

# **NORTH TABLELANDS DEER HERD MANAGEMENT PLAN**

## **DATA ANALYSIS UNIT D-5**

**Game Management Units  
87, 88, 89, 90, & 95**



**November 2007**

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## DAU D-5 (NORTH TABLELANDS) EXECUTIVE SUMMARY

**GMU's:** 87, 88, 89, 90, and 95

**Land Ownership:** 92% Private, 8% Public

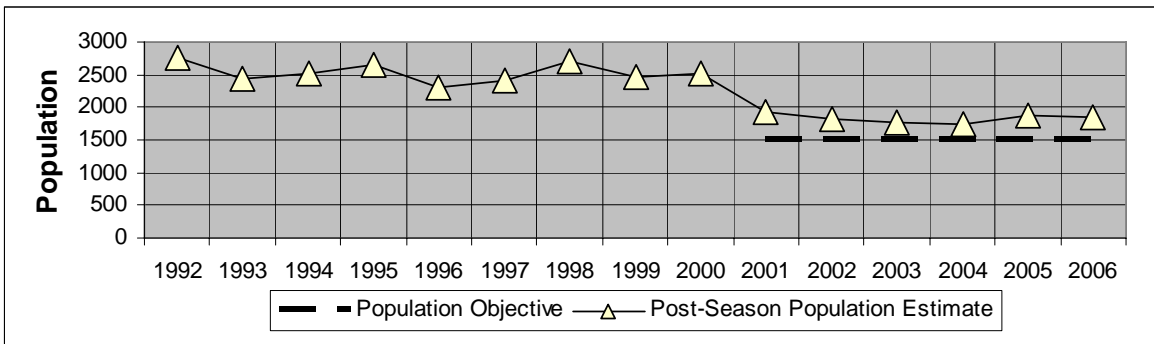
**Post-Season Population:**

*Previous Objective – 1,500; 2006 Estimate – 1,847; Current Objective – 2,400–2,700*

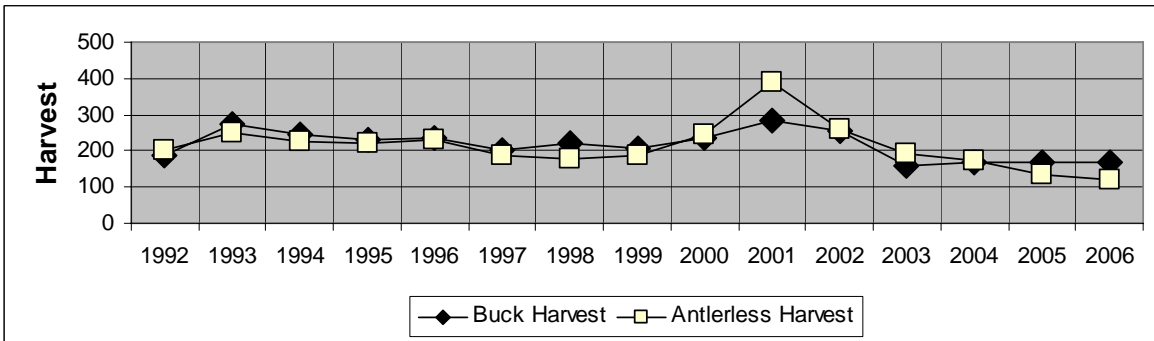
**Post-Season Sex Ratio (Bucks/100 Does):**

*Previous Objective – 30; 2006 Observed – 38; 2006 Modeled – 36; Current Objective – 35–40*

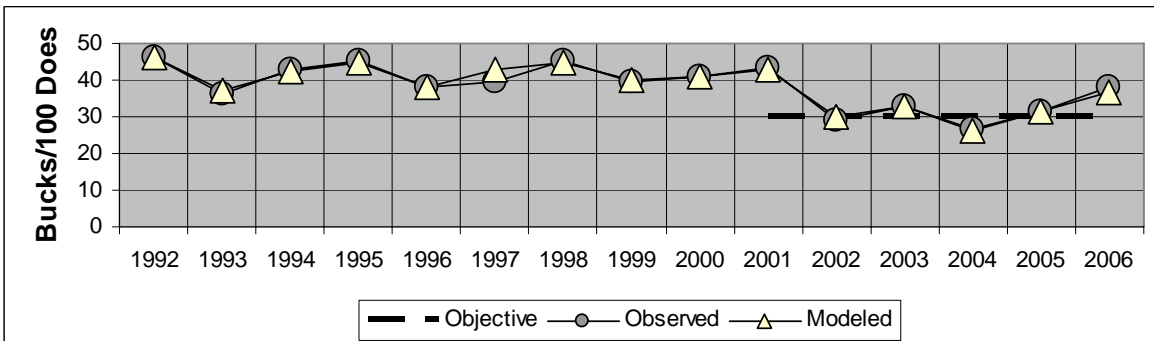
**Figure I. D-5 Post-Season Population Estimate**



**Figure II. D-5 Harvest**



**Figure III. D-5 Post-Season Sex Ratios**



## **Background**

The North Tablelands Data Analysis Unit (DAU) was reduced in size in 2001 to include only GMUs 87, 88, 89, 90, and 95. At that time, the Division established interim population and sex ratio objectives of 1,500 deer and 30 bucks/100 does until a formal management plan could be developed through the DAU planning process.

Over the past 15 years, estimated deer numbers for the North Tablelands deer herd have varied from a high of approximately 2,756 in 1998 to a low of 1,669 in 2004. From 1992-2000, the average population estimate for the DAU was 2,468 deer. Since 2001, management changes were implemented to reduce the population from historic estimates to address Chronic Wasting Disease (CWD). Since 2001, the average population estimate for the DAU has been 1,836 deer. Observed fawn/doe ratios have varied from a low of 42 fawns/100 does in 2001 to a high of 90 fawns/100 does in 1994 and has averaged 66 fawns/100 does over the past decade.

From 1992-2000, the management focus was to provide quality buck hunting opportunities. During this time, the buck/doe ratio averaged 42 bucks/100 does. In 2001, the buck/doe ratio was reduced to address concerns about CWD. Since 2001, the sex ratio in the North Tablelands deer herd has averaged 32 bucks/100 does.

## **Significant Issues**

Since 2001, the North Tablelands deer herd has provided recreational deer hunting opportunities with limited quality buck hunting. Public comments emphasized that the DAU should be managed for more quality buck hunting opportunities and expressed strong support to increase the current long-term population objective.

The North Tablelands deer DAU is part of the endemic area for CWD infection and has been the primary factor in the management of this DAU since 2001. The first CWD positive deer was found in 1997. The 3 and 5-year average prevalence rates for CWD from hunter submitted samples in both mule deer and white-tailed deer were 4.6% and 5.5%, respectively. Testing hunter harvested deer will continue to be the primary surveillance method for CWD in this DAU.

