

PRONGHORN MANAGEMENT PLAN LARAMIE RIVER HERD

*Data Analysis Unit PH-36
GMUs 7 & 8*

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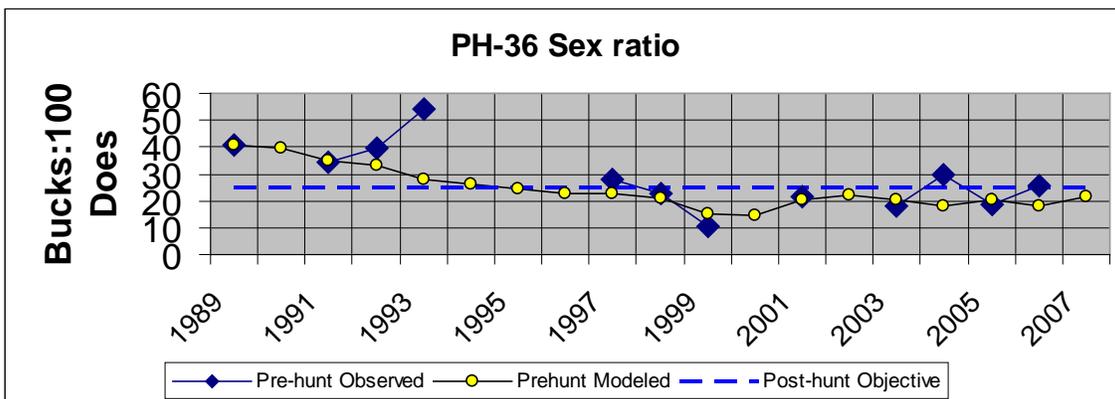
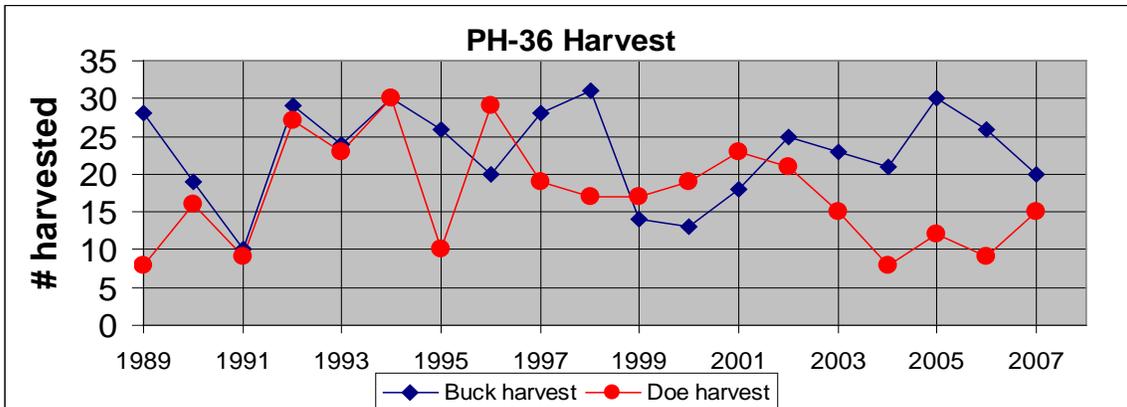
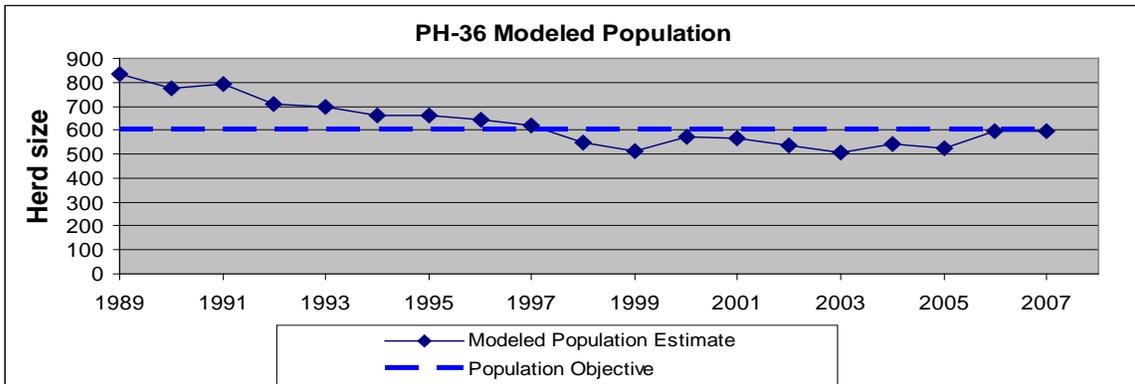


2009

DATA ANALYSIS UNIT PLAN FOR PH-36

EXECUTIVE SUMMARY

GMUs: 7 & 8 (Northwest Larimer County)
Land Ownership: 681 sq. miles; 20% Private, 70% USFS, 6% BLM, 4% State
Post-hunt Population:
 Previous objective: 600 2007 Estimate (Modeled): 600
 Current objective: Alternative #2 550-650 pronghorn (status quo)
Sex Ratio (Bucks:100 Does):
 Previous post-hunt Objective: 25 2006 Pre-hunt Observed: 26 2007 Pre-hunt Modeled: 22
 Current objective: Alternative #2 20-25 bucks:100 does (status quo)



Background

The Laramie River herd is a relatively small herd of pronghorn that occupies primarily private land in the Laramie River Valley. There is significant movement across the Colorado-Wyoming, but otherwise Data Analysis Unit (DAU) PH-36 accurately captures the annual range of this herd. Due to the small population size, large proportion of animals on private land, and lack of conflicts, this herd has been managed with a relatively consistent level of buck and doe licenses over the last 18 years. Several adjustments to management have occurred over time in PH-36 including separating it from PH-33 to the east, creating regular rifle and Private Land Only (PLO) rifle licenses for both bucks and does, allocating both regular and PLO rifle licenses by Game Management Units (GMU) 7 or 8, and the creation of PH-36 specified muzzleloading licenses.

Significant Issues

Based on discussions with the public and Colorado Division of Wildlife (CDOW) staff there appear to be few issues involving this herd. Game damage is not a concern. Members of the public attending the DAU plan meeting expressed interest in the CDOW improving access for pronghorn hunting in general, including PH-36, as many herds in the state reside primarily on private property. Preference point “creep” may be issue to some landowners in the Laramie River; many of the pronghorn are concentrated on a few large ranches and some feel that small parcel landowners are inundating the applicant pool for licenses when they don’t have enough private land access to realistically harvest an animal.

Management Alternatives

This management plan provides 3 alternatives for a herd population objective and 3 alternatives for sex ratio objectives. Population and sex ratio objectives are independent of one another, and represent different biological issues, social aspects and hunting strategies in herd management.

Population Objective Alternatives:

Population Alternative #1: 400-500 pronghorn (25% reduction)

This alternative would provide a very small number of licenses each year, once the population had been reduced to objective. Preference points needed to draw both buck and doe licenses would increase.

Population Alternative #2: 550-650 pronghorn (status quo)

This option would represent a similar continuation of current license trends and required preference points. Given no other changes in herd status, this option would provide for hunting recreation and continue to manage for a stable herd.

Population Alternative #3: 700-800 pronghorn (25% increase)

This alternative would require short-term reductions in licenses to achieve the increase objective. It is possible game damage could be a concern, depending on how animal distributions occurred. Given the climates in the Laramie River, this upper population size may be difficult to sustain in bad winters.

