TRINCHERA DATA ANALYSIS UNIT
E-33

GAME MANAGEMENT UNITS

83, 85, 140, 851

ELK MANAGEMENT PLAN

PREPARED FOR

THE COLORADO DIVISION OF WILDLIFE

BY

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April 2007

E- 33 DATA ANALYSIS UNIT PLAN
Executive Summary
04/18/2007

GMUs: 83, 85, 140 and 851
Land Ownership: 89% Private, 3.3% USFS, 1.5% BLM, 2.4% CDOW
Current Posthunt Population Objective: 14,000-16,000
Previous Posthunt Population: Objective: 22,500 **2006 Estimate:**18,100
Current Posthunt Sex Ratio (Bulls/100 Cows) Objective: 35-40
Previous Posthunt Sex Ratio (Bulls/100 Cows) Objective: 50 **2006 Obs:** 35 **Mod:** 43

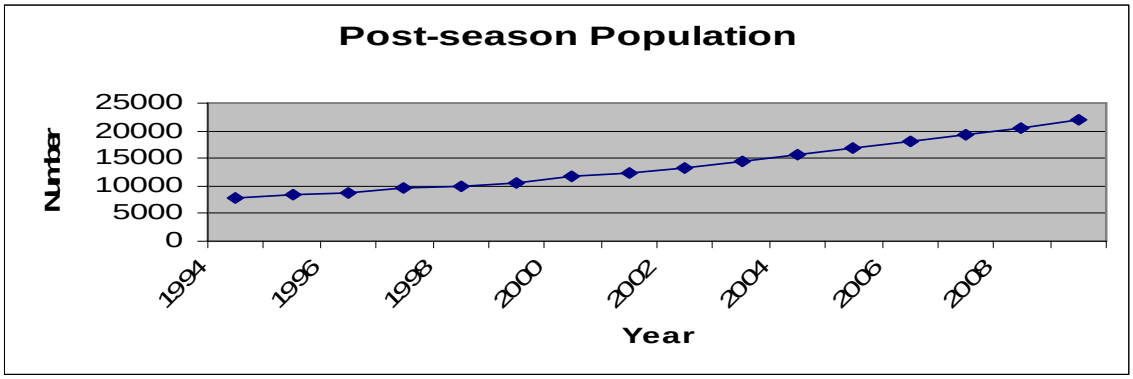

Figure 1. E-33 Posthunt Population Estimate

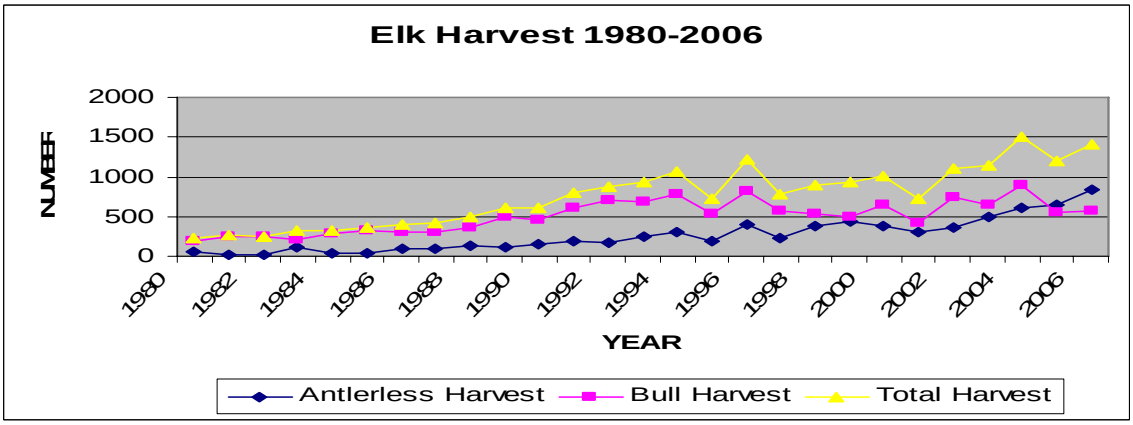

Figure 2. E-33 Harvest

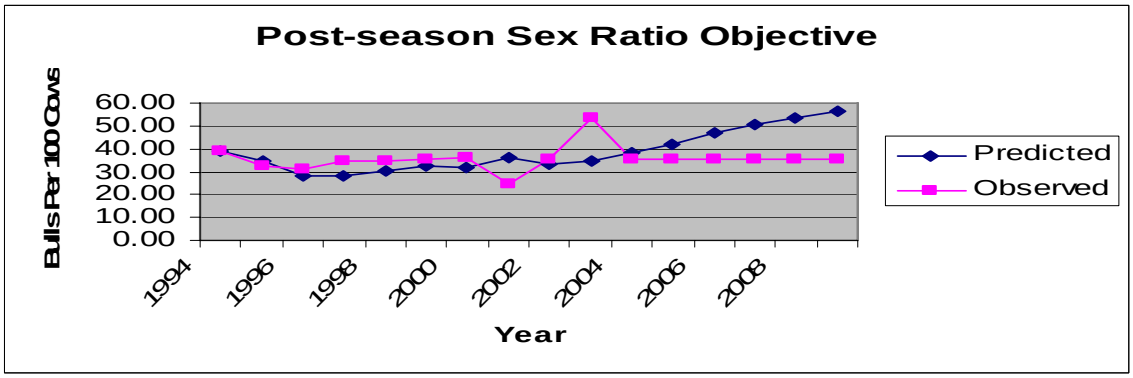

Figure 3. Posthunt Bulls/100 Cows

E-33 Background

The Division of Wildlife adopted a population objective of 22,500 elk in 1987 for DAU E-33. At that time the estimated population was nearly 15,800 elk. This population level was developed considering movements of elk across the Colorado/New Mexico state line, and incorporated the entire elk population shared in this area by both states. The modeled elk population steadily increased until it reached a level of about 33,000 elk. Difficulties in modeling the population were related to data exchange and different data collection methodologies between the two states.

In 2003 wildlife managers from New Mexico and Colorado met to discuss populations in the Trinidad and Raton Basins along the Colorado New Mexico border. At that time the elk population for E-33 was modeled using a population level that included elk from both states. Discussions focused around problems with population modeling elk herds that move across state lines and are monitored by different survey methodologies. Harvest data and sex and age ratio collection along with population modeling differences prevented both states from sharing information to assist each other with acquiring population parameters that would assist with population management that was consistent across state lines.

