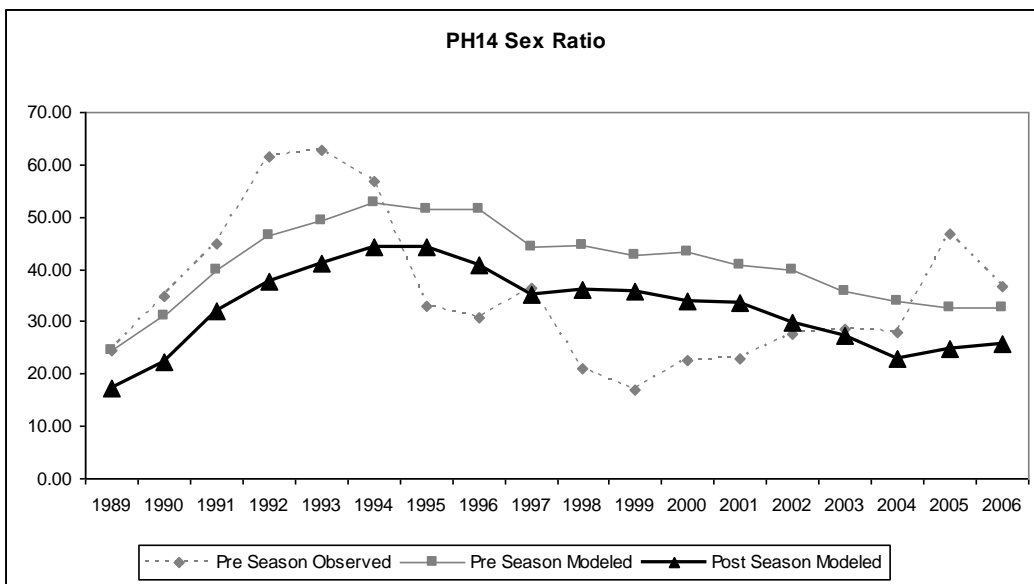


Figure 4. Posthunt modeled, prehunt modeled and prehunt observed sex ratios for 1989 to 2006



### 3.3 Harvest

Pronghorn harvest is a factor of available licenses which are all limited. Success rates are high compared to other ungulates because of the open habitat where pronghorn are found which in return makes it easier for hunters to find their quarry. Because of this variables in harvest are a reflection of changes in available licenses more than changes in population size.

1999 archery licenses became limited and went from an either sex license to a buck license. This was because of poor recruitment in the years leading up to it. Muzzleloaders went from a statewide limited license to a limited license only valid for the GMUs in the San Luis Valley in 2007. At the same time muzzleloader doe licenses were eliminated in this DAU.

Buck harvest has averaged 169 from 1989 to 2006 (appendix C). In 1996 it reached a maximum of 263 and in 2006 was a minimum of 107. Doe harvest averaged 83 during the same time period with a maximum of 163 in 1996 to a low of 3 in 2001. The majority of doe harvest has been in the northern range of GMU 82 with some influence of dispersal harvest in the eastern portion of GMU 79.

Success rates from 1989 to 2006 have averaged 63% with a low of 34% in 1998 and a high of 96% in 2004.