Herd Composition-Sex Ratio Objective Alternative

Composition Alternative #1: 15-20 bucks:100 does

This alternative would represent the lowest level of bucks, and therefore buck maturity/horn size among the 3 options. This ratio would permit a small increase in buck hunting opportunity, but not enough to impact preference point dramatically.

Composition Alternative #2: 20-25 bucks:100 does (status quo)

This status quo alternative would represent the current level of buck hunting, buck maturity and horn size.

Composition Alternative #3: 25-30 bucks:100 does

This third alternative would require a reduction in the level of buck harvest to achieve this ratio increase. Given the small herd size, low buck harvest level and low buck ratios during classification flights this ratio may be difficult to achieve in some years.

Preferred Alternatives

Population Alternative #2: 550-650 pronghorn (status quo)

Composition Alternative #2: 20-25 bucks:100 does (status quo)

These alternatives both represent a continuation of current management objectives. Given the limited amount of pronghorn habitat in the DAU, minimal public access, and public, external agency and staff comments received, the recommendation is to continue with the status quo of 550-650 animals and a buck:doe ratio of 20-25:100.

This plan was approved by the Colorado Wildlife Commission on March 12, 2009

**LARAMIE RIVER
PRONGHORN MANAGEMENT PLAN
DAU PH-36 (GMUs 7 & 8)**

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DATA ANALYSIS UNIT PLAN FOR PH-36

INTRODUCTION

The purpose of a Data Analysis Unit (DAU) plan is to give the Colorado Division of Wildlife (CDOW) direction in managing a big game species in a given geographical area. It identifies suitable habitat, gives the herd history and current status, and identifies issues and problems. Key features of a DAU plan are the herd size and herd composition objectives, which are developed after considering input from all interested entities. CDOW intends to update these plans as new information and data become available, at least once every ten years.

DAU PLANS AND WILDLIFE MANAGEMENT BY OBJECTIVES

The Colorado Division of Wildlife manages wildlife for the use, benefit and enjoyment of the people of the state in accordance with the CDOW's Strategic Plan and mandates from the Colorado Wildlife Commission and the Colorado Legislature. Colorado's wildlife resources require careful and increasingly intensive management to accommodate the many and varied public demands and growing impacts from people. To manage the state's big game populations, the CDOW uses a "management by objective" approach (Figure 1). Big game populations are managed to achieve population and sex ratio objectives established for Data Analysis Units.

DAUs provide the framework to manage individual herds of big game animals. DAUs are generally discrete geographically, and attempt to identify an individual big game population. However, individual animal movements may at times straddle or encompass more than one DAU. While DAU boundaries are administrative, they represent the best way to encompass the majority of a herd within a biological area, and allow the most practical application of management tools such as hunting, to reach objectives. DAUs are typically composed of smaller areas designated as game management units (GMUs), which provide a more practical framework where the management goals can be refined and applied on a finer scale, typically through hunting regulations.

The DAU plan process is designed to balance public demands, habitat capabilities and herd capabilities into a management scheme for the individual herd. The public, hunters, federal land use agencies, landowners and agricultural interests are involved in the determination of the plan objectives through input given during public meetings, the opportunity to comment on draft plans and when final review is undertaken by the Colorado Wildlife Commission.

The objectives defined in the plan guide a long term cycle of information collection, information analysis and decision making. The end product of this process is a recommendation for numbers of hunting licenses for the herd (Figure 1). A traditional DAU plan addresses two primary goals: the number of animals the DAU should contain and the sex ratio of those animals expressed as males:100 females. The plan also specifically outlines the management techniques that will be used to reach desired

objectives. The fact that DAU plans are reviewed and revised on a 5-10 year basis provides assurances against the often-dynamic fluctuations experienced by Colorado’s big game herds. Changes in land development, public attitudes, hunter success, hunter access, research results, disease prevalence and game damage may all contribute new information needed when reviewing or revising a DAU plan. The CDOW strives to maintain a tight link between the inclusion of publics in the development of population objectives and the yearly iteration of data collection, analysis and renewed decision-making to reach those objectives.

Individual DAUs are managed with the goal of meeting herd objectives. Herd data, which is typically collected annually, is entered into a computer population model to get a population projection. The parameters that go into the model include harvest data from hunter surveys, sex and age composition of the herd gathered by field surveys and mortality factors such as wounding loss and winter severity, generally acquired from field observations. The resultant computer population projection is then compared to the herd objective, and a harvest calculated to align the population with the herd objective.

**COLORADO’S BIG GAME MANAGEMENT
BY OBJECTIVE PROCESS**

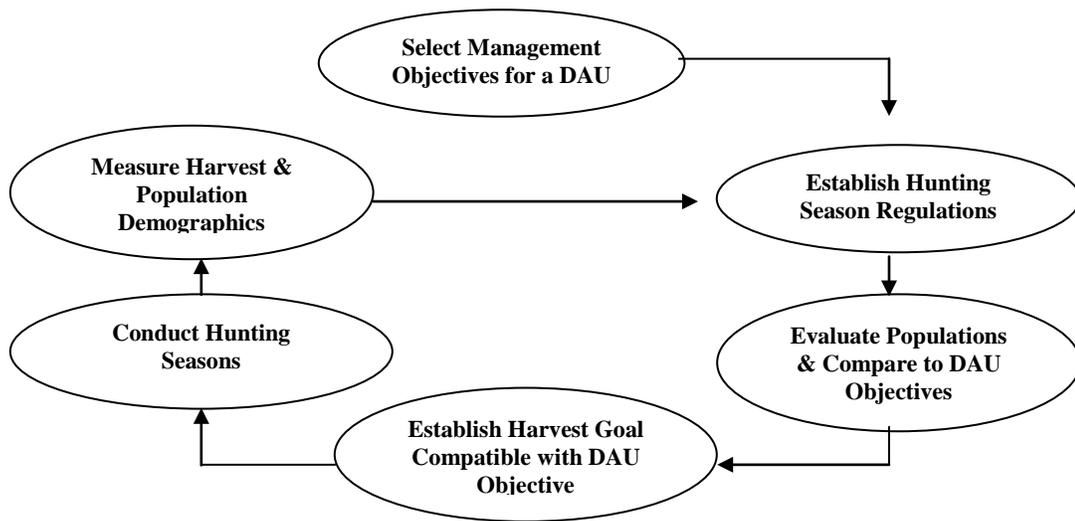


Figure 1. Management by objectives process used by the CDOW to manage big game populations on a DAU basis.

DESCRIPTION OF DAU PH-36 AND HABITAT

Geography

Pronghorn DAU PH-36 is located in Larimer County in north central Colorado. It consists of GMU 7 and 8. PH-36 is bounded on the north by the Wyoming state line, on the east by Larimer County Roads 69, 68C, 74E (Red Feather Lakes Road), 179, 80C, (Cherokee Peak Road), and 59, on the south by Colorado Highway 14, and on the west by the Larimer-Jackson County line (Figure 2).

Elevations range from 12,950 feet on Clark Peak in the southwest part of the DAU to 7,500 feet on the north end of the unit. The main contour that defines the pronghorn habitat in the DAU is the lower Laramie River valley (below Glendevey) and surrounding uplands.