Throughout the discussions it was clear that although we used different methodologies we both estimated the elk population for the area at 33,000 elk. Discussion then focused on elk movements within the area including emigration and immigration of elk from both states. It was agreed that while there was definitely interchange across the border it was estimated to be equal levels in both directions and that the Colorado population could be monitored as a separate entity. At that time discussion were held to determine current population levels within Colorado and an interim population objective for the area.

CDOW Biologists, Area Wildlife Managers and District Wildlife Managers discussed current elk population levels within the DAU and determined that a population of 14,000 animals was a minimum population for the DAU. It was agreed to do an intensive population classification that year to determine population ratios as a starting point for the DAU planning and modeling process.

The elk population model was adjusted to reflect the discussed changes to the modeled elk population.

Antlerless harvest has increased in recent years in an effort to reduce the population. The current post-hunt population estimate is approximately 16,200 animals.

The current sex ratio objective of 50 bulls per 100 cows was also adopted in 1987. The current post-hunt sex ratio is modeled at 45 bulls/100 cows (2005 post-season). The highest observed ratio of 53 occurred in 2003.

E-33 Significant Issues

The issues and concerns identified during the public input process reveal a concern for the maintenance elk populations in the area while balancing the numbers with the available habitat in the face of increasing development and increasing demands on the elk resource.

Housing Development – This DAU has in the last decade seen a rapid development of housing in areas that once were part of elk ranges. Ranches have been subdivided and natural habitats have been changed or eliminated. This includes direct loss of habitat and effective loss of surrounding habitat due to harassment from people and pets. This development has combined to reduce the amount of useable winter range. Habitat improvement projects may be necessary to off-set the habitat loss due to development.

Maintaining high bull/cow ratios – The management of quality trophy opportunities on public and private lands is very important to a large segment of the public in this DAU. CDOW's objective is to maintain E-33 as a highly productive elk population that can annually support a harvest similar to those it has supported in the past. However, the maintenance of population levels that are acceptable to all segments of the society, along with one that is in balance with its habitat is very difficult to achieve.

Methane Development – Methane development within the DAU began in the in the late 1980's but did not become have a large impact to the elk habitat until extraction techniques improved in the late 1990's. Since that time development has increased dramatically with wells being drilled on an average density of six wells per section. With the corresponding maintenance and drilling, human activity levels have shown the same dramatic increase. Road densities have increased substantially in those areas affected by methane development within the DAU.

Private land access – With over 89% of the DAU in Private ownership hunter access is a continuing concern in the DAU. Trespass issues and private landowner rights were identified as problems in the area especially in GMU's 140, 851 and 83. Hunter access to the elk population especially for antlerless harvest is a growing concern. The Division of Wildlife has purchased 38,000 acres and leased 6,314 acres since the DAU plan was written in 1987 to help with hunter access in the area.

Management Alternatives

Three post-season population objective alternatives have been proposed for E-33 (1) 16,000-18,000 (2) 14,000-16,000 (3) 12,000-14,000. The current population is approximately 18,100 animals. It is generally agreed that this is too many elk for the population. The CDOW does not recommend managing for more than 16,000 elk in E-33 because of habitat and damage concerns.

Even with the large amount of private land available within the DAU managing for more than 40 bulls per 100 cows is not within the realm of possibility. Under current management with OTC bull licenses in the 2nd and 3rd season's the average bull to cow ratio is believed to be closer to 35-40. Even with severe restrictions in license numbers in

the 1st and 4th seasons harvest would be too high to maintain the higher ratio. Any objective above 40 bulls per 100 cows would require that license numbers be limited in all seasons. There is very little support for having the area become a limited area.

CDOW recommendation to the Wildlife Commission

Population Objective

The CDOW recommendation is to manage this elk population within the range of 16,000-18,000 animals representing a 21% increase from the previous interim population objective of 14,000 and a 32% reduction from the 1987 objective of 22,500. Sportsmen favored an increase in population objective beyond what is currently being recommended. Private property issues were addressed in public meetings and this report. Game damage issues and competition for forage with cattle were also considered. The recommended population objective of 14,000-16,000 elk will maximize opportunity while not compromise the habitat or agricultural producers' ability to make a living.

Sex Ratio

Most people did not want a change in the sex ratio objective, but with the current DAU management including unlimited bull licenses during the archery, 2nd and 3rd seasons it is impossible to reach the current objective of 50. The CDOW recommendation is to manage the sex ratio objective within a range of 35-40 bulls: 100 cows. This represents a decrease in the current estimated sex ratio of 36% and falls within the 3 year average estimate of 35 Bulls per 100 cows (2003-2006 post-hunt). The Division realizes that it may be difficult to manage within this sex ratio objective with unlimited bull licenses available in the archery, 2nd and 3rd seasons.

Management Strategy

The DAU management strategy recommendation by the CDOW is status quo. The 1st and 4th seasons provide for a quality hunting experience with limited antlered and antlerless licenses available. Unlimited antlered licenses are available during the 2nd and 3rd seasons. Various antlerless hunts have been utilized during the past several years to obtain management objectives. These include early and late season PLO licenses, Either-sex licenses for the first and fourth seasons, along with game damage and dispersal hunts. While with the large expanses of private land will continue to be a challenge to obtaining antlerless harvest the current methodologies are increasing antlerless harvest over prior levels.

The E-33 DAU Plan was finalized by the Colorado Wildlife Commission on May 3, 2007

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DATA ANALYSIS UNIT PLANS

Historically, big game seasons were set by tradition and/or political whims. Seasons that resulted did not reflect what was occurring with wildlife populations or habitat. To a degree big game seasons are still traditional and/or political, but in a response to a growing demand for finite wildlife resources, the Division of Wildlife must be more accountable. Managing our wildlife resources by management objectives creates accountability. The Division's Long Range Plan provides direction and broad objectives for the Division to meet a system of policies, objectives and management plans such as the Data Analysis Unit Plan, and directs the actions the Division takes to meet the legislative and Commission mandates.

DAU's are used to manage populations of big game animals. Each DAU is established to contain a discrete population of animals utilizing geographic boundaries that minimize movements between DAU's. Each DAU may contain from one to 10 or more Game Management Units (GMU) to which specific management practices are applied to reach the DAU population and sex ratio goals. DAU management plans are designed to support and accomplish the objectives of the Division of Wildlife's Long Range Plan and meet the publics' needs and desires for their wildlife recreation while minimizing human/wildlife conflicts.