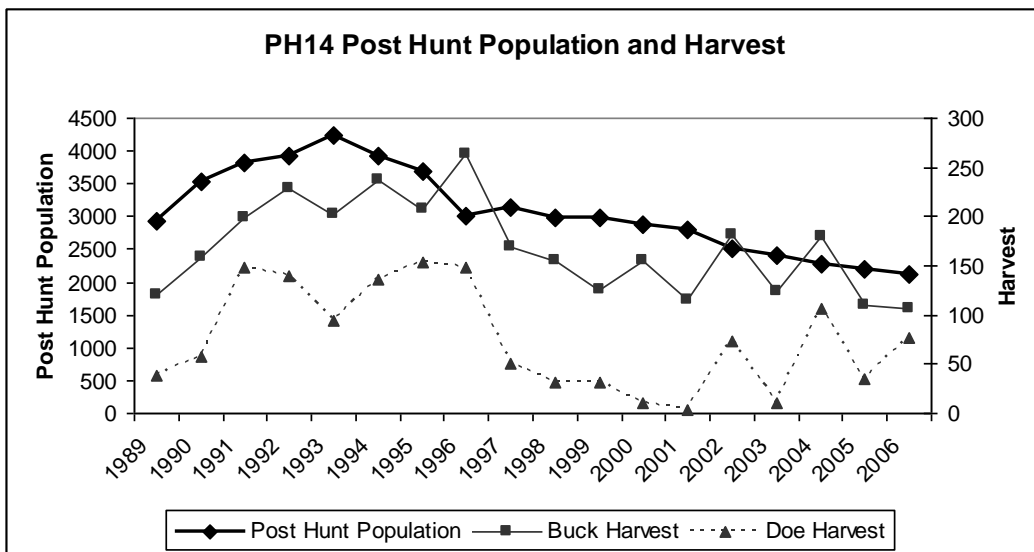


Figure 5. Buck harvest, doe harvest, and post hunt population from 1989 to 2006

## 4. Current Herd Management Status

### 4.1 Summary of Current Conditions

The current population estimate is at 2000 animals and population trend is decreasing. Major herds such as the one found around Villa Grove are actually increasing with good recruitment. Doe licenses have been issued in these areas to control the growth and help alleviate game damage problems.

Current post sex ratios objectives are high for GMUs 79 and 82 at 45 bucks:100 does and 40 bucks:100 does. Posthunt sex ratios have been below objective for at least the past 10 years. These objectives were set to provide quality buck hunts. Pronghorn typically reach their maximum horn size at the age of three and, unlike deer and elk, don't continue to increase their horn growth annually past that age (O'Gara and Yoakum 2004). Horn growth appears to be related more to genetics and forage quality than age. Therefore attempting to increase the quality of bucks through limited licenses is impractical. Decreased sex ratios would provide more hunter opportunity where hunting demand is high. Lower sex ratios would still

sufficiently provide 3+ year old bucks in the population to breed the doe segment successfully and offer quality bucks to hunters.

#### **4.2 Current Management Issues**

During 2001, 2002 and 2003 the area experienced an extreme drought. Forage became limited due to the lack of moisture and pronghorn responded with some of the lowest fawn:doe ratios recorded. This has caused several populations to diminish. In response, pronghorn hunting licenses decreased. The exception to this was the herd found around San Luis Creek which grew during this time period.

With decreasing licenses, the ability of hunters to obtain a license has also decreased. Currently it requires 8 preference points for a rifle buck license in GMU 68/681E, 10 points for the same license in GMU 79, while GMU 82/681E requires 7.

Another problem in this DAU is the presence of pronghorn on private lands and the accompanying game damage. During the past years of drought pronghorn have vacated non-irrigated habitat on public lands and moved onto irrigated alfalfa fields where they can cause game damage. An area that has seen the highest impact is in GMU 79 west of Hwy 15 around Hwy 112 and in the Villa Grove area. This is more of a population dispersal dilemma than overpopulation problem.

Distribution of pronghorn in the DAU is an issue. Current distribution is poor with a large portion of the population found along San Luis Creek and to some degree in parts of GMU 79. The ability to enhance the habitat in GMU 68 and the west portion of 681 so that it would support more animals and would be beneficial.

Development of private lands is a growing problem in the DAU, especially in GMU 79. Impacts to the pronghorn population from development, mostly private homes, include loss of important limited habitat, redistributing animals from historic winter range, and migration and movement barriers created by roads and fences.

Oil and gas development and its impact to wildlife is a major concern in the west. Currently energy development is being explored within the San Luis Valley, but no economic extraction techniques are currently available to make it cost-effective. Therefore the threat of oil and gas development to antelope populations in the DAU is low. If, however, energy development becomes profitable and begins then its impact could become greater than what pronghorn can survive based on energy development in other parts of the state.