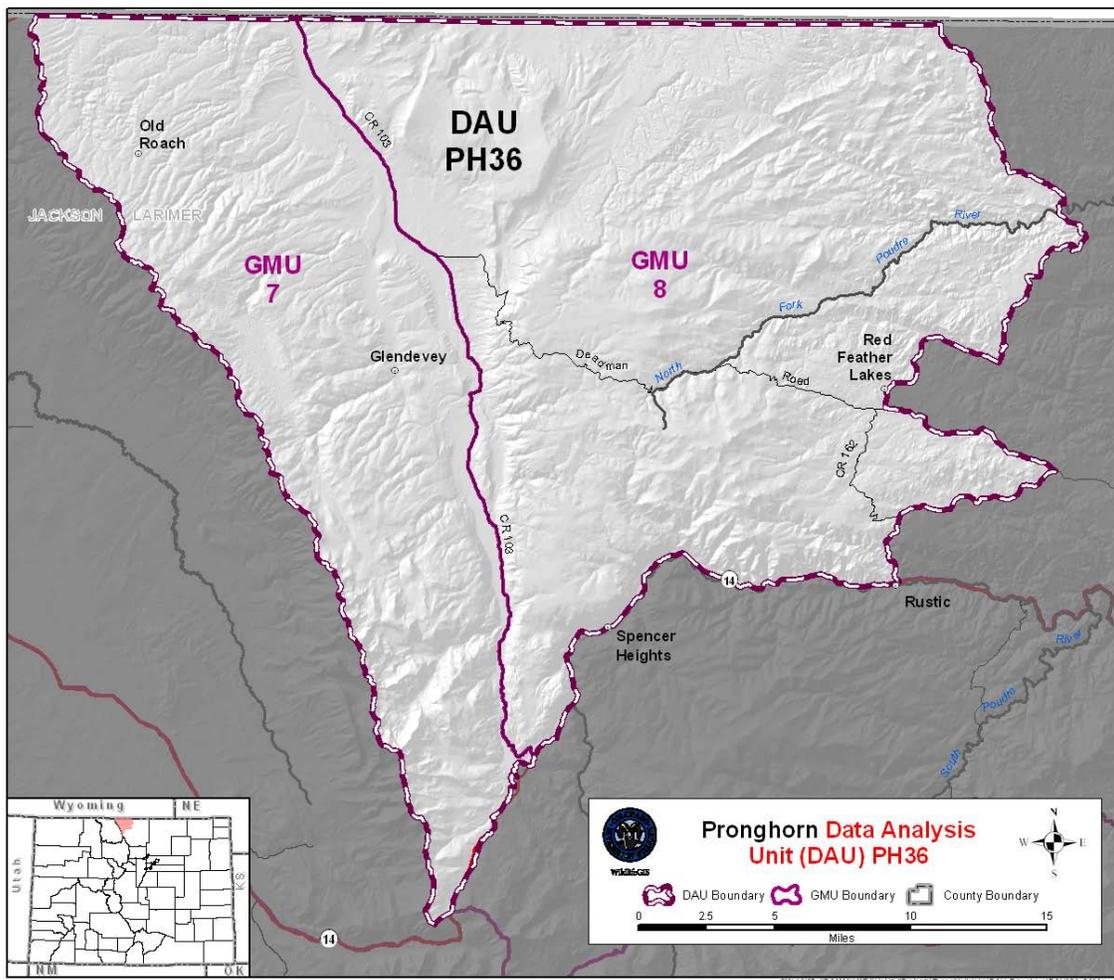


Figure 2. PH-36 Geography and GMU boundaries

Climate

The overall topography in PH-36 is a mixture of mountains, foothills, and plains, experiencing a variety of climate conditions. The higher elevational portions in the west experience a harsher climate, with long, cold winters, abundant snowfall, and short, cool summers. The weather in the plains of the Laramie River Valley in the north is typically milder and drier than the surrounding mountains.

Coniferous forest occupies most of PH-36 while the plains are covered by rangeland shrub habitat. Pronghorn summer range is an extension of the winter range, with portions of Bull Mountain and areas south of Four Corners only used during more temperate seasons. Snow accumulations on winter range are usually moderate due to strong winds and sun that keep depths within pronghorn tolerances. Any accumulations from the occasional spring and late winter storms usually melt off quickly on the plains. Weather-related winter mortality is usually not a factor in PH-36.

Land Ownership and Use

The surface area of the entire DAU is 681 square miles. While the majority of the DAU surface area is managed by the US Forest Service, actual pronghorn habitat is owned largely by private landowners and the Bureau of Land Management (BLM) (Figure 3). Private lands encompass 135 square miles, or 20 % of the DAU while the BLM has stewardship over 42 sq. miles (6 % of DAU). This 26% of the DAU represents almost all the available pronghorn habitat.

Most of the DAU itself is managed by the United States Forest Service (USFS). The vast majority of this surface area is heavily timbered and not pronghorn habitat but accounts for 70% of the DAU or 480 sq. miles. Among state lands, the 15,000 acres of land managed as State Wildlife Areas (DOW) or State Land Board property account for almost all of the total state area of 23.7 sq. miles or 3.5% of the DAU. Roughly half of the state lands could be considered pronghorn habitat.

Human occupation is limited in PH-36, particularly in the Laramie River valley. However, in the eastern portion of GMU 8 rural developments are more common. The main landscape use in the western part of the DAU is irrigated hay and ranching.