The DAU planning process is designed to incorporate public demands, habitat capabilities, and herd capabilities into a management scheme for the big game population (Figure 4). The public, sportsmen, federal land use agencies, landowners and agricultural interests are involved in the determination of the plans objectives through goals, public meetings, comments on draft plans and the Colorado Wildlife Commission.

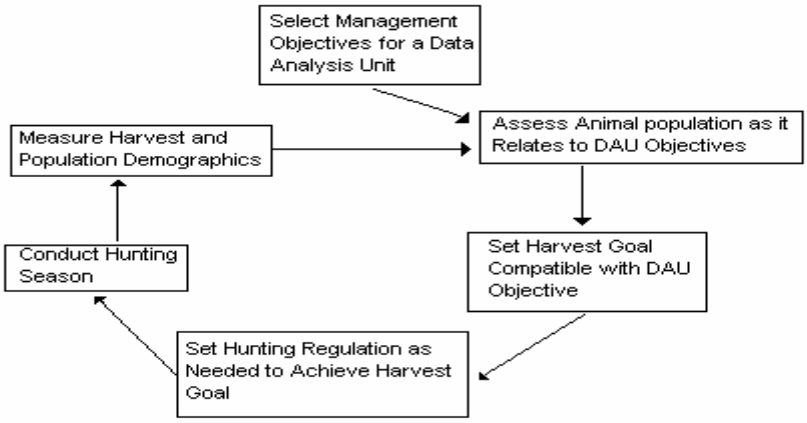

Figure 4. Colorado's Object Cycle of Big Game Management and Harvest

Individual DAU's are managed with the goal of meeting herd objectives. This is accomplished by gathering herd data and putting it into a spreadsheet model (DEAMAN)

to get a population projection. The input parameters for the model include harvest data which is tabulated from hunter surveys, sex and age composition of the herd which is acquired from aerial counts and mortality factors such as wounding loss and winter severity which are generally acquired from field observations. Once these variables are entered into the population modeling program a population estimate is obtained. The resultant computer population projection is then compared to the herd objective and a harvest is calculated to align the population with the herd objective.

TRINCHERA DATA ANALYSIS UNIT

PHYSIOGRAPHY

The Trinchera Elk Data Analysis Unit is located in South-Central Colorado (Figure ?) and is comprised of Game Management Units (GMU's) 83, 85, 140 and 851. GMU 140 is the only GMU in Colorado located east of Interstate 25 (I-25) that is included with GMU's west of I-25 for the purpose of hunting season regulations.

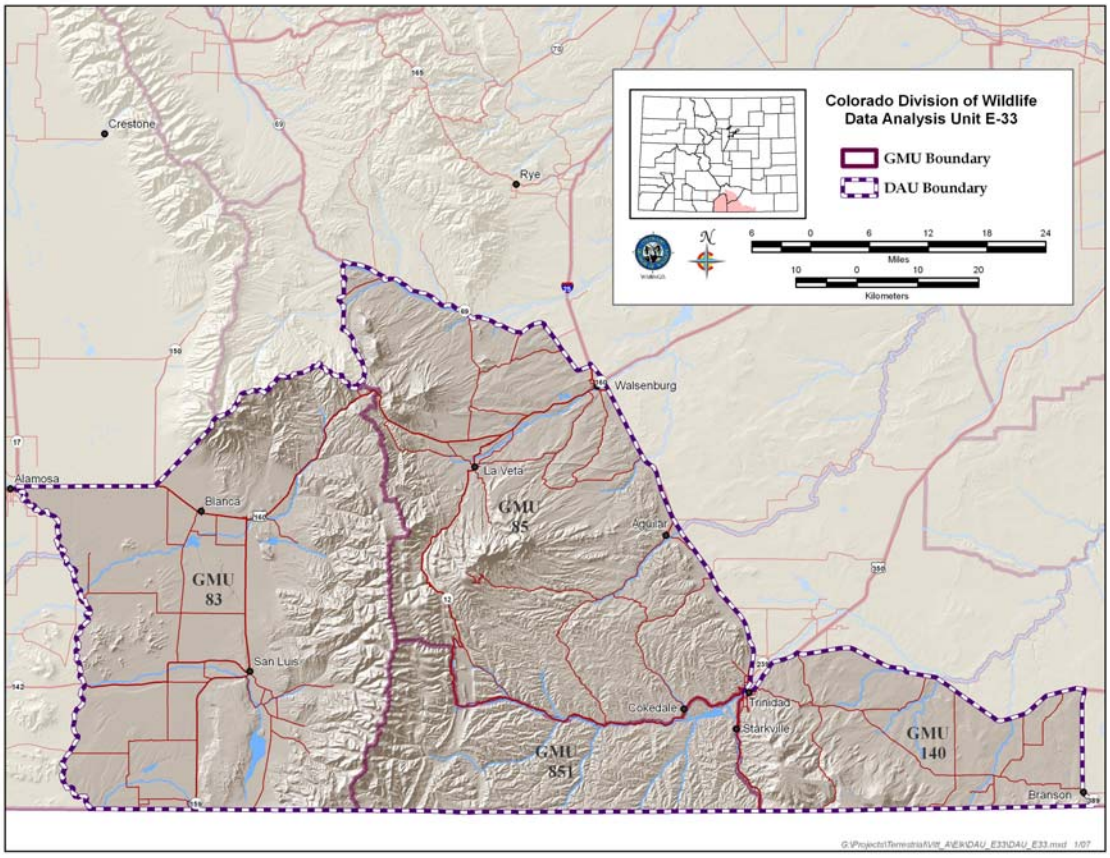

Figure 5. Elk DAU E-33

The Trinchera DAU covers 3,147 square miles ranging in elevation from 5,370 feet where San Francisco Creek flows under Colorado Highway 160 to 14,345 feet at the top of Blanca Peak in the Sangre de Cristo Mountains. Topography ranges from gentle roling hills to ridges and valleys to steep alpine slopes and cliffs. Precipitation ranges from 20+ inches at higher elevations to less than 6 inches in lower elevations. Precipitation falls mainly as winter and spring snows and early summer rains. Winter snows force most elk out of the higher elevations in the DAU but winters are not severe enough to cause concentration of elk.

Major rivers in the area include: Cucharas River, Apishipa River, Purgatoire River, Trinchera Creek (Las Animas County), San Francisco Creek (Las Animas County),

Sangre de Cristo Creek, Ute Creek, San Francisco Creek (Costilla County), and Trinchera Creek (Costilla County).

