

# COTTONWOOD CREEK DEER MANAGEMENT PLAN

DATA ANALYSIS UNIT D-15

GAME MANAGEMENT UNITS

48, 481, 56, 561

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# Cottonwood Creek Deer Management Plan

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# DAU D-15 (Cottonwood Creek)

## EXECUTIVE SUMMARY

**GMUs: 48, 481, 56, and 561**  
**Land Ownership:** 981 sq. mi. (19% Private, 75% USFS, 4% BLM, 2% State of Colorado)  
**Posthunt Population:** 2009 Estimate 5,600;  
 Current Obj 8,200 – 10,700; Recommended Obj 6,300 – 7,700  
**Posthunt Sex Ratio (Bucks:100 Does):** 2009 Observed 25; 2009 Modeled 24;  
 Current Obj 30-35; Recommended Obj 30-35

Figure 1. Posthunt population estimate for D-15 since 1987.

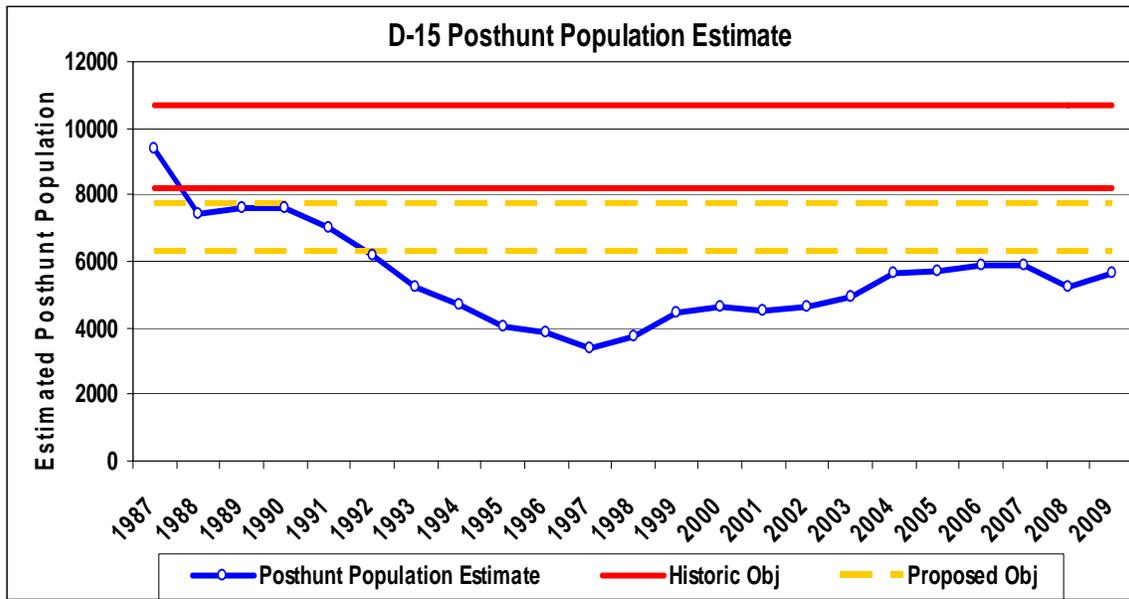


Figure 2. Observed versus model-predicted buck:100 doe ratios in D-15 since 1987.

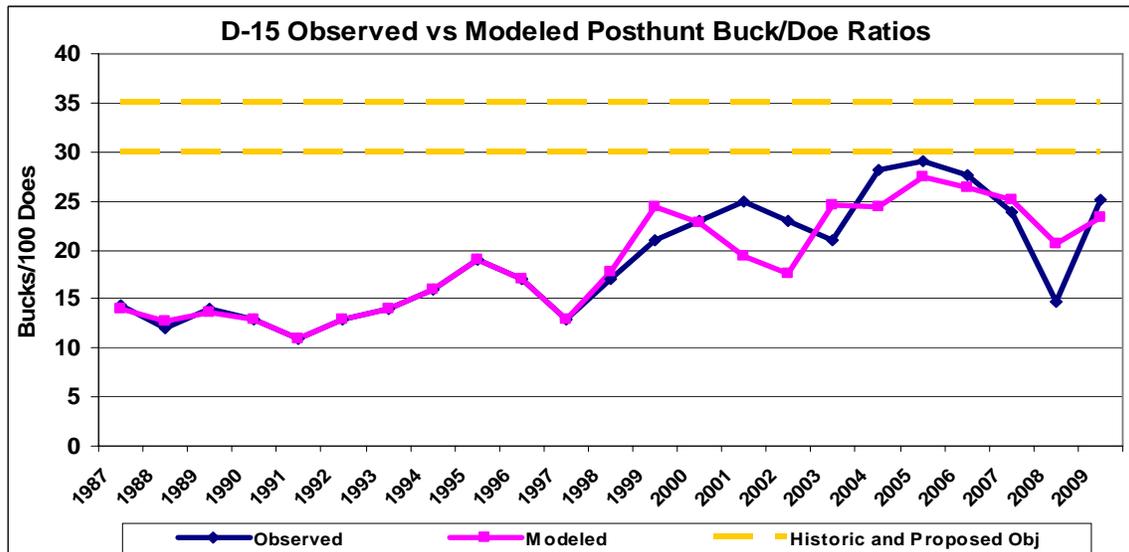
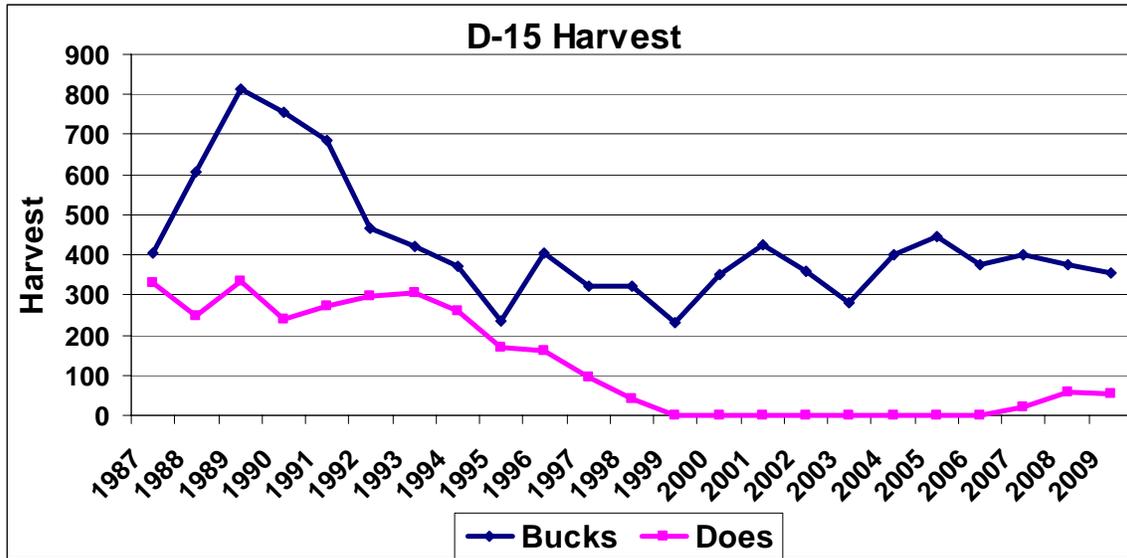


Figure 3. Harvest in D-15 since 1987.