#### **5. Habitat Resources**

The overall range of pronghorn in this DAU is 1506 square miles (Figure 6). Lack of water on the overall range and limited winter range are limiting factors for this population. Winter range is defined as that part of the overall range where 90% of the pronghorn are located during the average five winters out of ten from the first heavy snowfall to spring green-up. Severe winter range is that part of the overall range where 90% of the individuals are located when the annual snow pack is at its maximum and/or temperatures are at a minimum in the two worst winters out of ten. Winter concentration area is that part of the winter range where pronghorn densities are at least 200% greater than the surrounding winter range density.

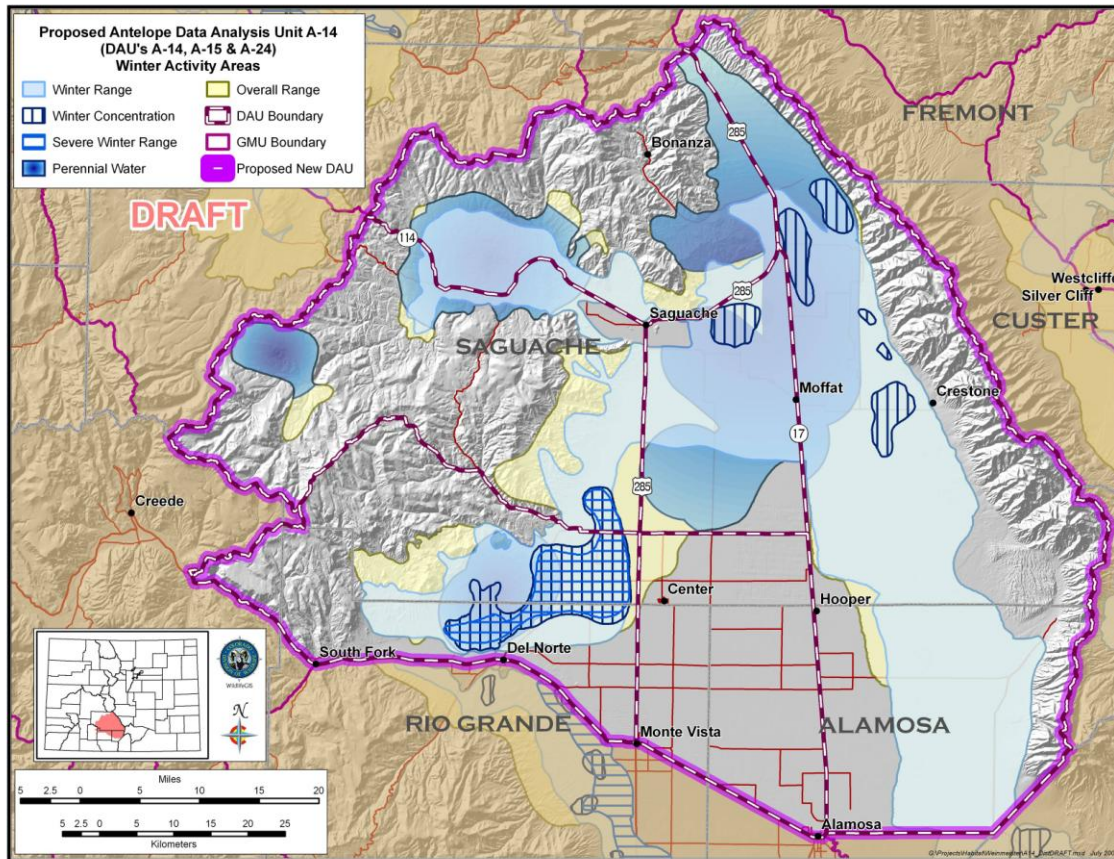


Figure 6. Winter range, severe winter range, and winter concentration areas for PH14

### 5.1 Public Lands

The overall range of pronghorn in the DAU on public lands is 26%. Of this 33% is US Forest Service, 14% is BLM, 5% is National Park Service, and 5% is Colorado State Land. The winter range is 1091 square miles with 57% or 622 square miles on public lands. Of this 5% is US Forest Service, 22% is BLM, 4% is National Park Service, and 8% is Colorado State Land.