Of the 3,321 mi^2 in E-33, land ownership is as follows: Private- 2,962 mi^2 (89%); U.S. Forest Service- 109 mi^2 (3.3%); Division of Wildlife- 78 mi^2 (2.4%); U.S. Bureau of Land Management- 51 mi^2 (1.5%); U.S. Fish and Wildlife Service- 18 mi^2 (0.54%) Colorado State Parks- 6 mi^2 (0.17%). (Figure 6)

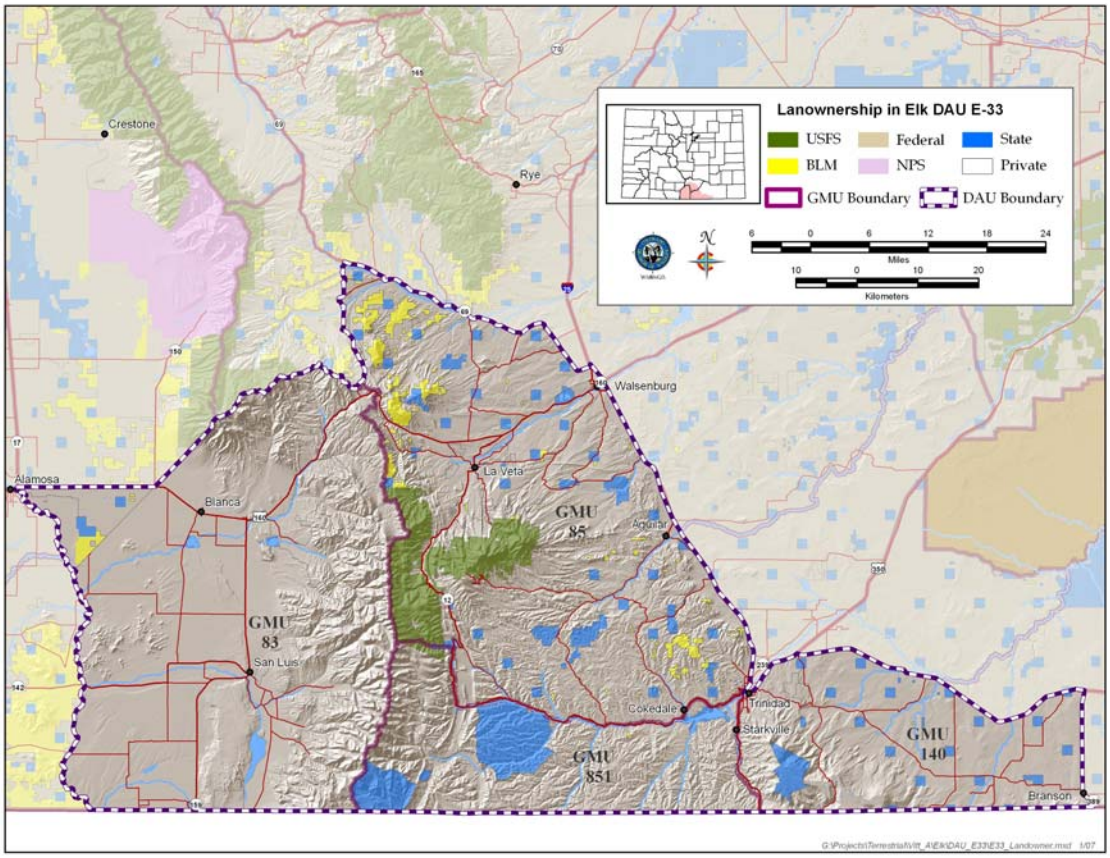

Figure 6. Land ownership in DAU E-33

Approximately 86% of E-33 (2,852 square miles) is elk habitat of which approximately 272 square miles (7.6%) is open to the public for managed hunting (Figure 7). The Division of Wildlife currently possesses the recreational lease on 6,314 acres of State Land Board property in this DAU (<10 square miles). These leased properties include Aguilar TV hill (500 acres) in Las Animas County; Black Hawk (1511 acres), Guillermo Ranch (2118 acres), Little Sheep Mountain (640 acres), Schultz Canyon (960 acres) and South Middle Creek (585 acres) in Huerfano County. Predominate biotic communities are: alpine tundra, sub-alpine conifer, montane conifer, montane shrub, mountain meadow and plains grassland.