### D-15 Background

Mule deer Data Analysis Unit (DAU) D-15 (Cottonwood Creek Herd) is located on the eastern edge of the Continental Divide in central Colorado and includes Game Management Units (GMUs) 48, 56, 481, and 561. Like many mule deer herds across the western United States, the D-15 herd reached peak population levels in the 1960s – 1970s. This population is estimated to have numbered nearly 10,000 animals as recently as the mid-1980s, before a population crash reduced the herd to less than 50% of that size in the mid-1990s. Buck harvest declined significantly in 1992 and remained low for several years. In 1999 hunting was restricted to bucks-only with a 33% reduction in buck hunters from the previous three year average. Since 2007 a small number of private-land-only (PLO) antlerless licenses have been allocated to alleviate game damage concerns on private lands, but there currently are no public antlerless licenses allocated in the DAU.

The previous posthunt population objective was set at 8,200 – 10,700 in 2005, congruent with population estimates achieved in the 1980s. However, since the previous DAU Plan was approved in 2005, CDOW has updated its mule deer population monitoring techniques and refined the D-15 population estimate. Since its low point in the mid 1990s following an apparent density-dependent population crash, this population has gradually rebounded and increased to a post-hunt 2009 estimate of nearly 6,000 deer. With the exception of a slight population decline associated with low survival rates during the substantial winter of 2007-08, the population trend for this herd remains positive. However, measured survival rates of radio-collared fawns and does in the adjacent D-16 DAU (Cripple Creek Deer Herd) have again begun to decline in recent years and local biologists have begun noticing apparent over-use of available winter range forage. Much of the available habitat has reached later-seral stages and appears heavily browsed. Game damage complaints are currently at reasonable levels, but have increased somewhat in recent years, particularly in and around the human population

centers of Salida and Buena Vista. Given these indicators, current populations may be approaching the general social and biological carrying capacity for deer in this DAU as current habitat conditions, human encroachment and development, and competition with elk and livestock begin to potentially create a density-dependent situation. As such, it is prudent to adjust our population objective and, thus, the DAU Plan. A population objective that allows for some continued population growth but is closer to the current estimate may be advisable and a limited amount of public doe hunting, in combination with the already allocated PLO licenses, may be an option to consider in following years. With the exception of a mild short-term decline following the winter of 2007-08, sex ratios have generally gradually increased as the population has grown in recent years and are nearing the current and recommended objective of 30-35 bucks:100 does.

## D-15 Management Alternatives

### Population Objective Alternatives:

*(Post-hunt 2009 estimate = 5,600)*

- 1) 5,400 – 6,600 (This alternative would stabilize population at its current size and limit currently observed growth of this herd by implementing increased doe harvest).
- 2) 6,300 – 7,700 (**Preferred Alternative:** Allows herd to continue to grow slightly, while still allowing CDOW to manage for a stable population of 7,000  $\pm$  10%. This alternative allows CDOW to implement doe harvest before over-use of winter range and game damage issues become problematic).
- 3) 8,200 – 10,700 (Status Quo; approved in 2005 based on previous population model estimates. This objective is likely no longer biologically or socially sustainable)

### Sex Ratio Objective Alternatives:

*(Post-hunt 2009 observed = 25; modeled = 24)*

- 1) 25-30 bucks:100 does (Likely would require an increase in buck license numbers, as sex ratios are trending upwards out of this range)
- 2) 30-35 bucks:100 does (**Status Quo and Preferred Alternative:** Sex ratios in the D-15 herd are currently trending upwards towards this range. These ratios are likely reasonable to attain, while maintaining hunter opportunity and quality)
- 3) 35-40 bucks:100 does (This alternative would likely require a substantial decrease in buck license numbers and hunter opportunity)

Three posthunt population objectives were proposed for D-15 in 2010 to update the 2005 Plan: 1) A reduction in the population objective from the 8,200 – 10,700 approved in 2005 to a new objective of 6,300 – 7,700 consistent with current estimates of social and biological carrying capacity; 2) a further reduction to 5,400 – 6,600; and 3) the status quo of 8,200 – 10,700 approved in 2005. CDOW does not recommend managing

for over 10,700 deer at this time because of current habitat availability and potential human/deer conflict concerns that would be anticipated. The recommended alternative is for a range of 6,300 – 7,700 (7,000 +/- 10%) to allow the population to continue to increase somewhat from its current level while allowing limited amounts of public and private land doe hunting opportunity as this herd nears its expected current biological and social carrying capacity. Any significant increase or decrease in future estimated winter range carrying capacity of the DAU or human-wildlife conflicts will be considered and future population objectives will be adjusted accordingly.

Sex ratio alternatives included 1) 25 to 30 bucks per 100 does; 2) 30 to 35 bucks per 100 does (current objective); and 3) 35 to 40 bucks per 100 does. The recommended alternative is to stay at the current objective of 30 to 35 which the population is approaching (observed ratios of 25/100 in posthunt 2009 counts and trending upwards).