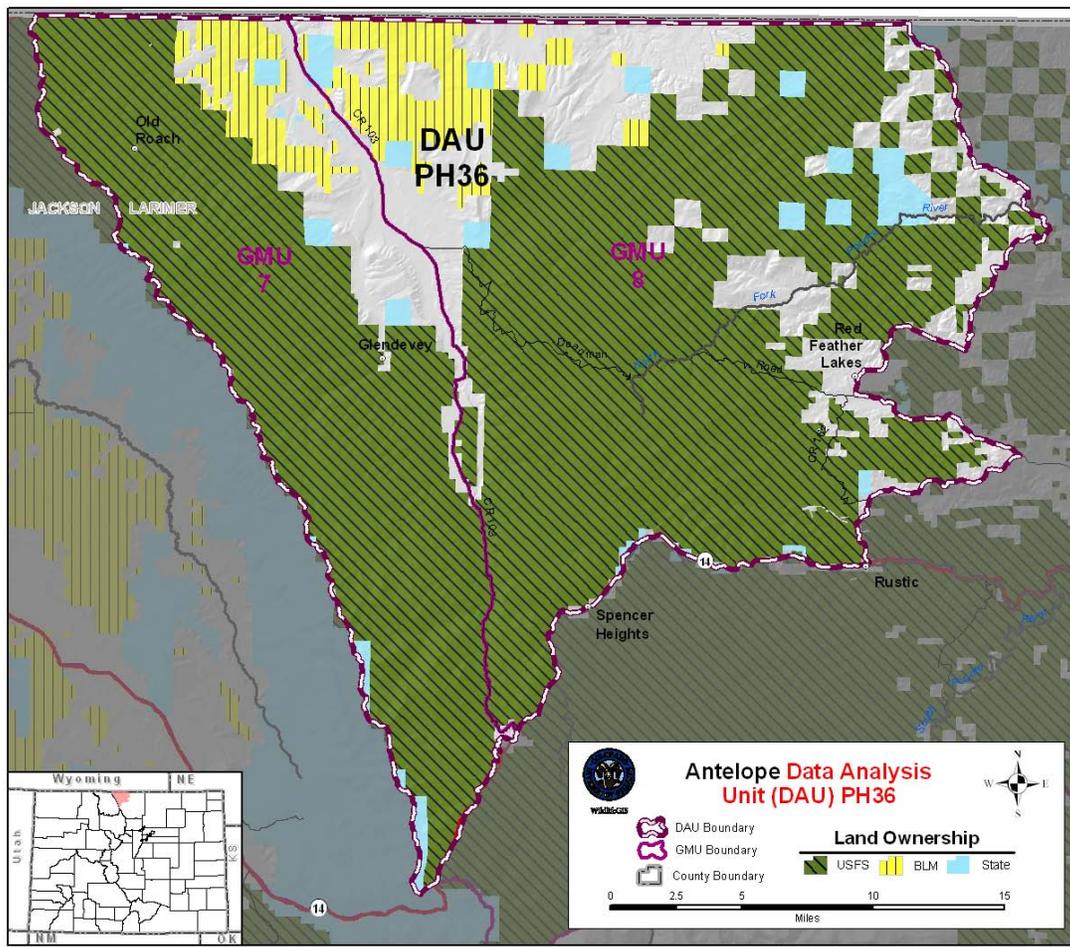


Figure 3. PH-36 Land Ownership

Vegetation

Vegetation over much of PH-36 is composed of coniferous forest, with shrubby rangeland concentrated around the Laramie River valley. Riparian areas are comprised of cottonwoods, along with alders and willows. Pronghorn principally occupy the sagebrush/shrub rangeland and associated grasslands, preferring open, rolling topography that affords good visibility (Figure 4).

Shrub rangeland is mostly associated with the uplands surrounding the Laramie River itself. Plants associated with shrub rangeland include sagebrush, rabbitbrush, native grasses and forbs. Foothills vegetation from approximately 5,500 to 7,000 feet and is characterized by various shrub types and ponderosa pine. Shrubs such as mountain mahogany, juniper, wild plum, and serviceberry are present.

Moving higher in elevation from the foothills leads to the montane zone. Ponderosa pine forests may continue to elevations above 8,000 feet, but often Douglas-fir stands begin at middle elevations and continue up to 9,000 feet. Both aspen and lodgepole pine appear as early colonizers, inhabiting areas of disturbance.

Areas on the far western and southwestern portion of the DAU represent the subalpine region. Aspen is present at the lower end of the zone, giving way to lodgepole

stands as elevation increases. Spruce/fir communities are the standard forest type through the subalpine until 11,500 feet, at which point timberline is reached and tree growth is nearly impossible, given the cold, snow, and wind. Above timberline, the landscape is dominated by tundra vegetation such as cushion plants, willow species, and small groups of krumholtz trees.

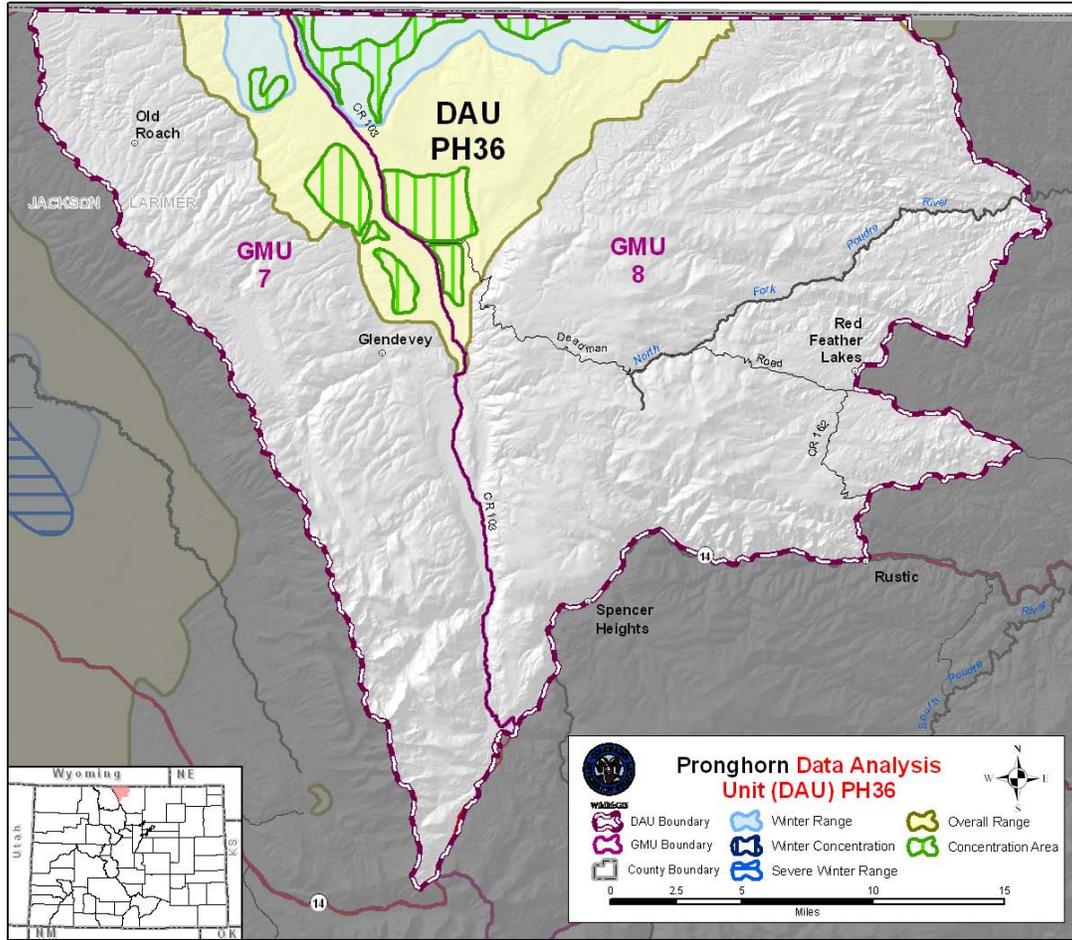


Figure 4. PH-36 Pronghorn Habitat

HERD MANAGEMENT HISTORY AND BACKGROUND

Current management objectives are to maintain the herd at 600 animals with a buck:doe ratio of 25:100.

History

Before 1989 PH-36 had been managed jointly with the adjoining DAU to the east (PH-33) as one DAU. It is unclear why the separation was made, but aerial observations indicate that terrain and topography probably isolate the Laramie River and Sand Creek areas enough that little interchange occurs between the two herds along the GMU 8/GMU 191 border. Due to the small size of the herd, large proportion of animals on private land

and lack of conflicts this herd has been managed with a relatively consistent level of licenses over the last 18 years.

Population and Sex Ratio

Estimating population numbers of wild animals over large geographic areas is a difficult and approximate science. Numerous attempts have been made to accurately count known numbers of wild animals in large fenced areas. All of these efforts have failed to count 100% of the animals. The CDOW recognizes the difficulties of estimating the size of pronghorn populations as a challenge in managing populations and attempts to maximize the accuracy of these estimates by using the latest technology and inventory methodology available. As better information and techniques become available (e.g., new estimates of survival/mortality, wounding loss, sex ratios, density, or new modeling techniques and software) they are evaluated and used where appropriate. The population estimate presented in this document should, therefore, not be considered a completely accurate enumeration of the animals in the DAU.