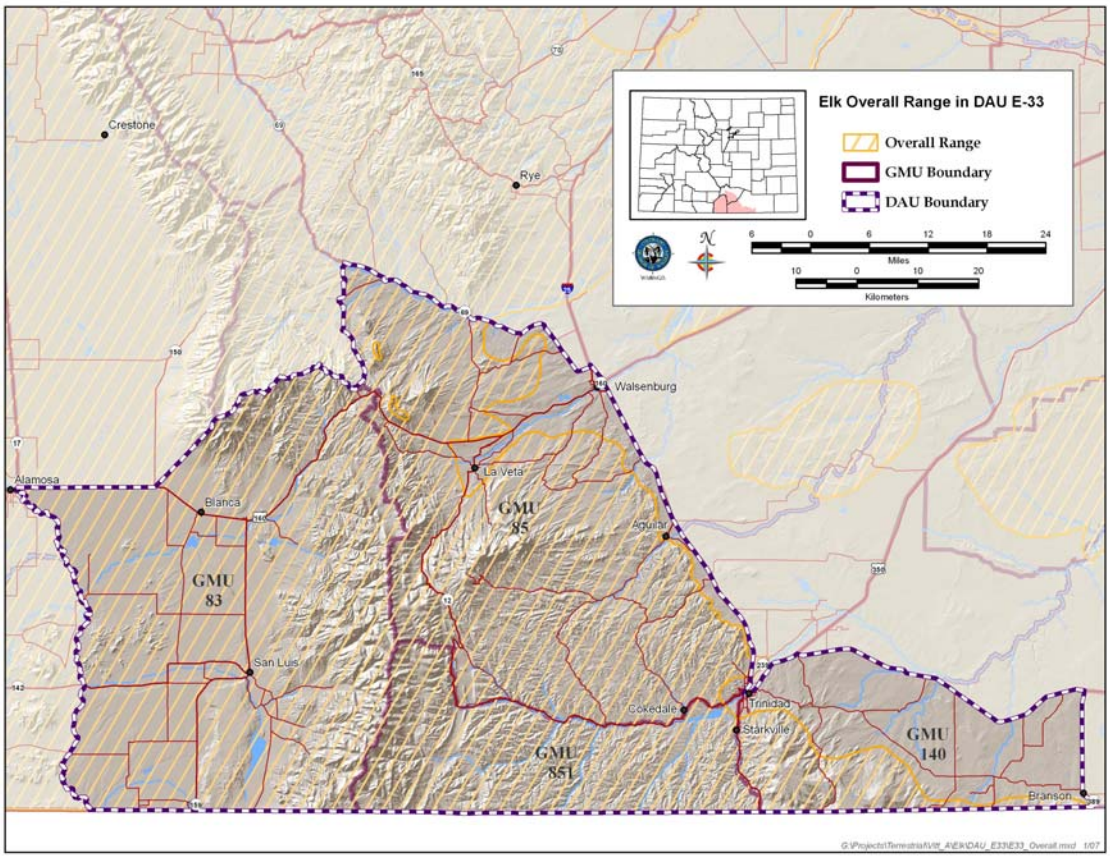

Figure 7. Elk Overall Range in DAU E-33

POPULATION DYNAMICS

Elk Distribution

Elk generally occupy the DAU from the grassland/shrub and Montane Conifer winter range adjacent to foothill areas to the higher mountain mixed conifer and sub-alpine regions in the summer. The overall range of the elk in the DAU is 2,852 square miles or approximately 86% of the DAU.

Elk movement to winter range is generally initiated by increasing snow cover and decreasing forage availability, along with hunting pressure. This movement generally begins in November and continues to January. The movement is generally to lower elevations and could be in all directions because of the configuration of the mountain ranges within which the elk summer. Wintering concentrations of elk are usually found in the foothills adjacent to the higher elevations which consist of heavy timber and little forage. Wintering elk concentrations can be found in the Tercio, James M. John SWA, Apishapa river corridor areas and the lower elevation grasslands around the town of San Luis.

Migrating elk from New Mexico will often cross state boundaries around Tercio, Lorinceto canyon and in the Sanchez Reservoir area. No winter concentration areas have

been identified in this DAU although severe winter range has been identified and mapped (Figure 8). Migration back to summer range usually follows the snow line with the elk dispersing into the overall range of the DAU in the summer and fall.

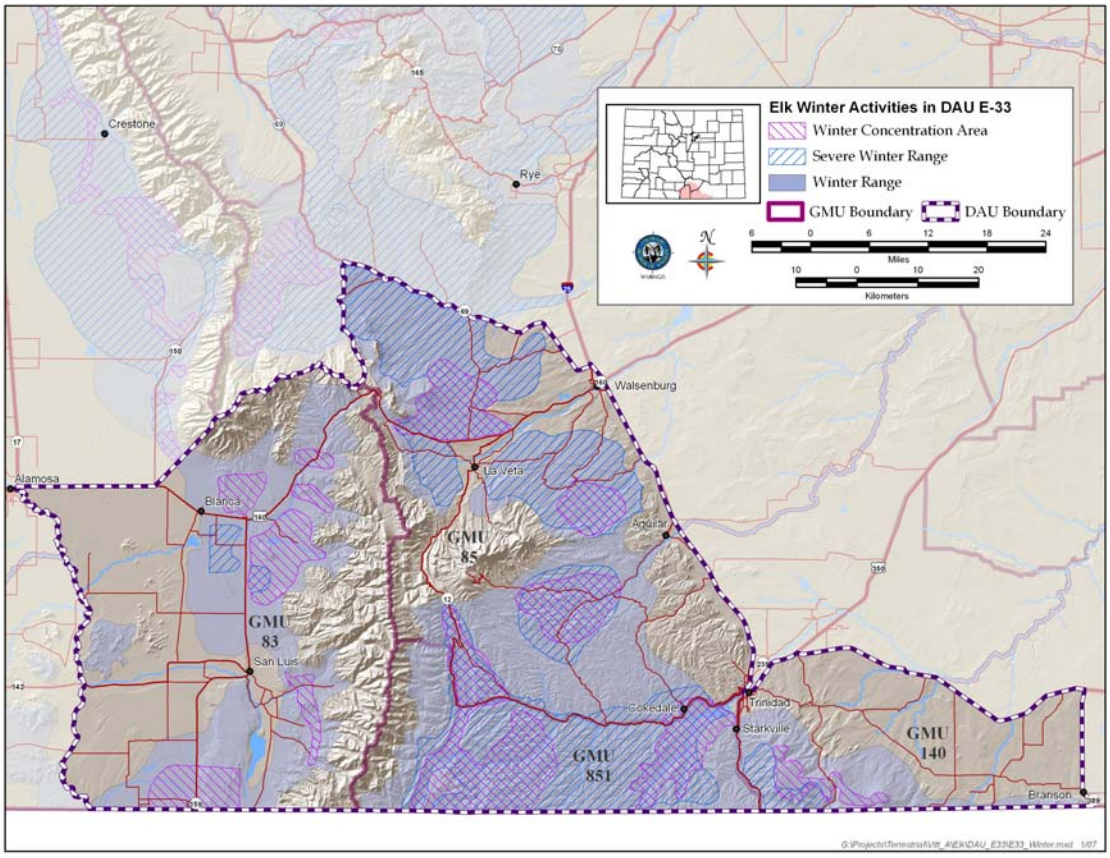

Figure 8. Elk Winter Range in DAU E-33

HERD MANAGEMENT HISTORY

Prologue

The total number of animals in a big game population fluctuates throughout the year. Normally, the population peaks in the spring just after the birth of the young. Populations then decline throughout the year as natural mortality and hunting seasons take animals from the population. Traditionally, the CDOW uses post-hunt populations (immediately after the conclusion of the last regular hunting season, usually in late November) as a frame of reference when we refer to the size of a population of elk. In this manner we have established a reference point and can eliminate confusion when referring to populations.

Realistically, elk population objectives are determined by a combination of variables that are woven together in a manner best suited to satisfy all the demands in order to arrive at a final objective number. The variables involved include biological data, economic, political and recreational considerations, along with domestic livestock concerns and

vegetative considerations to name some of the most prominent factors. Population objectives are often set at a level consistent with the herds' maximum sustained yield (MSY). However, it is very difficult to determine the ranges' MSY and carrying capacity.

Post-hunt populations referred to in this plan have been generated by computer simulation. A brief discussion concerning population assessment is contained in a *Population Assessment Procedure Overview* at the end of this section.

Recent Herd History

The DAU has been unlimited for antlered elk as far back as our records go, with antlerless licenses available through the primary drawing. There has been some level of antlerless harvest since the 1960's.