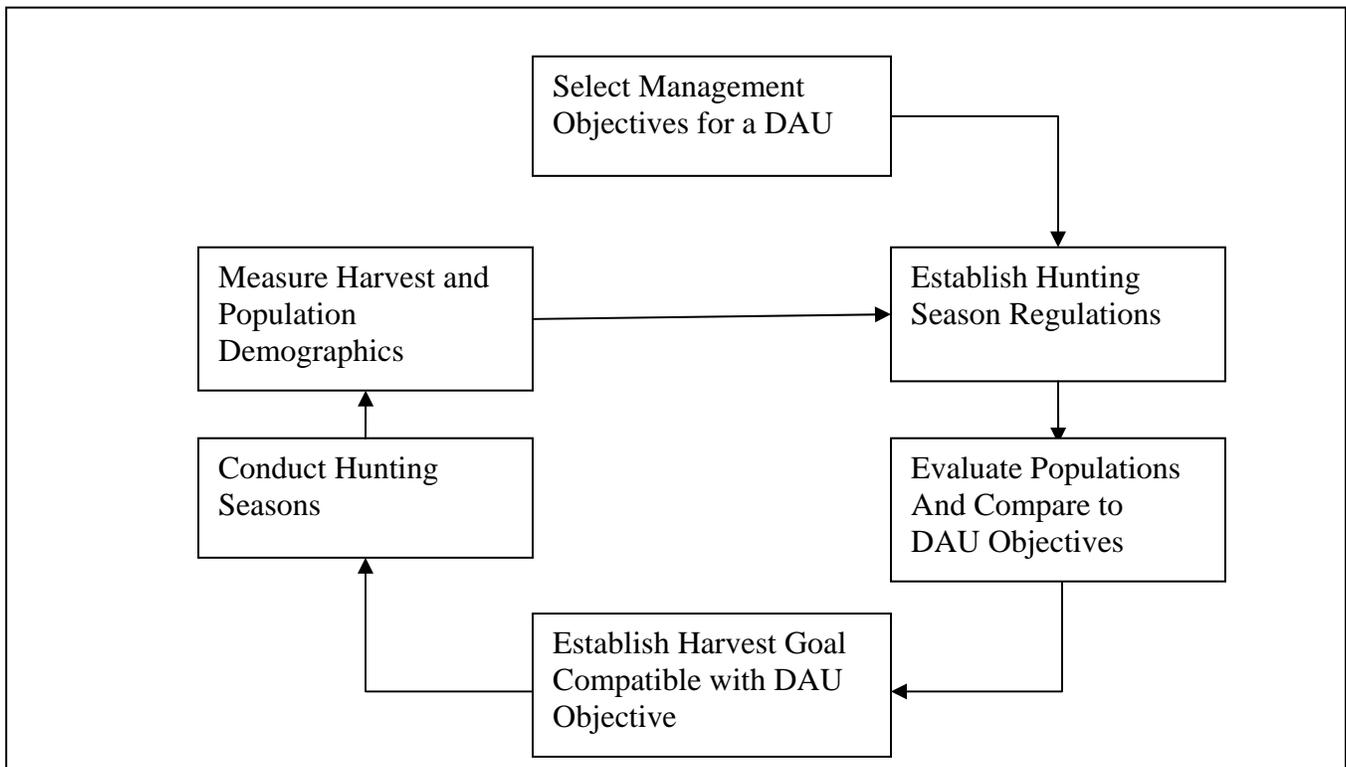
*This DAU plan was approved by the Colorado Wildlife Commission on January 5, 2011*

## INTRODUCTION AND PURPOSE

The Colorado Division of Wildlife (CDOW) 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 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 4). Big game populations are managed to achieve population and sex ratio objectives established for data analysis units (DAUs). Each DAU generally represents a geographically discrete big game population. The DAU planning process establishes herd objectives that support and accomplish the broader objectives of the CDOW's Strategic Plan.

### COLORADO'S BIG GAME MANAGEMENT BY OBJECTIVE PROCESS

Figure 4. Management by objective process used by the CDOW to manage big game populations on a DAU basis.



The DAU planning process incorporates public input, habitat capabilities, and herd considerations into management objectives for each of Colorado's big game herds. The general public, sportsmen, federal land management agencies, landowners, and agricultural interests are involved in determining DAU plan objectives through questionnaires, public meetings, comments on draft plans, and input to the Colorado Wildlife Commission. Limited license numbers and season recommendations result from this process.

Each DAU is managed to meet herd objectives that are established through the DAU planning process. The DAU plan establishes post-hunt herd objectives for the size and structure of the population. Once the Wildlife Commission has approved DAU objectives, they are compared with modeled population estimates. Model inputs include:

- Harvest estimates determined by hunter surveys
- Survival rates estimated by annually radio collaring does and fawns
- Post-hunt sex and age ratios determined by winter aerial surveys
- Estimated wounding loss, illegal kill, and survival rates based on field observations and telemetry studies.

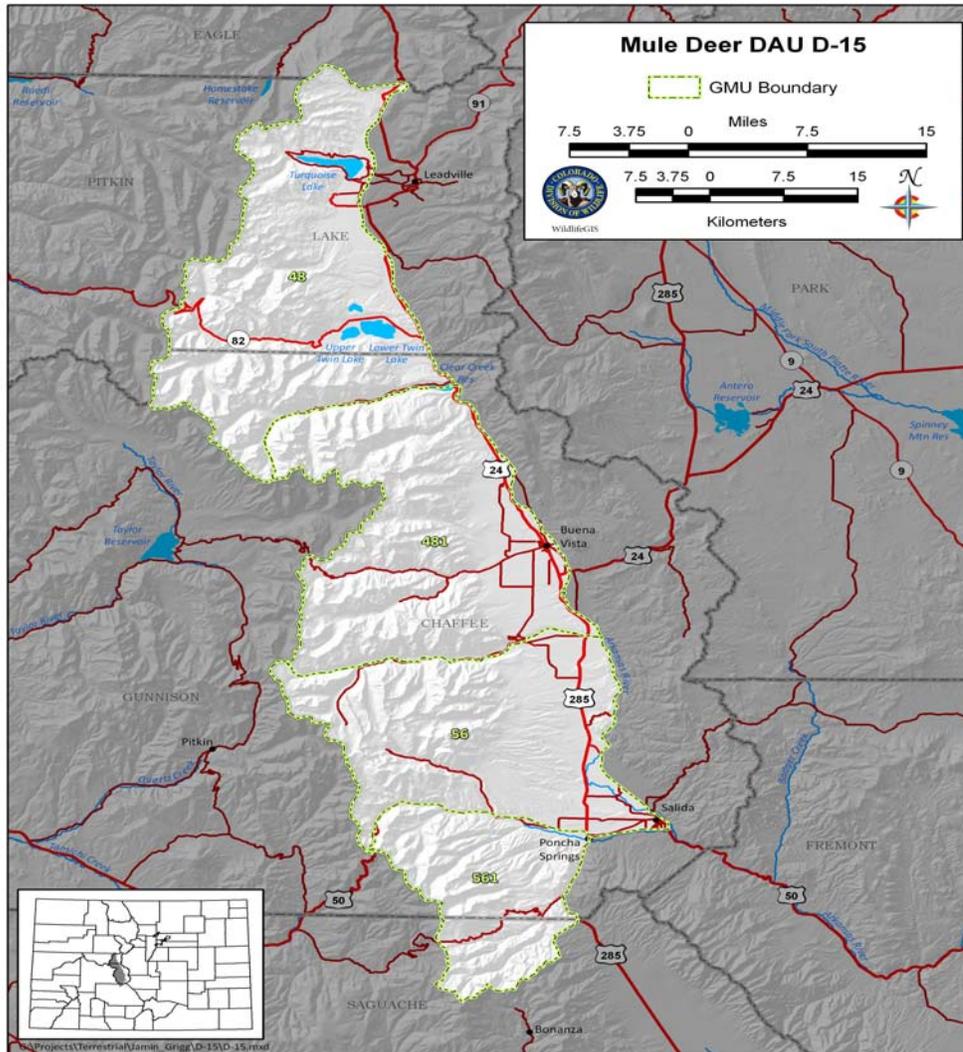
A computer model calculates the population's size and structure based on the most accurate information available at the time. The final step in the process is to calculate harvest recommendations that will align population estimates with the herd objective.