## **Management Alternatives**

The CDOW's preferred objectives for D-5 are to manage for a post-season population of 2,400–2,700 with an observed post-season herd composition 35–40 bucks/100 does. Public comments strongly supported increasing the deer population from the current objective level and managing the North Tablelands deer herd to provide more quality buck hunting opportunities. The 2006 post-season observed sex ratio was 38 bucks/100 does and the 5-year average is 32 bucks/100 does. Therefore, a slight reduction in the number of buck licenses may be necessary to maintain the preferred sex ratio objective. Quality buck hunting opportunities would increase under these alternatives.

Other alternatives being considered in this DAU plan are: 1) reduce the population by 20% to 1,300–1,600 deer, 2) maintain the population at the current level of 1,700–2,000 deer, 3) reduce the sex ratio objective to 25–30 bucks/100 does and 4) maintain the sex ratio objective at 30–35 bucks/100 does.

*This DAU plan was approved by the Colorado Wildlife Commission on November 8, 2007.*

# **NORTH TABLELANDS DEER MANAGEMENT PLAN DAU D-5 (GMU's 87, 88, 89, 90, & 95)**

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## **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 1). Big game populations are managed to achieve population and sex ratio objectives established for Data Analysis Units (DAU's).

A Data Analysis Unit or DAU is the geographic area that represents the year-around range of a big game herd and includes all of the seasonal ranges of a specific herd while keeping interchange with adjacent herds to a minimum. A DAU includes the area where the majority of the animals in a herd are born, live, and die either as a result of hunter harvest or natural causes. Each DAU usually is composed of several Game Management Units (GMUs), but in some cases only one GMU makes up a DAU.

The purpose of a DAU plan is to provide a system or process which integrates the plans and intentions of the Division of Wildlife with the concerns and ideas of land management agencies and interested publics in determining how a big game herd in a DAU should be managed. In preparing a DAU plan, agency personnel attempt to balance the biological capabilities of the herd and its habitat with the public's demand for wildlife recreational opportunities. Various publics and constituents, including the U.S Forest Service, the Bureau of Land Management, hunters, guides and outfitters, private landowners, local chambers of commerce, and the general public are involved in determining DAU population and sex ratio objectives and related issues. Public input is solicited and collected by way of questionnaires, public meetings, and comments to the Wildlife Commission.

The primary decisions needed for an individual DAU plan are how many animals should exist in the DAU and what is the desired sex ratio for the population of big game animals e.g., the number of males per 100 females. These numbers are referred to as the DAU population and herd composition objectives, respectively. Secondly, the strategies and techniques needed to reach the population size and herd composition objectives also are selected. The selection of population and herd composition objectives drive important decisions in the big game season setting process, namely, how many animals must be harvested to maintain or move toward the objectives and what types of hunting seasons are required to achieve the harvest objective. These primary objectives are set for a 10-year period of time.

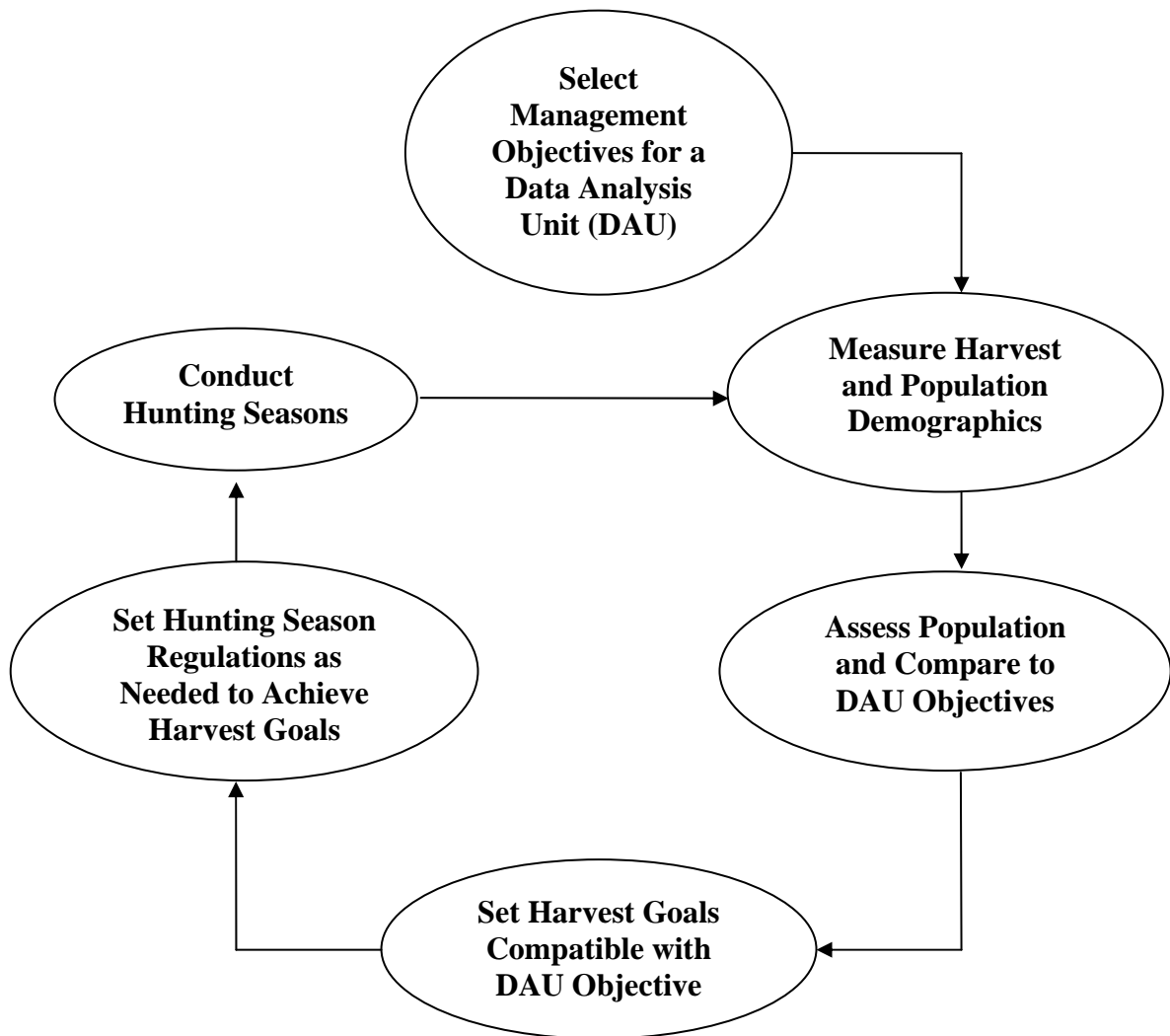


Figure 1. Colorado's Big Game Management by Objective Process.