Post-hunt population size is defined by spreadsheet population modeling using the DEAMAN program provided by Dr. Gary White at Colorado State University. DEAMAN uses population and herd composition data acquired during post-hunt aerial surveys as parameters to model population changes, these parameters may change as new information becomes available.

The Division of Wildlife adopted a population objective of 22,500 elk in 1987 for DAU E-33. At that time the estimated population was nearly 15,800 elk. This population level was developed considering movements of elk across the Colorado/New Mexico state line, and incorporated the entire elk population shared in this area by both states. The modeled elk population steadily increased until it reached a level of about 33,000 elk. Difficulties in modeling the population were related to data exchange and different data collection methodologies between the two states.

In 2003 wildlife managers from New Mexico and Colorado met to discuss populations in the Trinidad and Raton Basins along the Colorado New Mexico border. At that time the elk population for E-33 was modeled using a population level that included elk from both states. Discussions focused around problems with population modeling elk herds that move across state lines and are monitored by different survey methodologies. Harvest data and sex and age ratio collection along with population modeling differences prevented both states from sharing information to assist each other with acquiring population parameters that would assist with population management that was consistent across state lines.

Throughout the discussions it was clear that although we used different methodologies we both estimated the elk population for the area at 33,000 elk. Discussion then focused on elk movements within the area including emigration and immigration of elk from both states. It was agreed that while there was definitely interchange across the border it was estimated to be equal levels in both directions and that the Colorado population could be monitored as a separate entity. At that time discussion were held to determine current population levels within Colorado and an interim population objective for the area.

CDOW Biologists, Area Wildlife Managers and District Wildlife Managers discussed current elk population levels within the DAU and determined that a population of 14,000 animals was a minimum population for the DAU. It was agreed to do an intensive population classification that year to determine population ratios as a starting point for the DAU planning and modeling process.

The elk population model was adjusted to reflect the discussed changes to the modeled elk population.

Antlerless harvest has increased in recent years in an effort to reduce the population. The current post-hunt population estimate is approximately 18,100 animals.

The current sex ratio objective of 50 bulls per 100 cows was also adopted in 1987. The current post-hunt sex ratio is modeled at 43 bulls/100 cows (2006 post-season). The highest observed ratio of 53 occurred in 2003.

Post-hunt Herd Composition

Aerial sex/age composition surveys for this DAU are available from 1983 to present. Initially, these surveys were conducted annually, depending on available funding. However, in recent years the surveys have been done every three years. These surveys, accomplished by helicopter, are designed to sample only a portion of the existing post-hunt population and determine the ratio of bulls to cows and calves to cows. These surveys are often mistaken by the public as total counts of the population. The results are presented as the number of bulls/100 cows and the number of calves/100 cows. Usually, the bull ratio is subdivided into yearling bulls and mature bulls. It is generally accepted that observed bull/cow ratios are lower than in the real population, but that calf/cow ratios are fairly accurate. Aerial surveys are subject to variability due to weather, snow cover, sample size and observers. The average cow/calf ratio observed from 1990 to 2004 was 49 calves per 100 cows, with a high of 60 in 1992 to a low of 23 in 2004. The observed bull/cow ratio from 1990 to 2004 averaged 31 bulls per 100 cows, from a low of 11 in 1990, to a high of 53 in 2003. Statistical errors exist in the observed data because of sampling errors in the data collection. When only one GMU is sampled a year depending on the GMU the data could be either higher or lower than the actual value, because of differences in different segments of the population. The current long-term bull/cow ratio is 50 bulls per 100 cows. Again, it is generally accepted that observed bull/cow ratios are lower than in the real population.

Population Assessment Procedure Overview - Disclaimer

Estimating populations of wild animals over large geographic areas is an extremely difficult and inexact science. As an example, there is currently no statistically sound method available to determine elk population densities. The CDOW, as well as other western states, is conducting research studies to try and answer these questions. There are some systems being studied that may hold promise, but the techniques are not available now. The difficulties with censuses are due to elk habitats and distribution problems. They tend to group into large herds, which play havoc with statistics and randomization. Numerous studies have attempted to accurately count all of the known

number of animals in large fenced areas. All of these efforts have failed to consistently count 100% of the animals. In some cases less than 50% of the animals can be observed and counted. Highly sophisticated methods using infrared sensing have also met with very limited success. The CDOW attempts to minimize this problem using the latest technology and inventory methodology that is available today.

Our current method of determining elk populations is based upon population models, which integrate measured biological factors into a computer generated population simulation. The biological factors used include post-hunt sex and age ratio data taken from helicopter surveys in January, hunter surveys and hunter harvest information. The surveys provide baseline information, which is used to align the models. Other data requirements include winter survival information for different age classes and sexes, wounding loss and winter severity factors. If better information becomes available, such as estimates of survival rates, wounding loss, sex ratio at birth, density estimates or new modeling techniques and programs, the CDOW reserves the right to use this new information and the new techniques as they become available. Making these changes may result in significant changes in the population estimate. It is recommended that the population estimates presented in this document be used only as an index or as trend data. They represent CDOW's best estimate of populations at the time they are presented.

Harvest

Harvest is affected by the number of antlerless permits issued, season structure, weather and population size. When the herds are over objective, harvest is higher because the surplus animals along with annual recruitment must be taken to reach population objectives. When the herd is at the population objective only the annual recruitment may be taken. The harvest history generally reflects the increasing elk population, with the highest harvest corresponding to the highest populations. Also, higher harvests have occurred in recent years when the CDOW has been attempting to slow the population growth in an effort to achieve the population objective. Harvest from 1980 to 2004 has averaged 722 elk and ranged from a low of 223 elk in 1980, to a high of 1,502 elk in 2004. Since 1985 bull harvest has averaged 740, with a low of 309 in 1986 and a high of 892 in 2004. Antlered harvest has been managed through a four point antler restrictions like many areas of the state. Harvest numbers depicted in Figure 9 are for all manners of take.