# Description of Data Analysis Unit D-15

## Location

The Cottonwood Creek deer data analysis unit (DAU) encompasses an area of 981 square miles in central Colorado, 60 miles west of Denver and Colorado Springs (Figure 5). It includes game management units 48, 481, 56, and 561. The DAU is bounded on the north and west by the Continental Divide, on the east by the Arkansas River and on the south by the divide between the Arkansas and Rio Grande river drainages and the Chaffee/Fremont county line. The DAU includes the western two thirds of Lake and Chaffee counties and a small part of northern Saguache County.

Figure 5. Data Analysis Unit D-15 (Cottonwood Creek deer herd).



## Physiography

The area comprises the eastern slope of the Continental Divide east to the Arkansas River from Tennessee Pass to Poncha Pass. The four game management units descend steeply, from the top of the Sawatch Range to the broad flat river valley. Elevations range from the highest point in Colorado, 14,433 feet at Mount Elbert, to the point that the Arkansas River leaves the DAU near Salida, 6,800 feet above sea level. Side drainages generally run west to east and terminate at the Arkansas River at the eastern boundary of the DAU.

## Vegetation

The western border of the DAU is defined by alpine tundra (above 11,500') and is characterized by sedges, forbs and stunted willows. The terrain then descends into subalpine forest (9,000'-11,500') dominated by subalpine fir, Engelmann spruce, aspen and bristlecone pine. The montane forest below (5,600'-9,000') contains primarily ponderosa pine, Douglas-fir, lodgepole pine, and aspen. Below that are semidesert shrubland areas (7,000'-8,000') supporting sagebrush, rabbitbrush, mountain mahogany, grasses and numerous forbs. Near the valley bottom, the pinon-juniper woodlands (6,800'-8,000') contain primarily pinon pine, juniper, mountain mahogany, rabbitbrush, forbs and cactus. The riparian ecosystems extend along all of the drainages and include narrowleaf cottonwood, willow, cinquefoil, current and forbs and grasses. Agricultural croplands in the DAU consist mainly of native grass and alfalfa hay fields in the Arkansas River valley bottom and along tributaries. Appendix 2 indicates the acres of each vegetative type found in the DAU and approximate forage production for each type.

## Climate

As with all of mountainous Colorado, the climate varies significantly with season, elevation and aspect. Elevations below 7,500 feet are usually hot and dry in the summer and generally remain snowfree during most of the winter. Elevations between 7,500 feet and 8,500 feet have slightly cooler and wetter summers with persistent snow cover during the winter. South facing slopes normally remain open or have minimal snow cover throughout the winter. Areas above 8,500 feet elevation are generally much cooler and wetter during the summers and snow-covered throughout winter except for windswept ridges above timberline. Annual precipitation varies from 9 inches per year on the valley floor to over 25 inches along the Continental Divide. Snowfall accounts for the majority of the precipitation in the DAU with thunderstorms adding significant localized volumes in the summer.

Average daily high temperatures range from 41 degrees in winter to 82 degrees in summer, in the Salida area. Average lows range from 12 degrees in winter to 46 degrees in summer. In Leadville, daily high temperatures range from 30 degrees in winter to 67 degrees in summer while daily low temperatures average 0 degrees in the winter and 36 degrees in the summer.

## Land Status

The Cottonwood Creek deer DAU encompasses 981 square miles (Figures 6 and 7). Private lands total 184 square miles which is 19% of the DAU. The higher elevation portions of the DAU are in San Isabel National Forest divided between the Leadville and Salida Ranger Districts. Forest Service lands total 706 square miles and comprise 74% of the DAU. Lower elevation public lands, managed by the Royal Gorge field office of the Bureau of Land Management, are generally scattered between the lower edge of the USFS lands and private lands. BLM lands total 35 square miles which is 4% of the DAU. Occasional parcels of State Trust Lands are dispersed through the private land portion of the DAU totaling 21 square miles (2% of the DAU).

Figure 6. Land Ownership within Data Analysis Unit D-15 (Cottonwood Creek deer herd).