## **NORTH TABLELANDS DAU DESCRIPTION**

### **Location**

The North Tablelands DAU is located in northeast Colorado (Figure 2). The DAU is bounded by the Wyoming and Nebraska borders on the north; on the east and south by U.S. Highways 138 and 6, Logan County Roads 6 and 17.7, Washington County Road 58, Morgan County Road W.7, 2<sup>nd</sup> street in Snyder, CO, Morgan County Roads W.5, 28, W, 13.5, W.5, Colorado Highway 144, Morgan County Road 2, Weld County Road 68, and Colorado Highway 392; and on the west by U.S. Highway 85, Colorado Highway 14, and I-25. This DAU contains GMUs 87, 88, 89, 90, & 95 and encompasses approximately 4,030 square miles.

### **Habitat Composition**

There are several habitat types within the North Tablelands DAU, including dry cropland, irrigated cropland, mid-grass prairie, short-grass prairie, rolling juniper breaks and canyons, and Conservation Reserve Program (CRP) lands. Nearly 50% of the DAU is comprised of short-grass prairie. The short-grass prairie is concentrated in the northern half and extends across the entire DAU. The short-grass prairie has remained stable with little being broken out for farming. However, residential development is encroaching into the short-grass prairie on the western side of the DAU. Habitat quality has remained stable or is increasing across the DAU due to CRP lands, managed grazing systems within the short-grass rangelands, and changing cropping practices that emphasize corn and alfalfa. There are 3 small riparian drainages within the DAU; Crow Creek, Pawnee Creek, and Wildcat Creek.

### **Climate**

The climate in the DAU is characterized by hot, dry summers and recently, relatively mild winters. Annual precipitation ranges from 13–16 inches with most occurring during intense summer thunderstorms. Snowfall can be variable in the area, but recent winters have been dry with moderate temperatures. However, during the winter of 2006-07, the DAU experienced below average temperatures and above average snowfall.

### **Land Use**

Land ownership patterns within the North Tablelands DAU are typical of eastern Colorado, with the majority of the area being in private ownership. The most notable exception is the Pawnee National Grasslands, which encompasses 193,000 acres scattered across a large portion of GMUs 87 and 88. Others include State Land Board, of which, nearly 10,000 acres are administered under the State Trust Lands Program and several smaller parcels owned by the Colorado Division of Wildlife. Public lands comprise 8% of the DAU. Land use within the DAU is primarily agricultural based. Center pivot irrigation occurs throughout the DAU with the majority occurring on the eastern and southern portions of the DAU. Corn, wheat, and alfalfa are the primary crops under irrigation. On the western end of the DAU, residential development is encroaching into the short-grass prairie of GMUs 87 and 95, although impacts to deer habitat have not been significant.



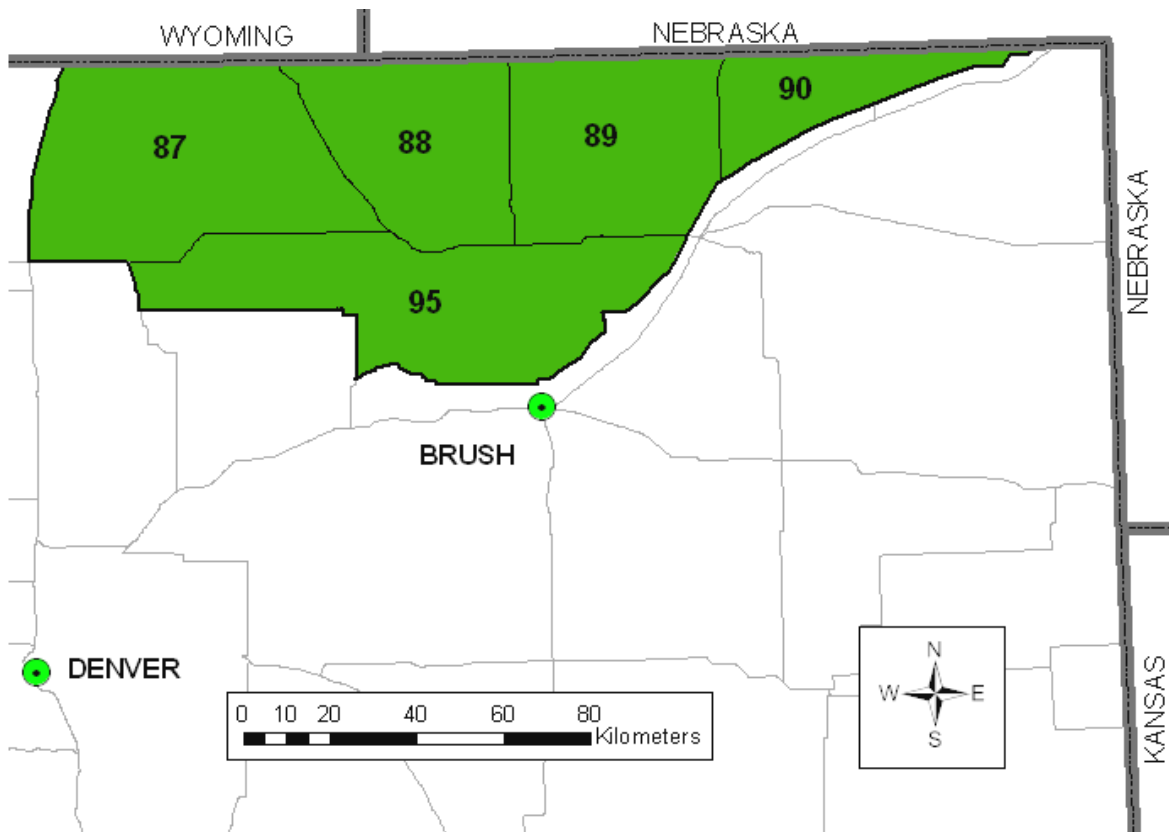


Figure 2. Geographic location of the North Tablelands deer DAU and its associated Game Management Units in northeast Colorado.

### **Deer Distribution**

Both mule deer and white-tailed deer can be found within the DAU. Mule deer are commonly found in all habitat types, although densities are highest in irrigated cropland settings, and within large complexes of CRP lands and often concentrate in the juniper breaks, canyons, and riparian areas during winter. White-tailed deer are far less numerous than mule deer and are typically found in areas adjacent to the South Platte River DAU, although, it is not uncommon for white-tailed deer to be found throughout D-5. While some white-tailed deer are residents, many move into D-5 from the South Platte River, just prior to fawning season. As corn crops are harvested and winter approaches, most of these white-tailed deer leave D-5 and return to the South Platte River corridor.

### **HERD MANAGEMENT HISTORY**

Prior to 2001, the GMUs that now comprise D-5, D-54, and D-55 were managed as a single large DAU, bisected by the South Platte River deer DAU. In 2001, the GMUs south of the South Platte River were designated as D-54 and D-55 and the units north of the South Platte River (87, 88, 89, 90, & 95) were designated as D-5, in an effort to better estimate the deer populations and differentiate the deer herds that spent most of their lives north and south of the South Platte River.