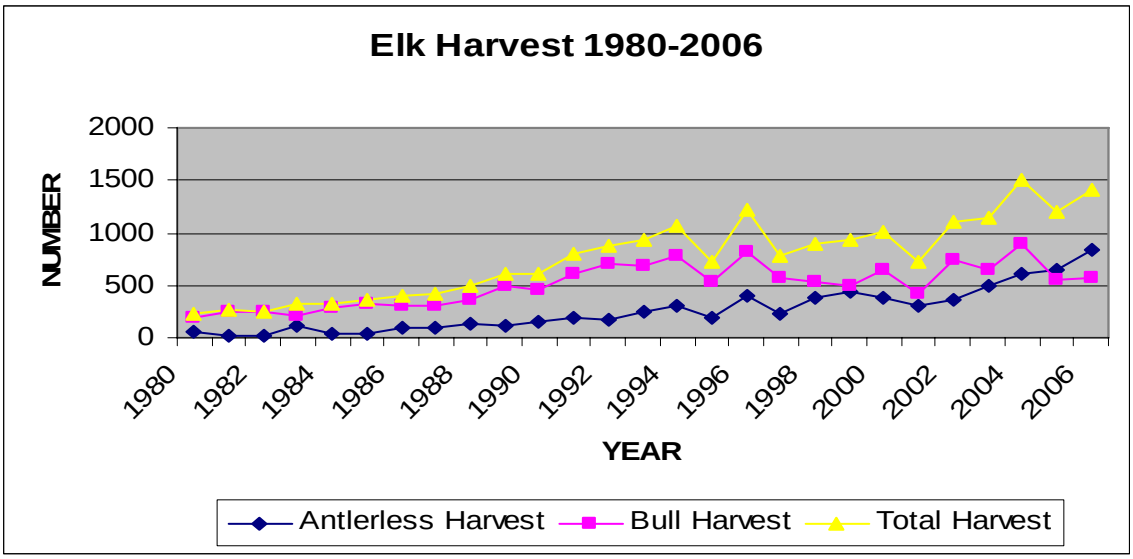

Figure 9. Elk Harvest in E-33 from 1980-2006

Annual success rates have varied from a low of 21% in 1997 to a high of 43% in 2004 and 1991 they averaged 31% from 1989 to 2004. The Hunter Success rates depicted in Figure 10 are over-all success rates for all seasons and all manners of take.

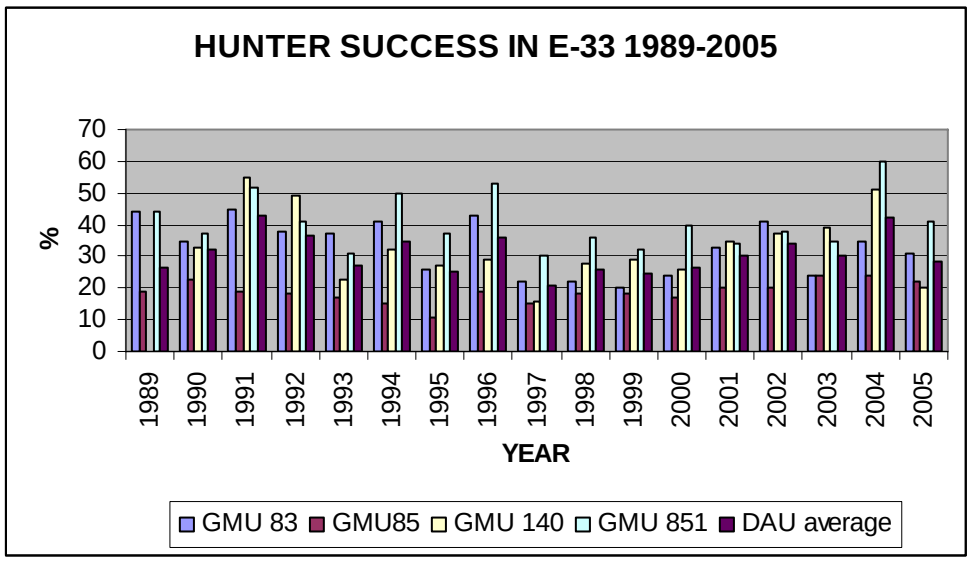

Figure 10. Hunter Success in E-33 By GMU and DAU

Hunting Pressure

The number of hunters per year for all seasons between 1989 and 2005 ranged from a low of 2126 in 1989 to a high of 4,725 in 1999. The increase in the hunter pressure from the mid to late 1990's is a result of the additional antlerless licenses in an attempt to reduce the population towards objective. Hunter numbers depicted by Figure 11 include all methods of take.

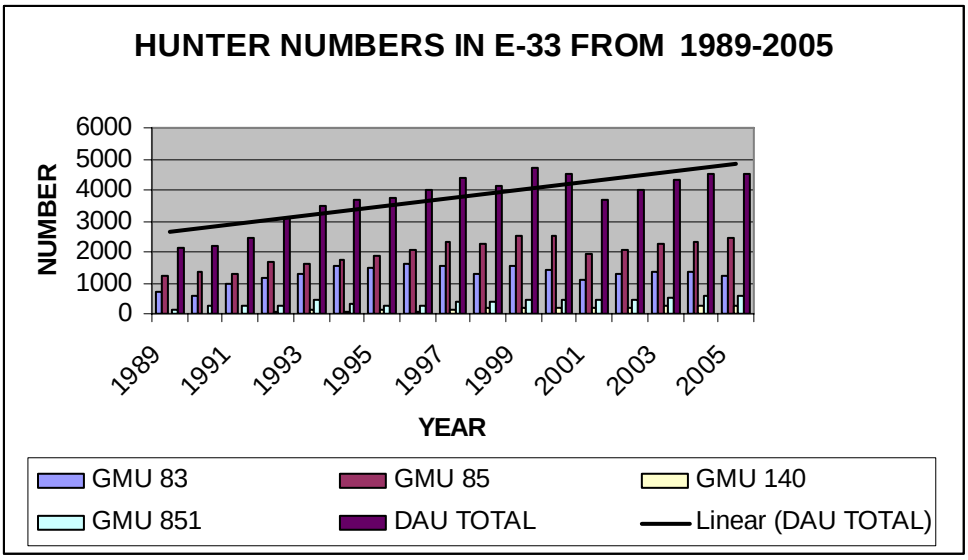

Figure 11. Hunter Numbers by GMU and DAU Total

CURRENT HERD MANAGEMENT STATUS

The 2006 post-hunt population estimate for the Trinchera DAU was approximately 18,100 elk. This is significantly above the current interim population objective of 14,500 elk.

Elk inventory and modeling procedures have become more refined in recent years, and the current models probably do a better job of reflecting actual herd status than the older versions. Recent research has shown that elk herds have a much higher natural annual survival than previously thought and therefore can sustain a higher level of harvest than the earlier models predicted. It is important to remember that herd modeling is an ever evolving science and with new information can change rapidly.