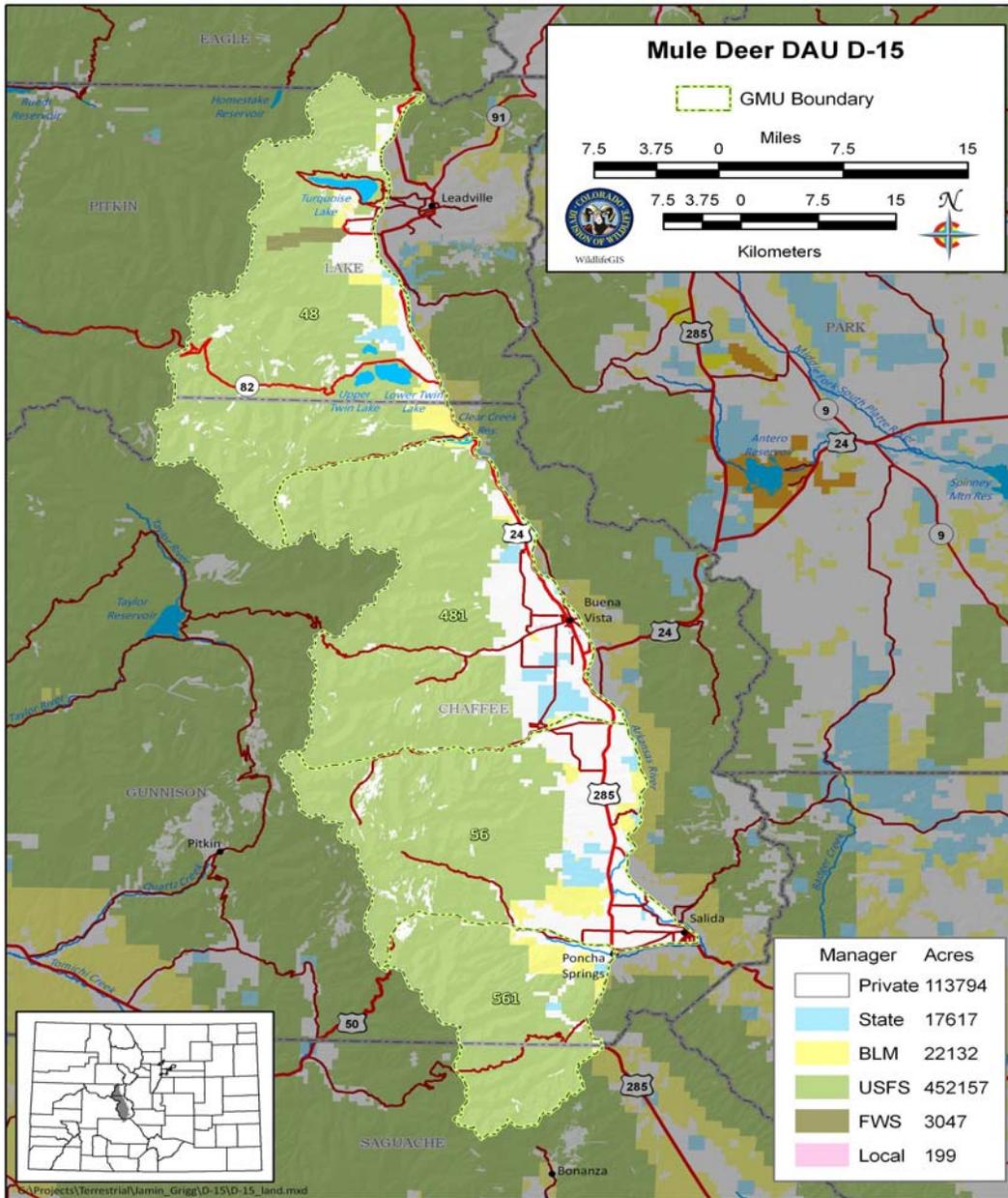


Figure 7. Land ownership within D-15 (square miles, percent of GMU).

GMU	Private	% Private	USFS	% USFS	BLM	% BLM	Colorado	% Colo.
48	41	14%	245	81%	9	3%	2	1%
481	60	21%	210	74%	3	1%	11	4%
56	73	31%	143	60%	15	6%	7	3%
561	11	8%	107	84%	8	6%	1	1%
<b>Total DAU</b>	<b>185</b>	<b>19%</b>	<b>705</b>	<b>74%</b>	<b>35</b>	<b>4%</b>	<b>21</b>	<b>2%</b>

## Land Use

Land use in this DAU has changed significantly in the last 20 years. Multiple use of the public lands in the DAU include heavy recreational use of both USFS and BLM lands throughout the year. Additionally, much of the public lands have seasonal grazing allotments. There is a small amount of logging, primarily for disease control or salvage timber sales of beetle killed trees or for habitat improvement for deer and elk. Mining has been a significant historic use of public and private lands but has decreased to a very low level of activity at the current time. Private lands are generally in agricultural production, either for grazing or hay production; however, there has been a steady and accelerating rate of conversion from agricultural status to subdivision for residential development. Much of the important winter range for this deer herd has already been converted or is vulnerable to this change in land use.

## Deer Distribution

Deer occupy all of the DAU at some time of the year. Densities are low in the lower elevation habitats during the summer when most deer move up to traditional fawning and summering areas in higher elevation habitats. During the winter, deer move to lower elevation winter ranges as snow accumulates on the higher elevations and north slopes. Approximately one third of the DAU is winter range in normal winters with some concentration occurring in preferred habitats (Figure 8). During severe winter periods, habitat utilization is reduced to approximately a quarter of the size of the summer range. Appendix 1 has habitat maps for the overall range and three categories of winter range.

In recent years an increasing number of deer are remaining in the urban areas of Buena Vista and Salida in response to the high quality forage available there in fertilized and irrigated yards and gardens. Additionally, restrictions on the discharge of firearms within city limits and closure by covenants in most subdivisions have created de facto refuges where resident deer populations are not removed or disturbed. This situation has led to some increase in deer/auto accidents and complaints about foraging impacts on landscaping and garden plants.

Figure 8. D-15 habitat categories (square miles).

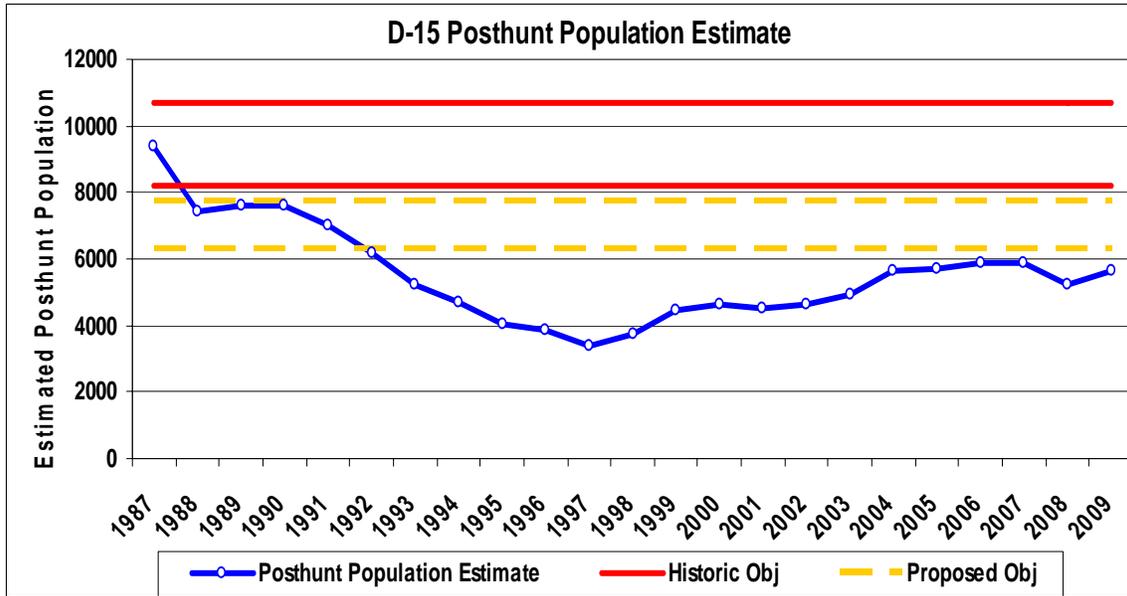
<b>GMU</b>	<b>Overall Range</b>	<b>Winter Range</b>	<b>Severe Winter Range</b>	<b>Winter Concentration Area</b>
<b>48</b>	299.8	35.5	19.0	21.9
<b>481</b>	282.4	94.0	54.8	19.3
<b>56</b>	241.4	129.9	106.0	109.7
<b>561</b>	127.9	51.2	21.3	36.9
<b>DAU Total</b>	951.5	310.6	201.1	187.8

## Herd Management

Management of the deer herd in D-15 is conducted like most herds in Colorado. Hunting season regulations and license numbers are set based on the current estimated post-hunt population and the long term population and sex ratio objectives established by the Wildlife Commission in this DAU Plan. Those population objectives are considered to be the most reasonable goal for this herd based on the quantity and quality of available habitat for deer, the recreational, economic, and political desires of the people of the state, the level of conflicts between the deer herd and agricultural producers in the area, and the comments of land management agencies.

The post-season population size (Figure 9) is estimated each winter from a computer model utilizing annual harvest data gathered by CDOW, age and sex ratio samples obtained through winter aerial surveys conducted by CDOW personnel, survival rates for does and fawns measured annually using radio collars, and population trend estimates based on all of the above data. Estimating numbers of free ranging deer over this large of a geographic area is an extremely difficult and approximate science. Thus the population objectives considered in this plan are given as ranges to reflect the fact that each year's population estimate may vary according to changes in hunting and survey conditions, survival rates, and winter snow conditions.