### 5.2 Private Lands

Private land makes up 74% or 1114 square miles of the overall pronghorn range and 43% or 469 square miles of winter range. Damage to alfalfa fields and other crops is the most pressing private land issue.

## 6. Development of Alternatives

The primary purpose of this DAU Plan is to determine the long term post-hunt population objective and herd composition objectives. Sex ratios (buck:doe ratios) are a management option and age ratios (fawn:doe ratios) are a product of environmental factors. The past DAU plan used a set number for each objective. For each alternative proposed for the new plan a number range is given for the objective instead. This is to allow more flexibility in management based on uncontrolled impacts to the population such as extreme weather events and other causes.

Each alternative includes a brief discussion of general results of managing at that level. Generally, the lower the population objective the lower the investment needs to be in habitat improvements. As the objective population increases, the larger the investment needs to be. Habitat management practices vary in labor intensity, costs and life expectancy of the project. Individual practices that could be considered

include prescribed fires, fertilization, seeding, water developments, fencing, timber management, travel management and range management. Game damage problems would probably decrease under the low population alternatives, and would most likely increase as population objective increases. Higher population levels would support a higher harvest by hunters, help satisfy hunter demand and increase the fiscal benefits to state and local economies.

## **6.1 Population Objective**

ALTERNATIVE 1: 1500 to 2000 (15% decrease in current population)

This alternative would best address game damage in the DAU at the cost to sportsmen and non-consumptive users. To achieve this objective doe licenses would be increased to decrease the population. This would bring the population to the lowest it has been since 1970 or before.

ALTERNATIVE 2: 2000 to 2500 (current population)

This alternative allows the best balance for managing this herd for recreational opportunity and minimizing agricultural conflicts. Doe licenses would be available and most likely be focused in those areas with the greatest game damage conflict and highest densities of animals. Habitat work and water improvement would be encouraged in areas of low densities of pronghorn in an attempt to have better distribution of pronghorn throughout the DAU.

ALTERNATIVE 3: 2500 to 3000 (15% increase in current population)

This alternative would provide the largest population but still doesn't reach the number of animals that were present in the 1980's and early 1990's. It would create the greatest potential for agricultural conflicts. Current habitat conditions would make it difficult to achieve this population size with an even distribution of the population throughout the DAU. Most likely those areas like that along San Luis Creek would have to produce and hold the majority of the population or habitat improvement projects and water improvement would be needed in areas with low densities of pronghorn. Recreational opportunities would logically be highest with this scenario.

## **6.2 Herd Composition – (posthunt buck:doe ratio)**

ALTERNATIVE 1: 22 to 27 bucks: 100 does

This alternative provides the lowest sex ratio of the three alternatives. This would provide the highest opportunity for hunters to obtain a license. It would keep the sex ratio plenty high so there would be no ill biological effects. Quality of the hunt would be the lowest. This wouldn't necessarily produce smaller bucks in the population but would impact the hunting experience from having an increased number of hunters in the field. This in return could create more hunter conflicts.

ALTERNATIVE 2: 27 to 33 bucks: 100 does

This alternative would create the best balance between the quality of hunting and the frequency of being able to hunt with no adverse biological impact.

ALTERNATIVE 3: 35 to 40 bucks: 100 does

Alternative three is closest to the current objectives (for GMUs 79 & 82). Outcomes of this alternative would be fewer licenses available which would mean more preference points to acquire a license. This would create the lowest opportunity for hunters. The benefits would be an increased number of bucks, not necessarily bigger bucks, and less hunters in the field. There would be no biological benefit offered beyond the other two alternatives.

## **7. Alternative Selection**

### **7.1 Preferred Alternatives**

The preferred alternatives were selected after gathering input from public meetings, the Blanca and SLV HPP committees, local federal land use agencies, local County Commissioners, written comments, and Division of Wildlife personnel. Also herd capabilities and other factors mentioned previously were considered.