DAU PH-36 has been managed for a population objective of 600 animals. Based on population modeling it appears that during the late 1980s and early 1990s the herd may have been over that objective (~20-30%), but since the late 1990s it has been at or below 600 animals (Figure 5). As a state-line herd it has been difficult to calibrate minimum counts seen on classification flights in August to numbers that hunters see in the early fall to herds observed by landowners during winter conditions. There is certainly some level of movement between PH-36 and Wyoming during winter and summer, particularly along the northwestern border in GMU 8. The current 2007 post-hunt population estimate is 600.

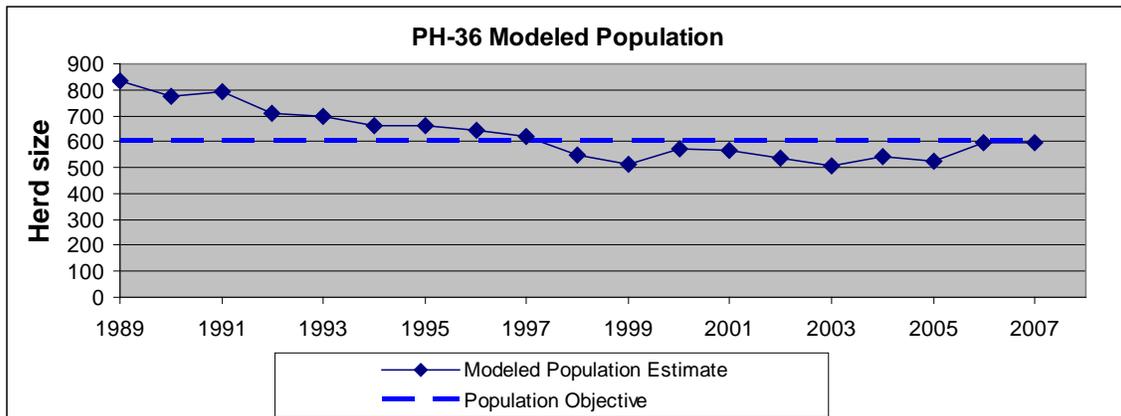


Figure 5. PH-36 Population Estimate and Objective

Observed ratios have tended to be at or below levels that would reach the post-hunt objective of 25 bucks:100 does (Figure 6). During the early 1990s however, pre-hunt buck:doe ratios were observed at levels high enough to reach objective. Ratio data is collected from fixed-wing aircraft and during classification flights an attempt is made to fly a survey transect line along every mile of habitat. In addition, due to the rugged nature of the pronghorn habitat in PH-36 pockets of habitat occur on mountainsides and other odd terrain features, so a considerable portion of effort is focused on surveying

entire pieces of habitat rather than covering them on transects. Due to this more intensive searching method, the proportion of the herd observed on classification flights tends to be larger than in some other DAUs. Classification flights are done just before the pronghorn rut, when there would be a naturally high association between the sexes. Observed male:female ratios in PH-36 may be biased low, as are most pronghorn ratios in Colorado, due to the habit of males often standing/bedding at some distance to the herd of does they have been associating with or not being detected as singles and small bachelor groups. In cases, such as these, the detection probability for the large group of does and fawns is greater than the buck standing alone. The last classification flight in the DAU was conducted in 2006 and 26 bucks:100 does were observed pre-hunt from a sample of 300 animals. This observed ratio puts the herd well under the post-hunt objective of 25.

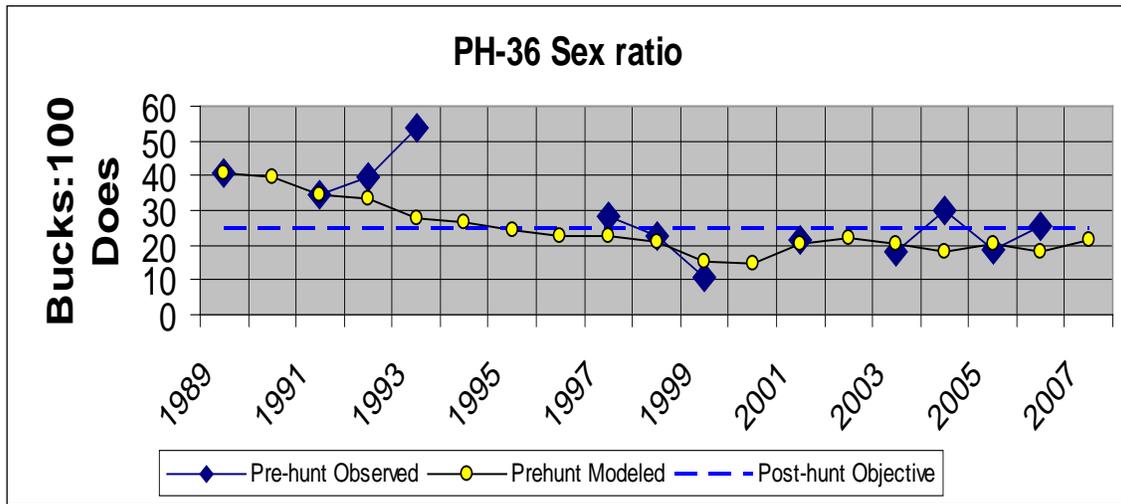


Figure 6. PH-36 Sex Ratios

Licenses

License setting in the DAU has been relatively conservative due to the small herd size and lack of public access. Since 2001, the number of specified licenses issued for both buck and doe rifle hunting in the DAU has ranged from 85 to 60. Archery licenses have been available on a statewide, unlimited basis. In 2007 all statewide pronghorn muzzleloading licenses became DAU-specified, but in previous years muzzleloading licenses were allocated as limited, state-wide tags.

In recent years regular rifle licenses were specified to GMU (7 or 8), but valid in either GMU for PLO license holders. In 2005 concerns were raised over the possibility that landowners in GMU 8, which has a number of small rural subdivisions, were applying for the PLO rifle tags in such large numbers such that the relatively small number of large landowners in GMU 7 would unfairly lose hunting opportunity. The argument was made that a change in regulations to create separate huntcodes for each GMU would allow landowners in GMU 7, who have the majority of pronghorn habitat, a greater opportunity to draw a license in a unit where they control access. Regulations were changed so that beginning in 2006 both regular and PLO rifle tags for both sexes were specified by GMU within PH-36. With only 2 years of data, it is unclear if this

change has fairly partitioned applicants between GMUs and their ability to access private land.

Harvest

Harvest in PH-36 has been relatively consistent over the last 18 years (Figure 7). The small overall size of the herd and private land access contribute to keeping the numbers of bucks and does killed each year very similar. Both buck and doe harvest has fluctuated between 10- 30 per sex since 1989. A DAU with a larger amount of pronghorn on public land might experience greater changes in harvest across time as animals are available for public land harvest in differing proportions depending on temporal conditions each year. The majority of pronghorn in PH-36 are on private property year round, although there are a smaller number of groups that are located on public land during the hunting seasons.

Nearly all harvest comes from rifle hunters (Figure 8). The archery 18-year average harvest is just over 1.5 animals and no muzzleloader has ever harvested in PH-36. Before muzzleloading licenses were specified by DAU in 2007, in only one of the last 18 years had a muzzleloading hunter even hunted in PH-36.