### Post-Season Population Size

Estimating population numbers of wild animals over large geographic areas is a difficult and approximate science. The CDOW recognizes this as a challenge in our management efforts and attempts to minimize this by using the latest technology and inventory methodology available. Population estimates for deer are derived using computer model simulations that involve estimates of mortality rates, hunter harvest, and annual production. These simulations are then adjusted to align on measured post-season age and sex ratio classification surveys and, in some cases, population estimates derived from line transect and quadrat surveys.

The CDOW recognizes the limitation of the system and strives to do the best job with the resources available. As better information becomes available, such as new estimates of survival/mortality, wounding loss, sex ratios, density, or new modeling techniques and software, the CDOW will evaluate these new techniques and information and use them where appropriate. The use of new information may result in substantial changes in the population estimate or management strategies. Therefore, the population estimate presented in this document should be used as an index or approximation and not as a precise enumeration of the deer in this DAU.

Estimated deer numbers for the North Tablelands deer DAU fluctuated around 2,500 (average = 2,468) from 1992–2000 and then in 2001, when this DAU was established, management changes were implemented to reduce the population to address CWD. Since 2001, the estimated population has varied from 1,600–2,000 (average = 1,836) (Figure 3). The population has ranged from a high of approximately 2,756 in 1998 to a low of 1,669 deer in 2004 (Figure 3). The DAU has experienced normal population fluctuations associated with weather conditions, hunting pressure, and population dynamics.

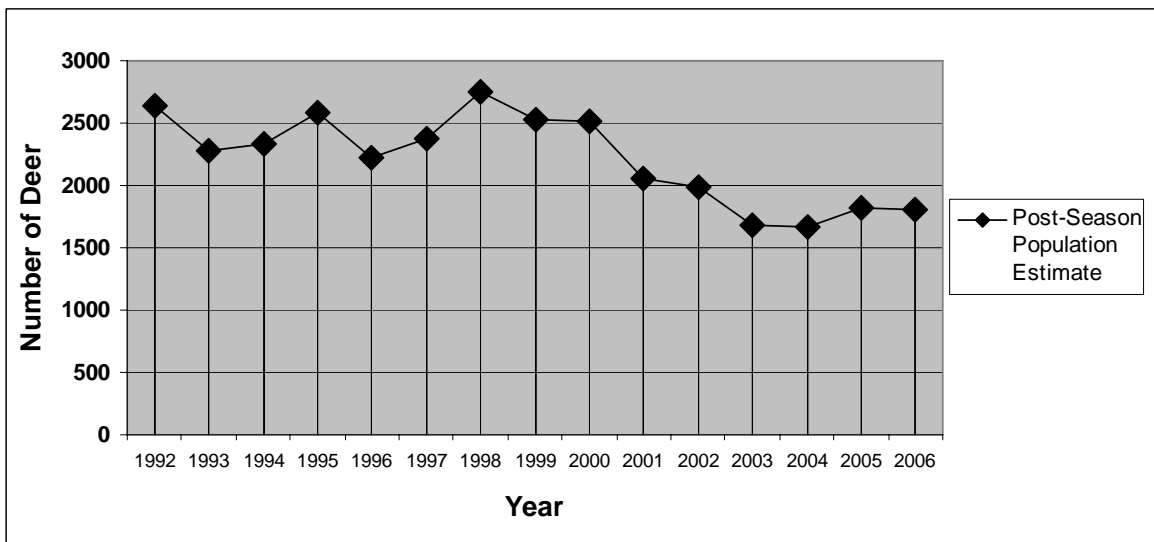


Figure 3. Post-season deer population estimates for the North Tablelands DAU, 1992–2006.

### Post-Season Herd Composition

Sex ratios, expressed as bucks per 100 does, and age ratios, expressed as fawns per 100 does, have been estimated by classifying deer from ground surveys. Surveys are conducted by district wildlife managers and biologists during a specified time frame in January after the hunting seasons have ended. Generally, aerial surveys are cost prohibitive on the eastern plains due to low deer densities. Observed sex and age ratios, along with harvest estimates are used in computer simulation models to estimate deer numbers, predict population trends, and assess impacts of reported harvest. The Division recognizes that ground-based surveys for any species, although cost-effective, can be biased due to survey methodology and sample size. Therefore, the Division may explore other management strategies, such as landowner and hunter surveys, to assist in the management of deer in the North Tablelands DAU.

This DAU has experienced two different management schemes over the past 15 years. From 1992–2000, the focus in this DAU was to provide quality buck hunting opportunities. During this time, the buck/doe ratio averaged 42 bucks/100 does ranging from 36 bucks/100 does observed in 1993 to 46 bucks/100 does observed in 1992 (Figure 4). In 2001, management changes to lower the buck/doe ratio were put into operation to address concerns about CWD, because evidence showed much higher prevalence rates in bucks than does and in older bucks than young bucks. Since 2001, licenses have been allocated to maintain this DAU at a sex ratio objective of 30 bucks/100 does. Over the last 5 years, the buck/doe ratio has averaged 32 bucks/100 does.

Observed fawn/doe ratios have varied from a low of 42 fawns/100 does in 2001 to a high of 90 fawns/100 does in 1994 and has averaged 66 fawns/100 does over the past decade (Figure 4). In 2001, fawn:doe ratios were lower than normal, indicating the widespread drought may have adversely impacted fawn recruitment in the DAU.

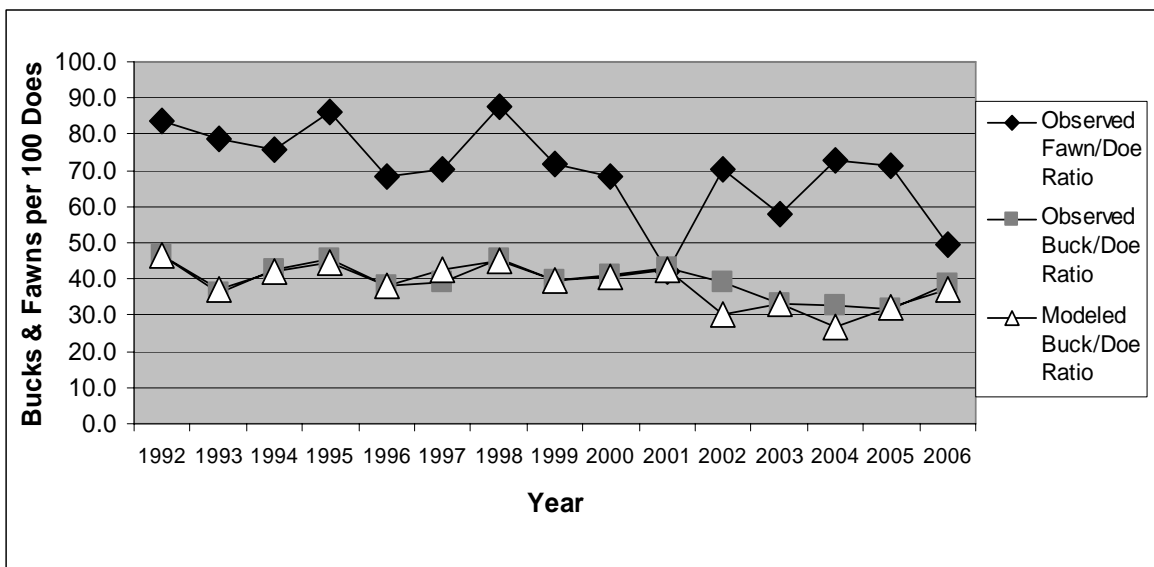


Figure 4. Observed post-season fawn/doe ratios estimates and observed and modeled buck/doe ratio estimates for the North Tablelands DAU, 1992–2006.