On November 14, 2007 a presentation concerning this plan was given to the Blanca Habitat Partnership Program Committee. The San Luis Valley HPP Committee received the presentation on November 28<sup>th</sup>. The SLV Committee recommended to adopt population objective of 2000 to 2500 (alt 2) and sex ratio objective of 27 to 33 bucks per 100 does (alt 2). Blanca HPP Committee game damage issues with antelope are minimal and they did not provide any verbal or written comments.

A public meeting was held in Center, CO on November 19, 2007 to discuss the DAU plan. 15 individuals participated as landowners and/or hunters. Everyone who expressed interest in pronghorn management wanted the population to be managed at the current level or at a higher level, including farmers receiving game damage from pronghorn in the northern portion of the DAU. A high sex ratio, alternative 2 and 3, were also favored equally.

A meeting with US Forest Service and Bureau of Land Management biologists and DOW staff was held on November 29, 2007 to discuss plan revisions. These federal land management agencies supported population objective alternative 2 and sex ratio objective alternative 2.

AWM Rick Basagoitia met with County Commissioners from Saguache and Rio Grande Counties. Saguache County Commissioners supported the Division of Wildlife's best judgment on antelope management in PH14. Rio Grande County Commissioners supported current population size and sex ratios.

Local DOW Area Wildlife Manager and District Wildlife Managers supported the recommended alternatives. This was after discussion about biological, recreational, social, and political impacts of the proposed objectives.

Through input given through these various means it is recommended for PH14 that the **population objective be 2000 to 2500** (alternative 2) and the **sex ratio objective be 27 to 33 bucks per 100 does** (alternative 2).

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Appendix A Known Pronghorn Transplants into the DAU

| Date        | Trap Site              | Release Site                  | Males | Females | Fawns | Unknown | Total | Trap Method         | Notes                       |
|-------------|------------------------|-------------------------------|-------|---------|-------|---------|-------|---------------------|-----------------------------|
| 3/10/1962   | Wolf Ranch             | Great Sand Dunes Ntl Monument | 6     | 13      | 7     |         | 26    |                     |                             |
| 1963        | unknown                | Natural Arch area             |       |         |       | 24      | 24    |                     |                             |
| 1/7/1964    | Chico Basin            | Old Woman Creek               | 7     |         |       | 18      | 25    |                     | Unknown were does and fawns |
| 12/1/1977   | Maybell                | Natural Arch                  | 37    | 47      | 7     |         | 91    |                     | 3 died                      |
| 1/23/1981   | Hugo                   | San Luis Valley               | 7     |         | 9     |         | 16    |                     |                             |
| 02/9,10/83  | 5 miles east of Moffat | Tracy Canyon & Bidell Creek   | 15    | 30      | 5     |         | 50    |                     |                             |
| 01/17-19/84 | Crestone               | Tracy Canyon                  | 15    | 18      | 13    |         | 46    | helicopter and trap |                             |

Appendix B Known Pronghorn Transplants from the DAU

| Date        | Trap Site              | Release Site                | Males | Females | Fawns | Unknown | Total | Trap Method       | Notes                                      |
|-------------|------------------------|-----------------------------|-------|---------|-------|---------|-------|-------------------|--|
| 2/6/1980    | 9 miles NE Saguache    | Poso Creek                  | 4     | 34      | 13    |         | 51    |                   |  |
| 2/6/1980    | 9 miles NE Saguache    | Ra Jadero Canyon            | 11    | 21      | 19    |         | 51    |                   |  |
| 11/22/1980  | Villa Grove            | unknown                     | 20    | 40      | 22    |         | 82    |                   | 4 mortalities not included in total number |
| 02/09-10/83 | 5 miles east of Moffat | 10 miles NE of Blanca       | 28    | 68      | 19    |         | 115   |                   |  |
| 02/9,10/83  | 5 miles east of Moffat | Tracy Canyon & Bidell Creek | 15    | 30      | 5     |         | 50    |                   |  |
| 2/10/1983   | 5 miles east of Moffat | Upper Dome Lake             | 1     | 14      | 20    |         | 35    |                   |  |
| 02/10,12/83 | 5 miles east of Moffat | Dry Creek Basin             | 13    | 36      | 25    |         | 74    |                   |  |
| 2/12/1983   | 8 miles NE of Moffat   | Jicarilla Tribe             | 17    | 23      | 19    | 3       | 62    |                   |  |
| 01/17-19/84 | Crestone               | Arizona                     | 29    | 75      | 73    | 9       | 186   | helicopter & trap |  |
| 01/17-19/84 | Crestone               | Jicarilla Tribe             | 41    | 86      | 22    | 27      | 176   | helicopter & trap |  |
| 01/17-19/84 | Crestone               | Tracy Canyon                | 15    | 18      | 13    |         | 46    | helicopter & trap |  |
| 2/6/1990    | Rito Alto              | Fort Garland                | 6     | 47      | 23    |         | 76    |                   |  |