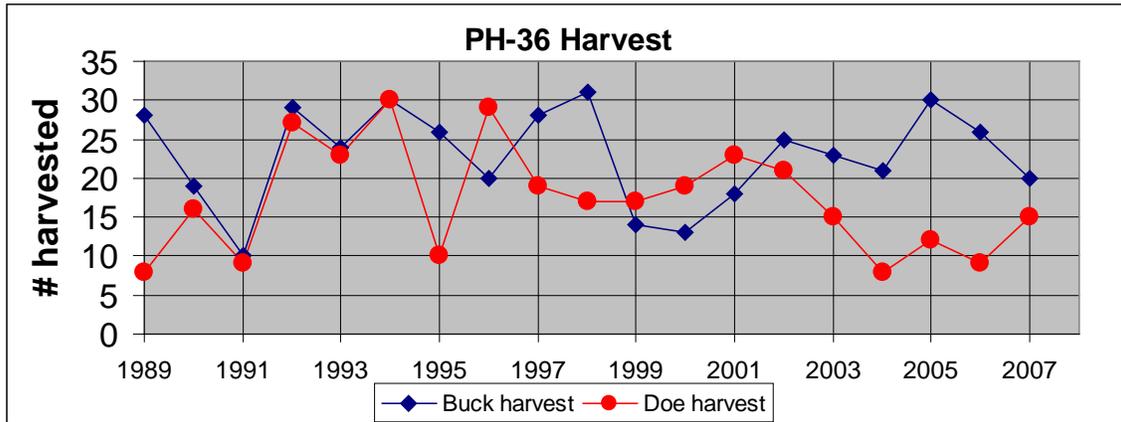


Figure 7. PH-36 Harvest

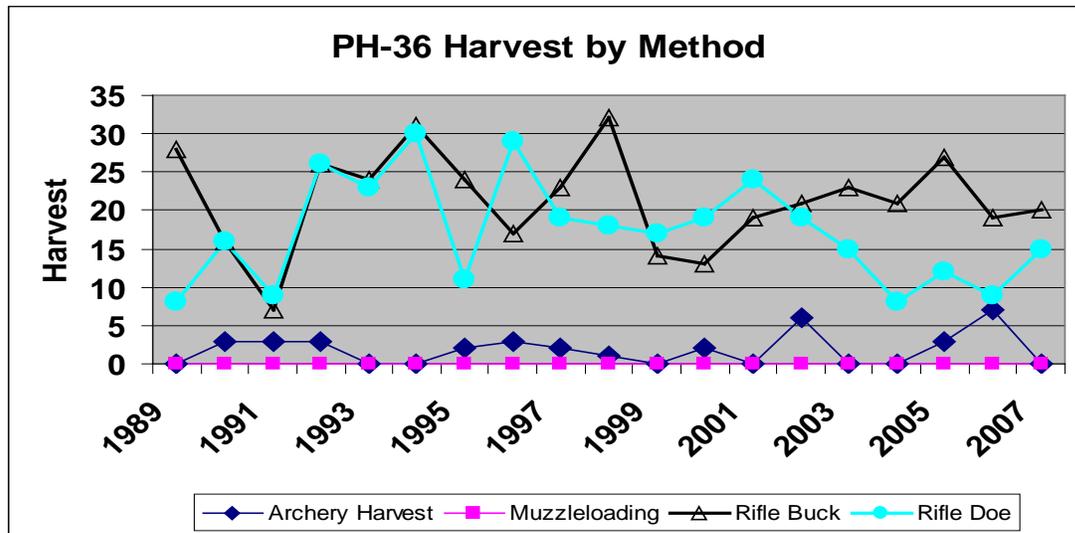


Figure 8. PH-36 Harvest by method of take

Success Rates

Success rates in PH-36 have varied widely within both buck and doe rifle seasons over the last 18 years. (Figure 9). Muzzleloading success has been 0% over the last 18 years as during 17 of those years no muzzleloaders hunted the DAU. Archery success is low compared to rifle, averaging 11% over the last 18 years. Rifle seasons enjoy much higher success, but there is still much year to year variability in the proportion of hunters that harvest animals, more than in most other adjacent pronghorn DAUs. This variability in rifle success rates between 90% and 30% is likely a relic of the small number of licenses available and the numerical impacts that just a few hunters can have on success rates in either direction. As previously described, this DAU has attributes like difficult topography and private property that may contribute to depressing rifle success rates slightly compared to more easily hunted DAUs with flat open landscapes and easy access on private or public land.

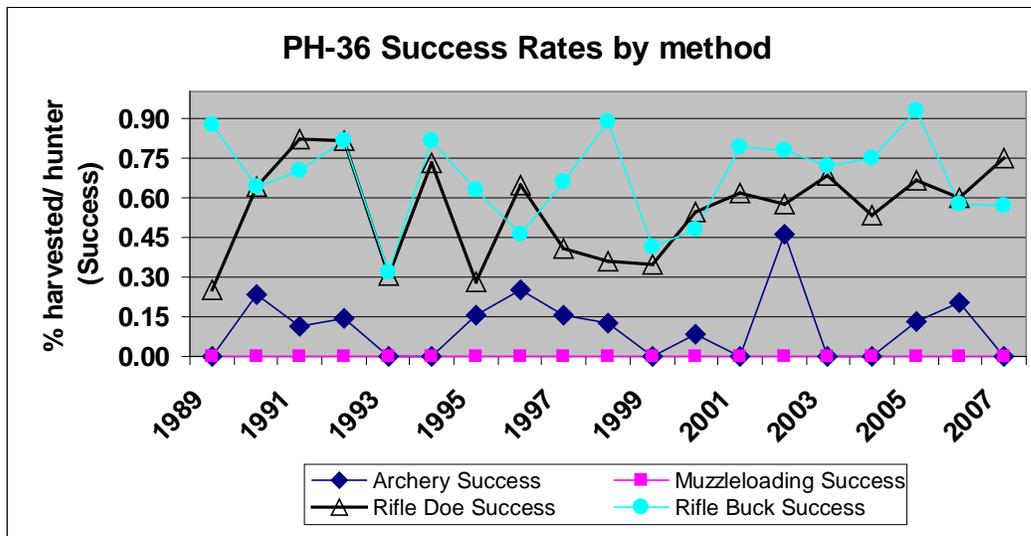


Figure 9. PH-36 Success rates by method of take

Disease

Disease is not an issue in PH-36. While chronic wasting disease has been detected in deer, elk and moose in the DAU, to date it has not been diagnosed in pronghorn.

Game Damage

There have been no pronghorn damage claims submitted in PH-36 for at least the last 24 years.

Habitat Management

A recent initiative has been presented by the BLM to cooperatively work with private landowners and the state of Colorado to improve general habitat conditions on and around Red Mountain/Bull Mountain in GMU 8 (including BLM lands in both Colorado and Wyoming). The local DWM has been involved in these initial meetings. It

is possible that as this project moves forward, habitat work for ungulates and/or pronghorn specifically can be proposed.

CURRENT HERD MANAGEMENT

Current Post-hunt Population

Based on the PH-36 population model, as well as observed data from aerial inventories, the 2007 post-hunt population is estimated at 600 animals (see Figure 5).

Current Sex/Age Composition

Annual computer modeling estimates a 2007 pre-hunt ratio of 22 bucks:100 does. The most recent 3-year average observed ratio (2004-2006) is 25 bucks:100 does. While there was no aerial classification flight conducted in 2007, the 2006 observed pre-hunt was 26 bucks:100 does. The objective of 25 bucks:100 does post-hunt has at times not been met, as both modeled and observed pre-hunt ratios have fallen just short of levels needed before harvest. Given the low number of bucks harvested each year, and the challenges with buck classification in general and in PH-36 in specific, these pre-hunt estimates are likely biased low.