Figure 9. Posthunt population estimate for D-15 since 1987.



Prior to 1999 this DAU was hunted with unlimited, over-the-counter buck licenses and a limited number of antlerless licenses. Like mule deer herds throughout the western United States, the population increased to a high point in the early 1960s and then declined in the early 1970s. It recovered to an estimated high of 9,700 in the late 1980s and then declined again in the early 1990s. Since that time it has been slowly recovering to its current estimate of nearly 6,000 deer.

Deer populations tend to naturally cycle as a result of habitat condition/availability and density-dependent survival rates associated with carrying capacity of the landscape. As the general habitat trend since the early 1900s has been towards more stability and approaching climax vegetative conditions, combined with the decline in agricultural forage available during the mid-1900s, the ability of the habitat to support deer has declined. The primary causes of this trend in habitat conditions are thought to result from the elimination of wildfire from the forests of the state, the increasing forest cover in formerly open grassland and shrubland habitats, and the improved soil and range management that has resulted in more stable grasslands, to the detriment of the forb and shrub components of the habitat. These components are important parts of deer diets.

## Post Season Herd Composition

Herd composition data has been acquired through aerial surveys conducted by CDOW personnel each winter. Fawn:100 doe ratios have averaged 59.8 over the last 5 years (Figure 10). Buck:100 doe ratios have steadily increased since buck licenses became limited in 1999 and are approaching the herd objective of 30-35

bucks per 100 does (Figure 11). Prior to 1999 buck hunting was unlimited and the DAU had a much higher buck harvest rate that kept the sex ratio in the teens.

Figure 10. Post-hunt fawn;100 doe ratios in D-15.

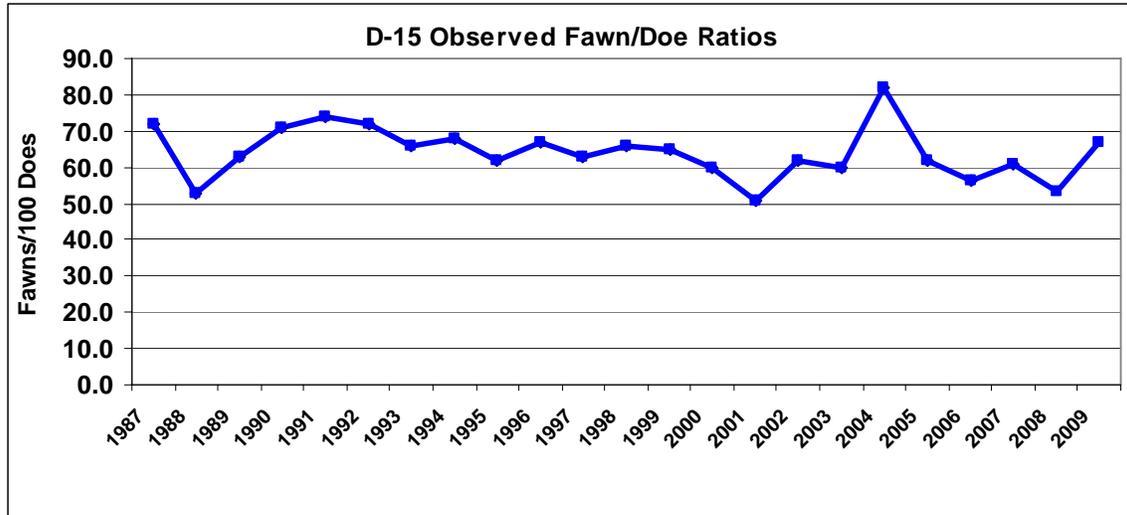
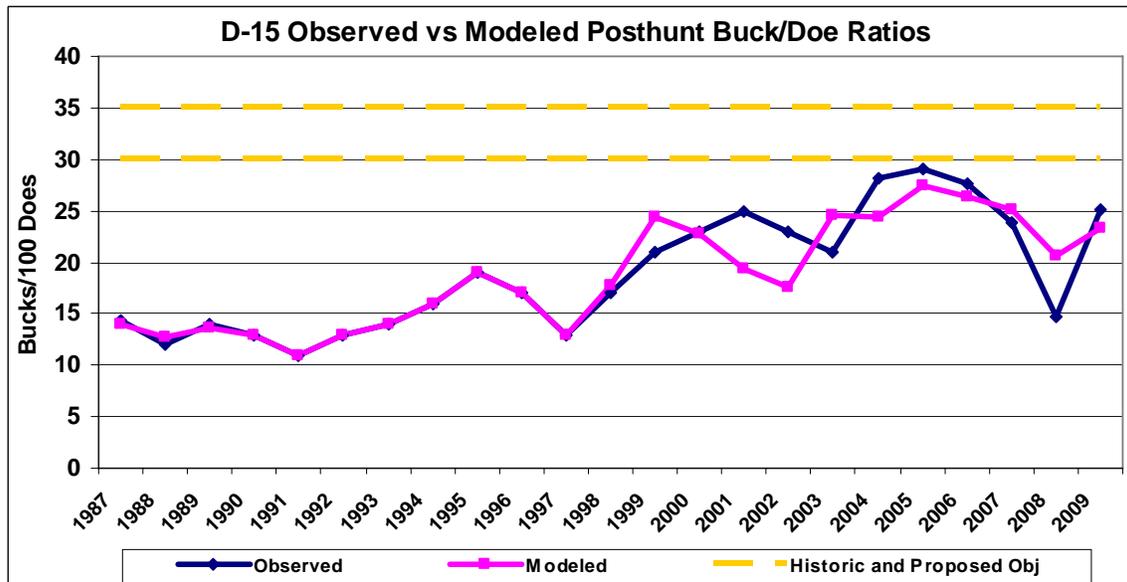


Figure 11. Post-hunt buck:100 doe ratios in D-15.