## Harvest

Over the last 15 years, harvest has ranged from a high of 672 animals in 2001 to a low of 291 in 2006 (Figure 5). Average harvest for the past 10 years is 389 animals. Antlered harvest ranged from a low of 160 bucks in 2003 to a high of 283 in 2001. Average buck harvest for the past 10 years is 207 animals. Doe harvest has ranged from a high of 324 does in 2001 to a low of 119 in 2005 and 2006. Average doe harvest for the past 10 years is 206 animals. The two rifle seasons account for the majority of the deer harvest in the DAU, with archery and muzzleloader seasons contributing significant opportunity (32%), but less harvest (9%).

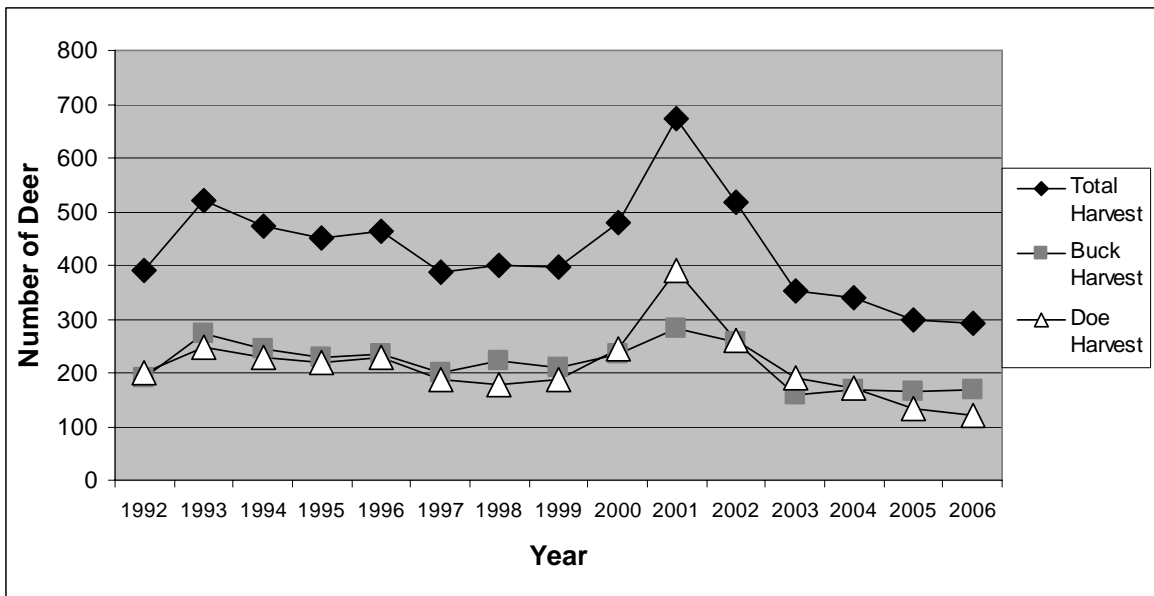


Figure 5. Total harvest and number of antlered and antlerless deer harvested in the North Tablelands DAU, 1992–2006.

## Hunters

Prior to 2001, the North Tablelands DAU was managed to provide quality buck hunting opportunities by maintaining a high buck/doe ratio and a higher proportion of 3+ year-old bucks in the population. Since 2001, the buck/doe ratio and total population numbers have been reduced to address CWD. Despite the overall reduction in buck numbers and a considerable decline in the number of mature bucks, the demand for antlered licenses continues to exceed the supply in most GMUs. In 2006, late season rifle buck licenses required 2 preference points to draw in GMU 95 and 1 preference point to draw in GMUs 87, 88, and 89 (Figure 6). Regular season rifle buck licenses required 2 preference points to draw in GMU 95 and 1 preference point to draw in GMUs 87 and 88. Doe licenses for either rifle season can be drawn with zero points. Archery either-sex and muzzleloader buck licenses are less difficult to draw than rifle buck licenses, taking 0 points for either. Landowner preference licenses for bucks are over-subscribed in all GMUs, while landowner applicants for doe licenses are under-subscribed in all units.

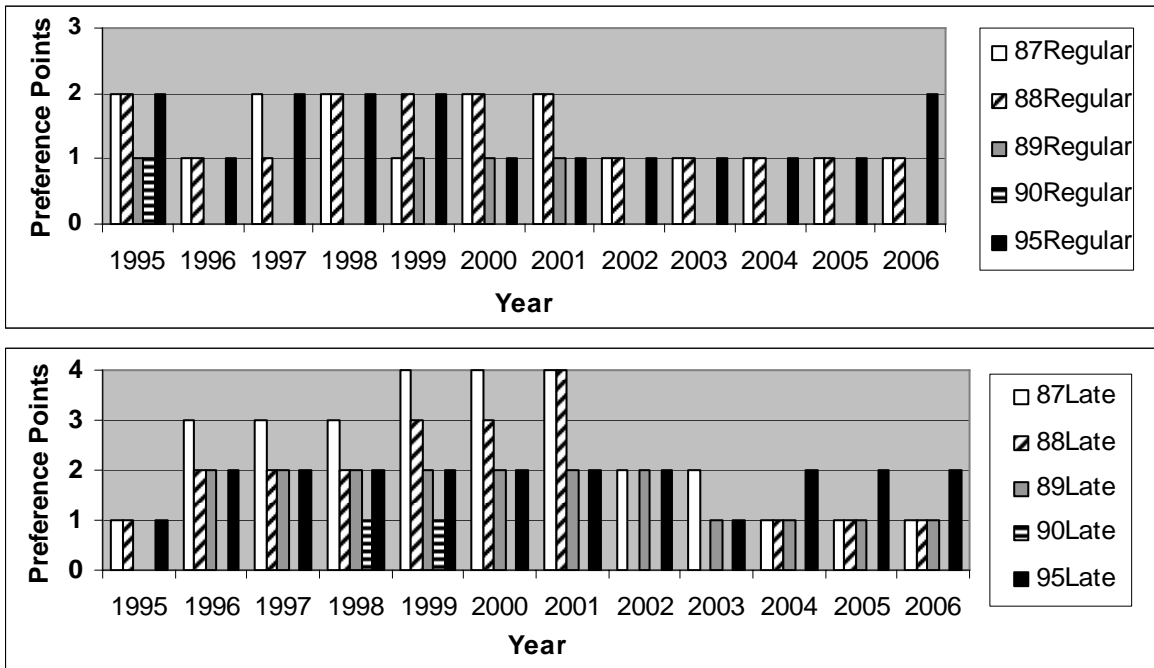


Figure 6. Number of preference points needed to draw a buck license for the regular and late-plains rifle seasons in the North Tablelands DAU, 1995–2006.