Current Management Strategies

Since the current population size is at or near objective, the goal in management has been to continue to stabilize the population with consistent license levels. Buck:doe ratios have been problematic in recent years as the herd is under the post-hunt sex ratio objective. This may in part be due to underestimation of ratios due to bias in sightings of bucks on pre-season flights.

Current Management Problems

There are no significant problems in PH-36. Increased hunter access to private property is desirable, but is not a problem in reaching management objectives. How to balance competing desires for hunting opportunity from a large number of small acreage landowners with that of 3-4 large landowners who have most of the pronghorn habitat may be the biggest challenge.

ISSUES AND STRATEGIES

Issue Solicitation Process

A public meeting was held in Wellington (north of Fort Collins) on August 8, 2007 to discuss pronghorn management in PH-36 (in conjunction with PH-33). The meeting was attended by 8 members of the public. The meeting was advertised in local media and on the DOW website for 30 days. A card was sent to PH-36 license applicants also informing them of the meeting and providing the website with a link to the DAU public survey (Appendix A). This survey was passed out in hardcopy to attendees at the meeting and was available for download for 30 days via the DOW website.

Once completed, the entire draft plan (with no preferred alternative) was posted from July 21 to August 21, 2008 on the DOW website for additional public comments. Copies of the draft plan were made available to the USFS, BLM, Larimer County and Northern Larimer County HPP committee.

Issue Identification

There were no comments regarding PH-36 made at the public meeting. As this was a joint DAU meeting to also discuss PH-33 (Cherokee Park DAU) all of the specific questions from the attendees focused on PH-33. Of the eight attendees, two were bowhunters and both mentioned that they enjoyed hunting DAUs with statewide archery licenses. Twelve completed surveys were returned for PH-36 (see Appendix A). Six of 12 (50%) favored an increase in the PH-36 population. Four of 12 (33%) wanted current populations levels and 2 of 12 didn't know what population size they preferred. When asked about buck:doe ratios in PH-36, 6 of 11 (55%) respondents favored the status quo. Three of the 11 (27%) preferred a higher buck:doe ratio, with more mature males but a decreased chance of drawing a license. Two of 11 (18%) favored maximizing buck license numbers, similar to the current management.

All but two of the survey respondents were hunters who had hunted either PH-36 or PH-33 in the last 5 years. More than half were from the Fort Collins area (inside the DAU) while the remaining 7 lived outside the DAU.

MANAGEMENT ALTERNATIVES DEVELOPMENT

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Population Alternative #1: 400-500 pronghorn (25% reduction)

This alternative would provide a very small number of licenses each year, once the population had been reduced to objective. Preference points needed to draw both buck and doe licenses would increase.

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This option would represent a similar continuation of current license trends and required preference points. Given no other changes in herd status, this option would provide for hunting recreation and continue to manage for a stable herd.

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This alternative would represent the lowest level of bucks, and therefore buck maturity/horn size among the 3 options. This ratio would permit a small increase in buck hunting opportunity, but not enough to impact preference points dramatically.

Composition Alternative #2: 20-25 bucks:100 does (status quo)

This status quo alternative would represent the current level of buck hunting, buck maturity and horn size.

Composition Alternative #3: 25-30 bucks:100 does

This third alternative would require a reduction in the level of buck harvest to achieve this ratio increase. Given the small herd size, low buck harvest level

and low buck ratios during classification flights this ratio may be difficult to achieve in some years.

PREFERRED ALTERNATIVES

Population Objective

Population Alternative #2: 550-650 pronghorn (status quo)

The preferred alternative based on general public, external agency and staff comments is to maintain the current population level of 550-650 pronghorn (Alternative #2). Given the constraints of available habitat in the Laramie Valley, public access and current levels of satisfaction there was no compelling reason to change population management. This alternative will have the least impact on interesting stakeholders, as populations management will continue to focus on current herd levels.

Herd Composition-Sex Ratio Objective

Composition Alternative #2: 20-25 bucks:100 does (status quo)

The continuation of the current sex ratio objective was based on comments from the general public, external agencies and staff. Alternative #2 (20-25 bucks:100 does) will provide current levels of opportunity for mature bucks under existing license levels.

APPENDIX A.

Survey form used for public input during DAU outreach process. Results and % of respondents selecting each response inserted into survey.



OPPORTUNITY FOR PUBLIC COMMENT

ON PRONGHORN MANAGEMENT

In Data Analysis Units PH-36 and PH-33

(Pronghorn Game Management Units 7 & 8- Laramie River and 9 & 191- Cherokee Park)

Dear Interested Citizen:

Pronghorn herds in Colorado are managed at the Data Analysis Unit (DAU) level. The management of each herd is guided by a herd specific management plan called a DAU plan. DAU plans describe herd population and management histories, population objectives and management strategies for a 10 year period. The DAU planning process is the CDOW method for incorporating the concerns and desires of the public with the biological capabilities of a specific herd. Public input is, therefore, a very important part of the DAU planning process.

Wildlife managers have begun the process of updating the DAU plans for GMUs 7 & 8 (Laramie River herd) and 9 & 191 (Cherokee Park herd). The CDOW is seeking your input on the future management of these herds. The information you provide will help the CDOW develop objectives and management strategies for pronghorn in northern Larimer County.

Please complete the following survey and return it to:

COLORADO DIVISION OF WILDLIFE
Attn: Jennifer Churchill
NE Region Service Center
6060 Broadway
Denver, CO 80216

**Surveys must be received by the
CDOW by August 22, 2007**

The Laramie River pronghorn herd (PH-36) consists of Game Management Units (GMUs) 7 and 8. The Cherokee Park herd (PH-33) consists of GMUs 9 and 191. Both these DAUs are in northern Larimer County.

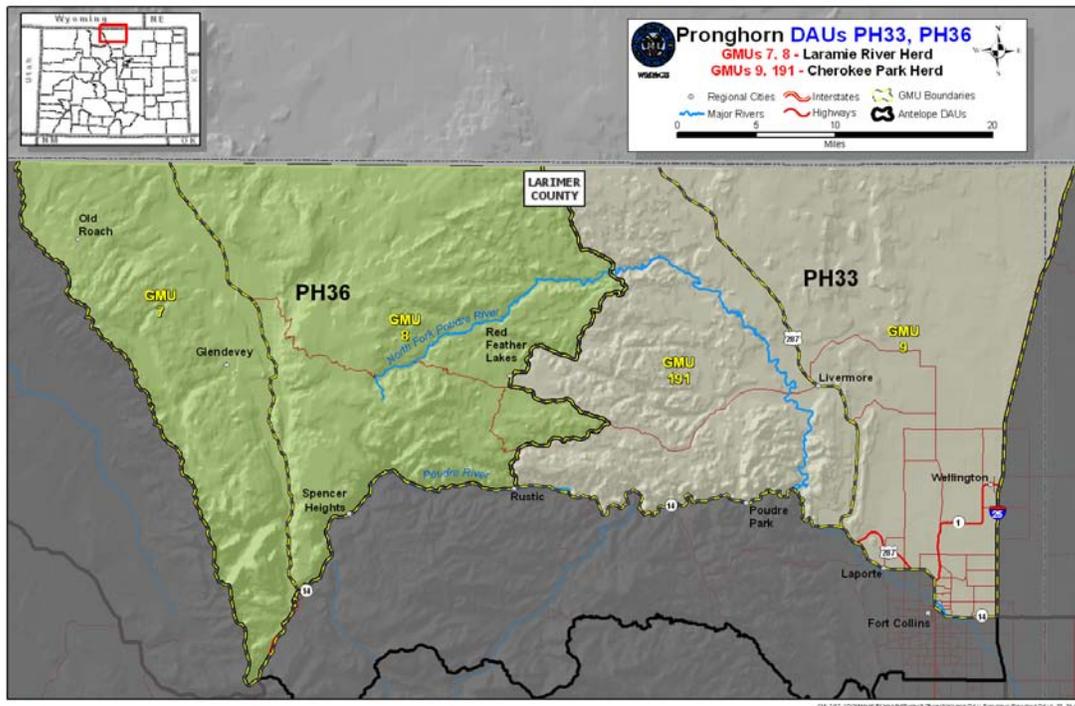


Figure 1: Pronghorn DAUs PH-33 and PH-36.