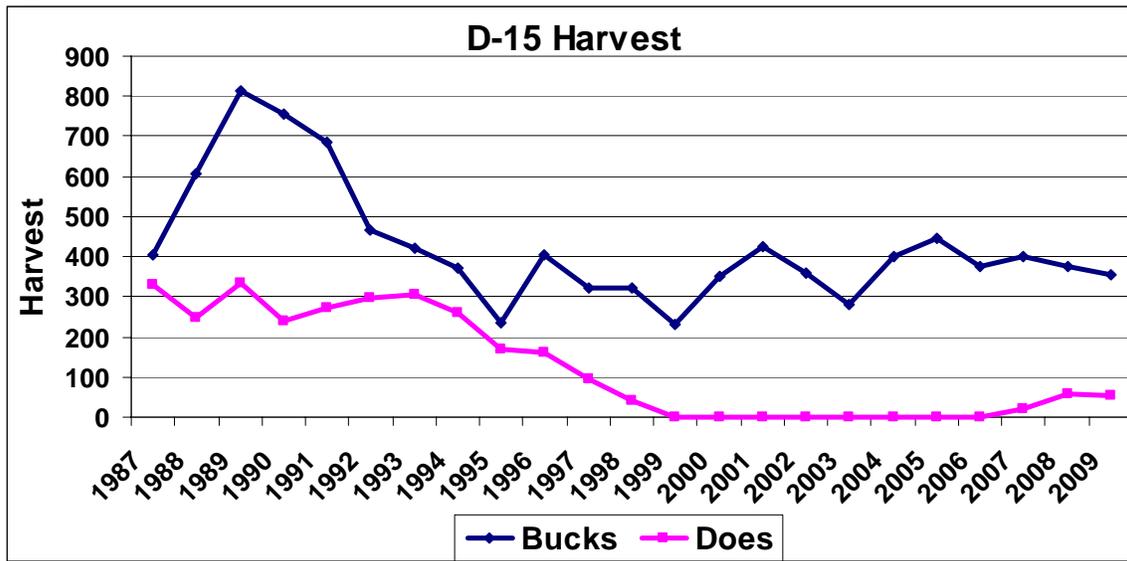


## Harvest

Harvest in D-15 has varied as the population size has cycled in recent history. Figure 12 shows the total harvest for each age and sex component since the 1980s. In 1999 the DAU went to antlered-only hunting and the number of buck

hunters was reduced by one third from the average number of buck hunters in the previous three years. Since that time buck ratios have steadily increased and are approaching 30 bucks per 100 does. As sex ratios have increased and hunter numbers have decreased hunter success has increased. Beginning in 2007, some private-land-only doe licenses have been allocated, but no public doe licenses are currently allocated in the DAU. However, as this population nears objective, public doe licenses may be instituted to increase hunter opportunity and lessen density-dependent impacts to survival rates as this population nears carrying capacity.

Figure 12. Harvest in D-15 since 1987.



## Current Herd Management

The current post-hunt objectives for D-15 are 8,200 – 10,700 for population size and a buck:100 doe ratio of 30-35. These provisional objectives have been in effect since 2005 and are based on peak population sizes observed in the 1980s. The 2009 post-hunt population estimate is nearly 6,000 deer and increasing. However, measured recent declines in survival rates in the adjacent D-16 DAU (Cripple Creek Deer Herd) and observed heavy use of available winter range may indicate this population is potentially nearing its social and biological carrying capacity and thus CDOW advises altering the population objective to reflect current habitat capacities and social tolerance. The population has increased steadily since crashing in the mid-1990s, but the current objective may be unreasonable given current conditions and adjusting the objective may help prevent another density-dependent population crash.

The observed sex ratio has been increasing from approximately 13 bucks:100 does in 1997 and is nearing the objective of 30-35 bucks:100 does. CDOW does not recommend a change to sex ratio objectives at this time.

## Current Management Concerns

The accurate determination of current carrying capacity is always a large and important challenge for wildlife managers. Aerial surveys and demographic data, combined with general field observations, indicate an upward trend for the D-15 population but it is the professional belief of local biologists and district managers that this population is nearing its carrying capacity given current habitat quality and availability. This concern regarding carrying capacity and density dependence may be demonstrated in a general downward trend in fawn and doe survival estimates in the neighboring D-16 (Cripple Creek) survival monitoring area, where measured fawn survival rates have declined from an average of 83% from 2002 – 2008 to an average of 62% from 2009 – 2010, while doe survival rates have declined from an average of 82% to an average of 72% during the same time period. There has been a significant loss of deer habitat due to changes in land use in this DAU. Most of the conversion from agricultural to residential use has occurred in winter and transitional ranges which are critical in determining the carrying capacity of this area. While increasing, this herd may no longer have the habitat conditions necessary to reach population levels observed in the 1960s or even the 1980s. Habitat loss, changes in habitat seral stages and productiveness, increased competition with elk, and agricultural use and concerns are all factors influencing carrying capacity of this herd.

In a few localized areas, high deer densities are beginning to cause some conflicts, though game damage conflicts remain minimal and generally related to elk rather than deer. However, in the towns of Buena Vista and Salida, and the agricultural areas around those towns, deer densities have reached higher levels than throughout the rest of the DAU and conflicts with agricultural production, landscaping, and vegetable gardens are beginning to be of issue.

## Public Involvement

The draft DAU Plan was posted on the CDOW website in September 2010 for a 30-day public comment period, with questionnaire attached. A public DAU planning meeting was conducted in Buena Vista in June, 2010 and was attended by 13 participants, along with 6 CDOW personnel. Both the D-15 deer herd and overlapping E-17 elk herd were discussed, as both DAU Plans are simultaneously being revised. Herd history and management strategies were presented and a basic questionnaire about population and sex ratio alternatives was handed out. Because this was not a random survey, results may not represent all interest groups or even adequately represent specific interest groups. Survey responses

do provide opinions of those able to attend the meetings (Appendix I). A similar presentation was made to the Arkansas River Habitat Partnership Program committee in July, 2010 and copies of the draft DAU Plan and management alternatives were presented to Chaffee and Lake County Commissioners and local USFS and BLM offices. Comments from the HPP Committee, County Commissioners, and federal land agencies were supportive of the CDOW recommendations for herd size and sex ratios.

## Development of Alternatives

Three population objective alternatives and three sex ratio alternatives were considered for D-15. The population objectives considered included: 1) the status quo population objective of 8,200 – 10,700 approved in 2005 based off of an outdated population model; 2) the recommended objective of 6,300 – 7,700 animals; and 3) a further reduction in the population objective to 5,400 – 6,600. The same sex ratio alternatives were considered in 2010 as in 2005 and CDOW does not recommend a change to the sex ratio objective of 30-35 bucks:100 does. A public meeting was held in June 2010 to discuss these alternatives and provide CDOW rationale and justification. The Draft Plan was posted on the CDOW webpage for a 30-day public comment period. Previously, two public meetings were held to discuss this plan and the alternatives in 2001 and two meetings in September, 2005. Additionally, a mail survey was sent to sportsmen, landowners and businesses in the area in 2001.

## Population Alternative Discussion

### 1) 5,400 – 6,600

This alternative would stabilize population at its current size and limit currently observed growth of this herd by implementing increased doe harvest. CDOW believes the D-15 herd can maintain population numbers slightly above this range.

### 2) 6,300 – 7,700 (**Preferred Alternative**).

Recent refinements to population modeling techniques have decreased the estimated number of deer existing in the D-15 herd, and thus it is prudent to adjust the population objective accordingly. This alternative allows the D-15 herd to continue to grow slightly, while still allowing CDOW to manage for a stable population of 7,000  $\pm$  10%. This alternative allows CDOW to implement doe harvest before over-use of winter range and game damage issues become problematic.