The total number of hunters for all methods of take has varied from 495 in 1992 to 913 in 2002 depending on the number of limited licenses allocated for the DAU. Since 1992, the number of rifle buck licenses has varied from a high of 450 buck licenses in 2002 to a low of 190 buck licenses in 1992 (Figure 7). The number of rifle doe licenses ranged from a high of 555 licenses in 2002 to a low of 235 licenses in 1992 (Figure 7).

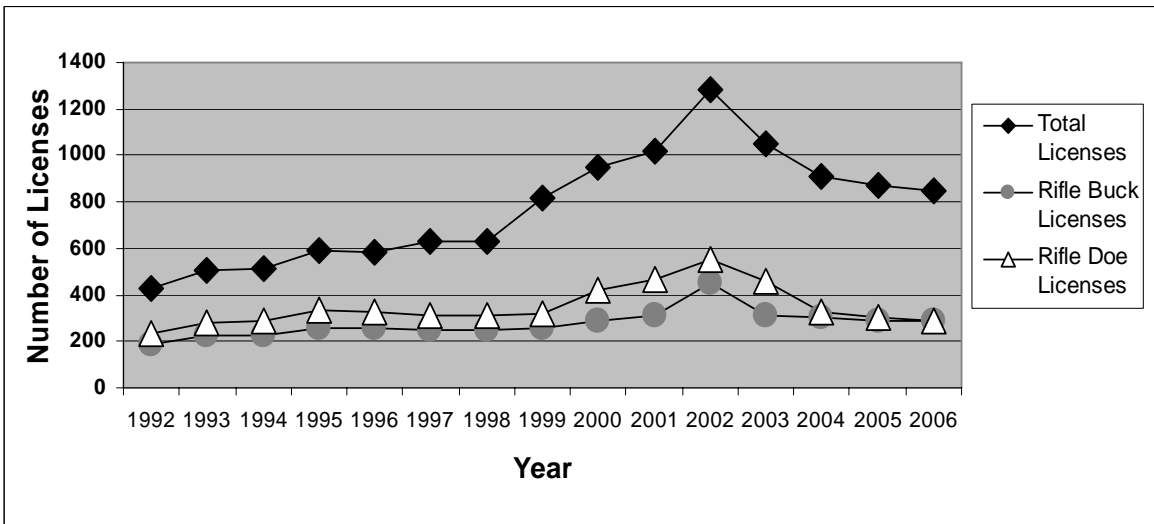


Figure 7. Total number of licenses for all methods of take and number of rifle buck and doe licenses allocated for the North Tablelands DAU, 1992–2006.

Harvest success rates are based on the number animals harvested/number of licenses allocated. These rates are generally used in determining license allocations because they take into account both hunter success and the number of license holders that did not hunt. Thus, harvest success rates are generally lower than hunter success rates and provide a more appropriate measure for predicting harvest. Therefore, only harvest success rates are presented.

The average harvest success rate for all methods of take from 1992–2001 was 60% (Figure 8). Since 2001 when reductions in buck/doe ratio and total population were implemented, success rates declined for all methods of take and the 5-year average harvest success has been 47% (Figure 8). Harvest success rates for rifle hunting have ranged from a high of 76% in 1992 to a low of 42% in 2003. From 1992–2001, the average harvest success rates for antlered and antlerless deer were 75% and 68%, respectively. Since 2002, the average harvest success rates for antlered and antlerless deer have declined to 56% and 54%, respectively. The reduction in deer densities and total buck numbers are contributing factors for the decline in harvest success over the past 5 years, although success varies with weather conditions and progression of corn harvest, primarily in GMUs 89, 90, and 95.

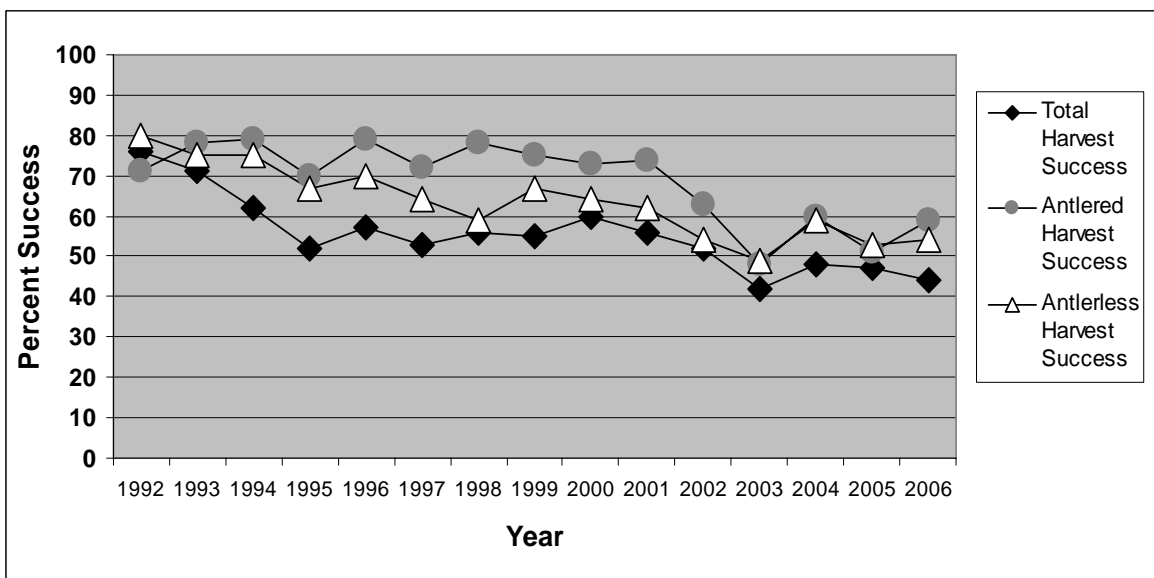


Figure 8. Total, antlered, and antlerless deer harvest success (%) in the North Tablelands DAU, 1992–2006.

### Past Management Strategies

In D-5, a limited number of licenses have been issued for the regular rifle season since 1980. Since 1987, a limited number of licenses have been issued for the late-plains rifle season in GMU 95, while the remaining GMUs continued to offer only regular rifle season licenses until 1995. Since 1996, all deer hunting licenses for all methods of take have been limited in number in GMU 95, while the remaining GMUs continued to offer over-the-counter archery and muzzleloader licenses until 1998. Since 1998, all deer hunting licenses for the North Tablelands DAU have been limited in number.