The Colorado Division of Wildlife manages big game herds to provide the public with hunting and viewing opportunities while minimizing conflicts and habitat damage. Often in order to do this, a balance is needed in both the total number of animals and the proportion of males (buck pronghorn) in the herd. Both management plans (DAU plans) will therefore, define 1) a population objective and 2) a male to female ratio objective (buck:doe-- see below).

Population Objectives: The Division strives to manage big game populations within both the biological and social carrying capacity of the herd. The biological carrying capacity is the number of animals that can be supported by the available habitat. The social carrying capacity is the number that will be tolerated by the people who are impacted by the herd. Both the PH-33 and PH-36 herds are currently at the previous long-term population objectives. When pronghorn populations are managed at levels below both the biological and social carrying capacity, people enjoy viewing, photographing and hunting while damage conflicts are minimized. As the number of pronghorn in an area increases, conflicts may arise due to auto/animal collisions and damage to agriculture, etc.

Question 1:

Would you like the number of **pronghorn in GMUs 7 & 8 (PH-36)** to:

- 6 of 12 (50%) INCREASE
- 4 of 12 (33%) SAME
- 2 of 12 (17%) Don't Know

_____ **Increase**

_____ **Stay the same**

_____ **Decrease**

_____ **Don't Know**

Why?

Would you like the number of **pronghorn in GMUs 9 & 191 (PH-33)** to:

- 6 of 13 (46%) Increase
- 3 of 13 (23%) Same
- 1 of 13 (8%) decrease
- 3 of 13 (23%) don't know

_____ **Increase**

_____ **Stay the same**

_____ **Decrease**

_____ **Don't Know**

Why?

Male:Female Ratio Objective: Pronghorn herds can be managed to maximize buck hunting opportunity (which creates higher hunter numbers) or to maximize the maturity of bucks available for hunting (typically less hunters afield), or some compromise between the two. If the herd is managed to maximize the quantity of hunting opportunity, more buck hunting licenses are made available and buck hunters will be able to hunt more frequently, with less preference points. However, this results in fewer total bucks in the herd (lower buck:doe ratio) as well as fewer large/mature bucks. If a herd is managed to maximize the mature, larger-horned bucks, fewer buck licenses are issued in order to increase the number of bucks in the population (higher buck:doe ratio). As a result, the size of males harvested will be larger, but the frequency that hunters are able to hunt bucks decreases and the preference points needed to draw will increase. Therefore a trade-off exists between the number of licenses (amount of opportunity) and the size and maturity of bucks available for hunters.

Question 2:

Currently, DAU PH-36 (Laramie River) is managed for a 25 buck:100 doe sex ratio objective. Last year a minimum of 3-4 preference points were needed to draw a rifle buck tag in PH-36.

For the purposes of pronghorn hunting, should GMUs 7 & 8 be managed for:

- 6 of 11 (55%) status quo
- 3 of 11 (27%) quality
- 2 of 11 (18%) quantity

- _____ Increased **quality** of hunting opportunity (higher buck to doe ratio, fewer hunters in the field, but more PP needed to draw a buck license)
- _____ Increased **quantity** of hunting opportunity (lower buck to doe ratio, more hunters in the field, and easier to draw buck licenses)
- _____ Status Quo (current ratio of 25:100 focuses on opportunity and low PP to draw)

Currently, DAU PH-33 (Cherokee Park) is managed for a 25 buck:100 doe sex ratio objective. Last year a minimum of 3 preference points were needed to draw a rifle buck tag in PH-33.

For the purposes of pronghorn hunting, should GMUs 9 & 191 be managed for:

- 6 of 13 (46%) status quo
- 5 of 13 (38%) quality
- 2 of 13 (15%) quantity

- _____ Increased **quality** of hunting opportunity (higher buck to doe ratio, fewer hunters in the field, but more PP needed to draw a buck license)
- _____ Maximum **quantity** of hunting opportunity (lower buck to doe ratio, more hunters in the field, and easier to draw buck licenses)
- _____ Status Quo (current ratio of 25:100 focuses on opportunity and low PP to draw)

Question 3:

Do you hunt pronghorn in GMUs 7, 8, 9 or 191? 13/15 had hunted

Have you hunted pronghorn or applied for a pronghorn license in the last 5 years? 14/15 were hunters

Question 4:

Where do you live (circle one from the options below)?

- 6 of 15 (40%) FC area
- 7 of 15 (47%) outside DAU
- 2 of 15 (13%) inside DAU

APPENDIX B

Comments received during 30-days draft DAU plan was posted on-line. Comments provided by agencies and other stakeholders.

1) US Forest Service Canyon Lakes Ranger District

File Code: 2610

Date: August 11, 2008

Mr. Mark Leslie
Area Wildlife Manager
Colorado Division of Wildlife
317 W. Prospect
Fort Collins, CO 80526

Dear Mark:

This letter is in response to CDOW's request for comments on the Draft Pronghorn Management Plans for Data Analysis Unit PH-33 (Cherokee Park Herd) and PH-36 (Laramie River Herd), which we received on July 29, 2008.

From information presented in the plans, it appears that none of the Canyon Lakes Ranger District overlaps with the Cherokee Park herd range, and that any occurrence of the Laramie River herd on District lands is limited and would include only the edge of the delineated overall range. It appears that no winter range or concentration areas for the Laramie River herd overlap District lands. Consequently, it is assumed that these 2 pronghorn herds and CDOW management of them has little to no effect on District lands, and we do not have any comment on the proposed population size and herd composition alternatives presented in the plans.

Thank you for the opportunity to comment on your Draft Pronghorn Management Plans for PH-33 and PH-36. Should you have questions regarding this letter, please contact myself (970-295-6711) or Dale Oberlag (970-295-6765).

Sincerely,

/S/ Ellen L. Hodges
ELLEN HODGES
District Ranger

2) Bureau of Land Management, Kremmling Office

Hello Mark. Thank you for the opportunity to review the Pronghorn Management Plan for the Laramie River Herd. After careful review, my recommendation would be to continue with the preferred alternative/status quo for both the population and sex ratio. This is largely due to the small size of the herd, large proportion of animals on private land, and especially due to the lack of conflicts over the last 18 years. The plan looks good overall!

If you have any questions, feel free to contact me and I look forward to working with you in the future!

**Sincerely,
Megan McGuire**