Appendix C: Harvest Data

| YEAR | MALES | FEMALES | YOUNG | TOTAL | HUNTERS | SUCCESS RATE |
|------|-------|---------|-------|-------|---------|--------------|
| 1972 | 48    | 0       | 0     | 48    | 59      | 81.4%        |
| 1973 | 49    | 0       | 0     | 49    | 57      | 86.0%        |
| 1974 | 42    | 0       | 0     | 42    | 57      | 73.7%        |
| 1975 | 45    | 0       | 0     | 45    | 64      | 70.3%        |
| 1976 | 64    | 9       | 5     | 78    | 91      | 85.7%        |
| 1977 | 94    | 7       | 2     | 103   | 108     | 95.4%        |
| 1978 | 93    | 14      | 0     | 107   | 110     | 97.3%        |
| 1979 | 107   | 8       | 0     | 115   | 129     | 89.1%        |
| 1980 | 74    | 20      | 8     | 102   | 243     | 42.0%        |
| 1981 | 112   | 67      | 7     | 186   | 344     | 54.1%        |
| 1982 | 128   | 53      | 4     | 185   | 352     | 52.6%        |
| 1983 | 143   | 70      | 9     | 222   | 424     | 52.4%        |
| 1984 | 213   | 185     | 20    | 418   | 639     | 65.4%        |
| 1985 | 170   | 53      | 1     | 224   | 449     | 49.9%        |
| 1986 | 133   | 51      | 6     | 190   | 266     | 71.4%        |
| 1987 | 135   | 33      | 2     | 170   | 261     | 65.1%        |
| 1988 | 136   | 48      | 4     | 188   | 261     | 72.0%        |
| 1989 | 140   | 46      | 7     | 193   | 269     | 71.7%        |
| 1990 | 159   | 57      | 4     | 220   | 309     | 71.2%        |
| 1991 | 198   | 149     | 11    | 357   | 515     | 69.3%        |
| 1992 | 228   | 140     | 19    | 388   | 572     | 67.8%        |
| 1993 | 202   | 94      | 8     | 307   | 476     | 64.5%        |
| 1994 | 238   | 136     | 11    | 385   | 625     | 61.6%        |
| 1995 | 208   | 154     | 3     | 365   | 689     | 53.0%        |
| 1996 | 263   | 148     | 15    | 426   | 816     | 52.2%        |
| 1997 | 169   | 51      | 2     | 220   | 648     | 34.0%        |
| 1998 | 156   | 31      | 0     | 187   | 559     | 33.5%        |
| 1999 | 125   | 31      | 3     | 161   | 337     | 47.8%        |
| 2000 | 156   | 11      | 0     | 167   | 293     | 57.0%        |
| 2001 | 115   | 3       | 0     | 118   | 251     | 47.0%        |
| 2002 | 181   | 6       | 67    | 254   | 270     | 94.1%        |
| 2003 | 124   | 10      | 10    | 144   | 201     | 71.6%        |
| 2004 | 180   | 48      | 95    | 324   | 339     | 95.6%        |
| 2005 | 110   | 35      | 19    | 164   | 236     | 69.5%        |
| 2006 | 107   | 76      | 4     | 188   | 258     | 72.9%        |