The late-plains rifle season was established on the eastern plains of Colorado in 1983 to provide additional hunting days to more effectively achieve harvest objectives and reduce crowding by spreading the hunting pressure across two seasons. However, in this DAU, licenses were not issued for the late-plains rifle season until 1987 in GMU 95 and in the remaining GMUs until 1995, because achieving harvest objectives and hunter crowding were not an issue prior to being implemented.

## **CURRENT HERD MANAGEMENT**

### **Population and Sex Ratio Objectives**

The 2006 post-season estimate was approximately 1,850 deer, which is above the current interim population objective. In 2001, when this DAU was established an interim population objective of 1,500 deer was set until a formal management plan could be developed. Likewise, in 2001, an interim sex ratio objective was set at 30 bucks/100 does. The current sex ratio for the DAU is estimated to be 38 bucks/100 does and the 5-year average is 32 bucks/100 does.

### **Current Management Strategies**

In 2001, management strategies were implemented to reduce the population and buck/doe ratio from its historic levels in an effort to address CWD. As CWD management activities progressed from 2001–06, the effectiveness of these management techniques was evaluated. Based on information collected by CDOW over the past 6 years on CWD management activities, it appears that large-scale density or population reduction has not resulted in reducing CWD prevalence.

### **Current Management Problems**

Deer damage is not an issue with only two deer damage claims being filed in the past 10 years. One occurred in GMU 88 in 2002 and the other in GMU 95 in 2003. If habitats continue to improve, the Division will need to closely monitor population responses along with game damage complaints and adjust license numbers accordingly.

Interspecific competition between mule deer and white-tailed deer is not a concern in the North Tablelands DAU as it is in other areas on the eastern plains. Prior to 1960, Colorado's eastern plains were almost exclusively populated by mule deer. White-tailed deer have progressively established themselves in more traditional mule deer habitats in some areas on the eastern plains. However, the encroachment by white-tailed deer in this DAU is primarily seasonal movements to and from the South Platte River corridor. Thus, their encroachment has not been a concern as in other areas of the state.

Currently, ground surveys are conducted annually to collect fawn/doe and buck/doe ratio estimates because aerial surveys are cost prohibitive due to relatively low deer densities in this DAU. However, the Division recognizes that ground surveys may be more biased than aerial surveys. Therefore, the Division may explore other monitoring strategies, such as a landowner survey or other means to assist in the management of the deer herd in the North Tablelands DAU.

### **Chronic Wasting Disease**

The North Tablelands deer DAU is part of the endemic area for CWD infection and CWD has been a primary factor in the management of this DAU since 2001. Local areas of CWD concentration are found in all GMUs within this DAU. The first CWD positive deer was found in GMU 95 in 1997. Prior to 2001, CWD had not been detected in GMUs 87, 88, 89, and 90. In 2001, hunter submitted samples from GMUs 88 and 89 documented CWD positive deer northeast of Stoneham, Colorado. In March 2002, GMUs 87 and 90 produced CWD positive animals that were found in surveillance culling operations.

From 1996–2001, the average CWD prevalence rate from various surveillance methods was approximately 2.8% for the entire DAU and GMU prevalence ranged from <1% in GMU 89 to 5% in GMU 88. Sample size varied by GMU ranging from 40 in GMU 88 to 364 in GMU 95 during that same 6-year period. The 3 and 5-year average prevalence rates for CWD from hunter submitted samples in both mule deer and white-tailed deer were 4.6% and 5.5%, respectively. Testing hunter harvested deer will continue to be the primary surveillance method for CWD.

## **MANAGEMENT ISSUES AND STRATEGIES**

The primary purpose of the DAU planning process is to determine objectives for the size and composition of the post-season population. Input for the DAU planning process has been solicited through a public meeting held on March 29, 2007 in Fort Morgan, CO. The public meeting was advertised in the local papers of Akron, Julesburg, Sterling, Yuma, Brush, Fort Morgan, Greeley, Loveland, and Fort Collins in northeast Colorado (Appendix A). Written comments were also received from a mail survey sent to all public meeting attendees (Appendix B). Furthermore, drafts of the DAU plan were available on the CDOW website and at the Brush and Fort Collins CDOW offices and copies were distributed to land management agencies, and conservation organizations for review and comments.

Public comments emphasized a strong desire to increase the current long-term population objective. Likewise, public input showed a desire to manage for more quality deer hunting in this DAU by increasing the current sex ratio (Appendix C).

## **ALTERNATIVE DEVELOPMENT**

### **Post-Season Population Objectives**

The population objective is selected independently from the herd composition objective. The Division acknowledges that estimating wildlife populations is an inexact science and habitat conditions and carrying capacity vary with fluctuations in weather and trends in agriculture; therefore, the long-term population objective will be expressed as a range rather than a specific number.

Alternative 1: 1,300–1,600.

Reduce the long-term post-season population by 20% from the current estimate of 1,850. Initially, this alternative would result in an increase in deer hunting licenses, but once deer



numbers are reduced to objective, hunting opportunity would decline from the current level. This strategy could decrease hunting opportunities for both bucks and does in the long-term unless there was a strong density dependent response resulting in increased fawn production and survival. Reducing the deer population to this objective would require increases in antlerless licenses over the next 2–3 years. There could be negative fiscal impacts to individuals and businesses benefiting from deer hunting in this DAU. Deer damage complaints would remain negligible under this alternative. Public input was not supportive for reducing the deer population below the current level.

Alternative 2: 1,700–2,000.

Maintain the post-season population at the current level of 1,700–2,000. Under this alternative and no change in current hunter preferences, the demand for buck licenses will continue to be greater than the supply and the number of preference points needed to draw a license will increase at the current rate. Damage complaints are expected to remain negligible. Maintaining deer numbers at the current level would allow the current hunting opportunities to continue with no fiscal impacts to individuals or businesses. Public input was not supportive for maintaining the deer population at the current level.

Alternative 3: 2,400–2,700.

Increase the long-term post-season deer population by 30% to 2,400–2,700 deer. Under this alternative, the population would be increased to the estimated population level prior to the reduction in 2001. Because the current population estimate is below this range, rifle doe hunting would be reduced for 2–3 years to reach this objective, depending on fawn recruitment rates during that time. Achieving this objective will provide more buck hunting opportunities that are obviously in demand. Increases in the number of antlerless licenses will be necessary once this objective is reached. Likewise, habitat conditions are favorable for supporting more deer and damage complaints have been minimal in this DAU, thus far. However, with increased deer numbers, the potential for deer damage complaints may increase. Damage by deer would need to be closely monitored as the population increases to objective. Hunter success should remain at or above current levels. Public comments strongly support increasing the population level above the current estimate.

### **Post-Season Herd Composition Objectives**

The following 3 sex ratio objectives are presented.