3) 8,200 – 10,700 (Status Quo; approved in 2005 based on previous population model estimates)

CDOW and cooperating agencies believe this objective is likely no longer biologically or socially sustainable. It is expected that if the herd is still capable of reaching this population size, it would result in over-use of winter range, potential negative density-dependent effects to survival rates, and socially-intolerable levels of game damage conflicts.

## Sex Ratio Alternative Discussion

1) 25-30 bucks:100 does

This alternative likely would require an increase in buck license numbers, as sex ratios are trending upwards out of this range. Most public input supports buck:doe ratios above this level.

2) 30-35 bucks:100 does (Status Quo and Preferred Alternative; approved in 2005)

Sex ratios in the D-15 herd are currently trending upwards towards this range. These ratios are likely reasonable to attain, while maintaining hunter opportunity and quality. CDOW does not recommend a change in the sex ratio objective at this time.

3) 35-40 bucks:100 does

This alternative would likely require a substantial decrease in buck license numbers and hunter opportunity.

**Appendix 1. Public survey results from DAU planning public meeting (13 attendees, plus one survey received though mail) – June, 2010.**

**DAUs D-15 and E-17 Management Plans Public Survey**

**Name (Optional):**

1) Which group(s) best represents your interests in deer and elk management in this area?

100% hunting       8% agricultural       commercial (guide/outfitter)  
 viewing opportunities/non-consumptive       agency personnel (specify)  
 business owner       8% other (specify) (Landowner)

2) **Agriculture Producers** – Have you had problems with deer and/or elk in the past five years?

Describe problem: **See Comments Below**

What species were involved \_\_\_\_\_ Number of animals \_\_\_\_\_

Was DOW contacted? Yes / No      Actions taken by DOW \_\_\_\_\_

Is this a continued or growing problem? No/Yes

3) **Hunters**

What is your satisfaction with **elk** hunting in GMUs 48, 56, 481, 561?

0% Poor    58% Good    42% Excellent

What is your satisfaction with **deer** hunting in GMUs 48, 56, 481, 561?

21% Poor    64% Good    15% Excellent

Circle which GMU you usually hunt:    7% 48    14% 56    72% 481    7% 561

What is most important to you? Mark your **TOP TWO** choices.

- \_25%\_ hunting every year
- \_25%\_ hunting quality with fewer hunters
- \_18%\_ high harvest success rates
- \_15%\_ potential to harvest mature animals
- \_17%\_ hunting for meat
- other (specify) \_\_\_\_\_

4) Would you like the number of **elk** in GMUs 48, 56, 481, and 561 to:

- \_57%\_ Increase
- \_29%\_ Stay the same
- \_7%\_ Decrease
- \_7%\_ Don't know

Why?

5) Would you like the number of **deer** in GMUs 48, 56, 481, and 561 to:

- \_28%\_ Increase
- \_57%\_ Stay the same
- \_15%\_ Decrease
- \_0%\_ Don't know

Why?

6) The number of bucks maintained in a population is related to levels of hunting opportunity. For the purposes of **deer** hunting, should GMUs 48, 56, 481, and 561 be managed for:

\_29%\_ Increased buck to doe ratio (increased numbers of bucks but it would become more difficult to draw a license).

\_64%\_ Same buck to doe ratio (similar numbers of bucks and opportunity to draw a license as we now have).

\_7%\_ Decreased buck to doe ratio (fewer numbers of bucks but easier to draw a licenses than current).

7) Similarly, the number of bulls maintained in a population is related to levels of hunting opportunity. For the purposes of **elk** hunting, should GMUs 48, 56, 481, and 561 be managed for:

\_36%\_Increased bull to cow ratio (increased numbers of bulls but it would become more difficult to draw a license).

\_57%\_Same bull to cow ratio (similar numbers of bulls and opportunity to draw a license as we now have).

\_7%\_Decreased bull to cow ratio (fewer numbers of bulls but easier to draw a licenses than current).

**Please provide any additional comments on the future management of DAUs D-15 or E-17 below:**

**Question 2:**

As many as 30-100 elk getting into haystacks and grazing spring feed for cattle. DOW has implemented dispersal hunts in the past.

I have a rural home 3 miles NW of Buena Vista. I am overrun with as many as 60-100 deer on my 2 acres and they have destroyed trees and shrubs I am trying to establish. DOW has not been contacted yet about the problem.

**Question 4:**

The elk pop in this area appears to be adequate (status quo).

The elk spend winter months on private lands (decrease).

More elk would disperse hunters across a wider area (increase).

Want more elk to choose from (increase).

Want more mature bulls (increase).

More elk would increase hunter success (increase).

CDOW doing a good job with current elk management (status quo).

Increased elk pop would increase chance to draw a license (increase).

Current management seems to be working (status quo).

Increased elk pop would increase chance to draw and success rates. Also just enjoy seeing them (increase).

**Question 5:**

Seems to be a healthy pop at current numbers (status quo).

Increased deer pop would increase chance to draw and success rates. Also just enjoy seeing them (increase).

Increased deer pop would increase chance to draw a license (increase).

Too many deer being hit by cars (decrease).

Deer herd seems to be a good size, but mostly on private land during hunting seasons (status quo).

The deer pop in this area has exploded in recent years. As more and more rural subdivisions are developed it removes those areas from hunting. Harvest is reduced, the deer population grows, and the size and quality of the animals diminishes (decrease).

I'd like to see more deer on public lands. They are all over the place at low elevation, but you don't see enough of them where they can be hunted during the regular rifle seasons. Not sure what can be done to alter distribution, other than to lay off the doe hunting on public land animals. I'm guessing that very few fawns born in the private lands would ever find reason to leave them. Therefore, in order to encourage more public land deer, I wouldn't shoot the public land does. If you want to offer doe tags, please keep them to private land only tags (Increase).

**Question 6:**

Would like more mature bucks (increase).

Decrease population level and increase buck quality.

**Question 7:**

CDOW doing a good job with current elk management (status quo).

Current bull ratios are good (status quo).

Would like more mature bulls (increase).

**General Comments:**

I believe the purpose of management is to ensure the health of the herd and a high quality of sportsmanship. A small increase in trophy animals would be desirable.

CDOW is doing a good job with current management. Please maintain your current high quality management of these herds.

Elk tend to migrate through this area and don't stay in any one area for long. The deer are the opposite and stay in one area for extended periods. The area I live in is a rural subdivision that is closed to hunting, like many others in the area. As a result, the deer are runts with no vigor or quality. The only option appears to me to be fencing my entire property with a deer fence if the landscaping is to have any chance at survival. I would rather not do that, but with the current deer population around the subdivisions I may have no choice.

Too many deer around Buena Vista. Need more doe licenses.

I'd like to see a high country mule deer hunt offered. I know it isn't a useful herd management tool, but it might be a nice recreational opportunity.

**If returning by mail, send to:**

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