Alternative 1: 25–30 bucks/100 does.

Reduce the sex ratio objective to 25–30 bucks/100 does which is a 5–10 bucks/100 does decrease from the current level. The 2006 estimated sex ratio and the 5-year average is currently above objective. Therefore, an increase in buck licenses would be required to achieve this objective. Once at this lower objective, it is possible that general buck hunting opportunities (number of buck licenses issued each year) would be more than are available under the current management scenario. Public comments did not support reducing the sex ratio below the current level.

Alternative 2: 30–35 bucks/100 does.

Maintain the sex ratio objective at 30–35 bucks/100 does. The current estimated sex ratio is slightly above this objective, however, the 5-year average falls within this range; therefore, no management actions are anticipated to maintain this sex ratio objective. This objective would maintain the current level of limited quality buck hunting opportunities. The demand for buck licenses would continue at the current rate. Public comments supported increasing the buck/doe ratio objective.

Alternative 3: 35–40 bucks/100 does.

Increase the sex ratio objective to 35–40 bucks/100 does which is a 10–15 bucks/100 does increase from the current objective. The current estimated sex ratio fall within this range, however, the 5-year average is below this range; therefore, a reduction in the number of buck licenses may be necessary to maintain this sex ratio objective. This objective will provide quality buck hunting opportunities. The demand for buck licenses would likely increase with the increased number of bucks and reduction in annual licenses issued. Public comments support managing the sex ratio objective to provide more quality buck hunting opportunities.

### **PREFERRED OBJECTIVES AND ALTERNATIVES**

The CDOW's preferred objectives for D-5 are to manage for a post-season population of 2,400–2,700 (**Alternative 3**) with an observed post-season herd composition objective of 35–40 bucks/100 does (**Alternative 3**).

All of the public comments strongly support increasing the current deer population in the North Tablelands DAU. Discussions with landowners, hunters, and DOW field personnel indicate that habitat conditions in D-5 can support increased deer numbers. Game damage complaints have not been an issue thus far, and are not expected to significantly increase under this alternative. Doe licenses would remain constant or be reduced for 2–3 years depending upon fawn recruitment to achieve this objective. However, hunters can expect an increase in hunting opportunities once the objective is reached.

Public comments supported managing the North Tablelands deer herd for more quality buck hunting opportunities. The 2006 post-season observed sex ratio was 38 bucks/100 does and the 5-year average is 32 bucks/100 does. Therefore, a slight reduction in the number of buck licenses may be necessary to maintain this sex ratio objective. Quality buck hunting opportunities are expected to increase when coupled with the preferred population alternative. Hunters, local communities, and businesses have encouraged the Division to manage D-5 for more quality buck hunting opportunities.

**APPENDIX A**  
**PUBLIC MEETING ANNOUNCEMENT**

# **ANNOUNCEMENT OF PUBLIC MEETING**

## **Fort Morgan Meeting to Gather Input on Deer Management in Game Management Units 87, 88, 89, 90 and 95**

The Colorado Division of Wildlife (DOW) will hold a public meeting in Fort Morgan to gather input on deer herd management in DAU D-5, which comprises Game Management Units 87, 88, 89, 90 and 95. The meeting will be held from 7 p.m. to 9 p.m., March 29 in the Founders Room at the Morgan Community College, 920 Barlow Rd., Fort Morgan, CO.

**The Division is seeking public input to establish population and herd composition (buck/doe ratio) objectives for the next 10 years.** “Getting public input is imperative to creating a balanced 10-year herd management plan for this deer herd,” said Larry Budde, area wildlife manager for the DOW. “We hope that folks who have hunted this area will come by and let us know what their thoughts and experiences have been in the GMUs.”

*The Colorado Division of Wildlife is the state agency responsible for managing wildlife and its habitat, as well as providing wildlife related recreation. The Division is funded through hunting and fishing license fees, federal grants and Colorado Lottery proceeds through Great Outdoors Colorado.*

**APPENDIX B**  
**MAIL SURVEY**

# MAIL SURVEY

## **OPPORTUNITY FOR PUBLIC COMMENT ON DEER MANAGEMENT**

### In Data Analysis Unit D-5

(Deer Game Management Units 87, 88, 89, 90 & 95- **North Tablelands**)

Dear Interested Citizen:

Deer 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 deer herd. Public input is, therefore, a very important part of the DAU planning process.

Wildlife managers have begun the process of updating the deer management plan for the North Tablelands deer herd (GMU's 87, 88, 89, 90 & 95). The CDOW is seeking your input on the future management of this herd.

The Colorado Division of Wildlife manages deer 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 (bucks) in the herd. This deer management plan (DAU plan) 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. From 2000-2005 D-5 deer numbers were managed towards a reduced objective as a chronic wasting disease (CWD) management tactic. That population reduction didn't have the desired effect of reducing prevalence and therefore a new population objective is needed.

### **Question 1:**

Would you like the number of deer in GMU's 87, 88, 89, 90 & 95 to:

\_\_\_\_\_ **Increase**

\_\_\_\_\_ **Stay the same**

\_\_\_\_\_ **Decrease**

\_\_\_\_\_ **Don't Know**

Why?

**Male:Female Ratio Objective:** Deer herds can be managed to maximize the 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 and probably every year. 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-antlered bucks, fewer buck licenses are issued in order to increase the number of males in the population (higher buck:doe ratio). As a result, the size of bucks harvested will be larger, but the frequency that hunters are able to hunt bucks decreases. Therefore a trade-off exists between the number of licenses (amount of opportunity) and the size and maturity of bucks available for hunters.

Older, mature male deer have been found to have a significantly higher prevalence of chronic wasting disease (CWD- a fatal neurological disease) than younger bucks or females. Lower buck:doe ratios (or less mature bucks) could reduce CWD prevalence.

**Question 2:**

For the purposes of deer hunting, should GMU's 87, 88, 89, 90 & 95 be managed for:

- \_\_\_\_\_ Increased **quality** of hunting opportunity (higher buck:doe ratios)
- \_\_\_\_\_ Maximum **quantity** of hunting opportunity (lower buck:doe ratios)
- \_\_\_\_\_ Status Quo

**Question 3:**

Do you hunt deer in D-5?	Yes	No
Have you hunted deer in D-5 in the last 5 years?	Yes	No

**Please provide additional comments on the future management of DAU D-5 below.**

**APPENDIX C**  
**PUBLIC COMMENTS**



**SUMMARY OF  
PUBLIC MEETING AND WRITTEN COMMENTS  
FOR  
NORTH TABLELANDS DAU**

- Keep the buck/doe ratio at the current level or higher. PUBLIC-(All)
- Quality deer hunting should be improved. PUBLIC-(Majority)
- Deer numbers are too low and should be increased. PUBLIC-(All)
- Deer numbers should be increased to the historic levels of the 1990's. PUBLIC-(All)
- Surveillance for CWD should be continued. PUBLIC-(All)