The current long-term post-hunt sex ratio objective is 50 bulls per 100 cows. In 2003 the highest sex ratio of 53 bulls per 100 cows was observed. Using harvest data, observed data and survival rates, the current model estimates a post-hunt ratio of 52 bulls per 100 cows.

Issues and Strategies

The most important aspect of the DAU planning process is obtaining input from all segments of the public. In order to accomplish this, the CDOW held open public meetings to gather recommendations on the goals and objectives of the DAU plan.

In December of 2006 500 questionnaires were distributed to randomly selected successful license holders that held elk hunting licenses in the 4 GMU's, of those 11 were returned with address problems. Questionnaires were also handed out to archery and 2nd and 3rd season hunters by local District Wildlife Managers in an effort to sample preferences regarding the DAU objectives. We received a total of 156 responses to the questionnaire from sportsmen, landowners, environmental concerns, outfitters and interested

individuals. A summary of the results of the questionnaire are presented in this report as Appendix A.

In 2007 the CDOW held three public meetings in order to obtain issues and concerns. Public meetings were held in Trinidad on the 26th of February 2007, La Veta on the 28th of February 2007and in Fort Garland on the 2nd of March 2007. There were 18 attendees in Trinidad, 21 in La Veta and 33 in Fort Garland. Information presented included past management in E-33, the objectives of the DAU plan and several population and sex ratio alternatives for consideration. Questionnaires were handed out and mailed to select landowners in the area along with being handed out at the public meetings. This resulted in 72 questionnaires being returned. The results of the landowner and public meeting questionnaires are summarized in Appendix B.

From the responses we identified these Issues and Concerns:

1. Housing Development – This DAU has in the last decade seen a rapid development of housing in areas that once were part of elk ranges. Ranches have been subdivided and natural habitats have been changed or eliminated. This includes direct loss of habitat and effective loss of surrounding habitat due to harassment from people and pets. This development has combined to reduce the amount of useable winter range.

2. Maintaining high bull/cow ratios – The management of quality trophy opportunities on public and private lands is very important to a large segment of the public in this DAU. CDOW's objective is to maintain E-33 as a highly productive elk population that can annually support a harvest similar to those it has supported in the past. However, the maintenance of population levels that are acceptable to all segments of the society, along with one that is in balance with its habitat is very difficult to achieve.

3. Methane Development – Methane development within the DAU began in the in the late 1980's but did not become have a large impact to the elk habitat until extraction techniques improved in the late 1990's. Since that time development has increased dramatically with wells being drilled on an average density of six wells per section. With the corresponding maintenance and drilling, human activity levels have shown the same dramatic increase. Road densities have increased substantially in those areas affected by methane development within the DAU.

4. Private land access – With over 89% of the DAU in Private ownership hunter access is a continuing concern in the DAU. Trespass issues and private landowner rights were identified as problems in the area especially in GMU's 140, 851 and 83. Hunter access to the elk population especially for antlerless harvest is a growing concern. The Division of Wildlife has purchased 38,000 acres and leased 6,314 acres since the DAU plan was written in 1987 to help with hunter access in the area.

DEVELOPMENT OF ALTERNATIVES

The primary purpose of this DAU plan is to determine long-term post-hunt population and herd composition objectives. Herd composition is determined by calf/cow and bull/cow ratios. While bulls/cow ratios can be manipulated with different management practices, calf/cow ratios are determined by many different environmental factors, over which managers have no control. Listed below are a few of the many possible alternatives that could be considered to accomplish these objectives.

Each alternative includes a brief discussion of management variables that would probably occur for that population level. Generally, the lower the population objective the lower the investment needs to be in habitat improvements. Conversely, as the population objective increases, the larger the investment needs to be. Habitat management practices vary in labor intensity, costs and the life expectancy of the project. Individual practices that should be considered include prescribed firs, fertilization, seeding, water development, fencing, timber management, travel management and others.

Game damage problems, although closely tied to the severity of the winter, would probably decrease under the lower population alternatives, and would increase with increasing population levels.

Higher populations will also support higher hunter harvest, increase hunter opportunity, and increase the fiscal benefits to the economy. A population objective that involves reducing the number of hunting licenses by 10% will also reduce the economic benefits to the state and local counties involved by approximately 10%. The population objectives below are examples of management alternatives.

Population Objective

The changes made to the manner that the CDOW has modeled the current population facilitates a lower population objective for E-33, all objectives will be a reduction from the population objective of 22,500 established in 1987.

1. **Maintain population at 16,000-18,000 (Current population level)**

   General Discussion – CDOW's current model indicates the population of has more than 18,500 animals. This is the population level that was most acceptable to the respondents to the surveys. Advances in population modeling programs and research indicate adult survival rates are higher than previously predicted by outdated modeling programs. For the purposes of developing population alternatives a population estimate of 16,000-18,000 elk will be used.
   Game Damage – Game Damage problems would be similar to current levels under this alternative. Fence and crop damage would be a concern to landowners.
   Habitat Improvement – Habitat improvement projects would be needed for distribution problems as they arise and as a result of lost habitat due to development, etc.
   Season Framework - The season framework approved for the 2006 hunting season could be maintained. The current harvest strategy will continue until adequate

antlerless harvest has been achieved and then the antlerless harvest would be reduced to levels necessary to maintain the population objective.
Fiscal Impacts – License sales would be remain at 2006 levels in order to maintain the population at the population objective.

2. Decrease the population objective to 14,000 to 16,000(12.5% decrease)

General Discussion –This is the population level that was the second most popular to the respondents of the surveys, and is slightly higher than most of the landowners indicated in their responses to the survey. This is most likely more in line with the carrying capacity of the land as resource damage has been documented by the local DWM's in the affected GMU's at the current elk population levels.
Game Damage – Game damage problems such as damage to growing hay, native rangeland and fences would most likely decrease. Local ranchers and farmers have indicated that at these population levels would be more tolerable particularly for loss of forage on ranges and fence damage.
Habitat Improvement – Range improvements such as burning, seeding, fertilization and mechanical treatments of vegetation and reduction in competition with livestock would be necessary in order to successfully support a larger elk population. Extensive burning on summer and winter ranges would benefit elk, but would be detrimental to mule deer if extensive shrub-lands were converted to grasses.
Season Structure – Season structure could remain largely intact. Initially, the population would be decreased from present levels by increasing the number of antlerless hunting licenses. Once the new objective is obtained, less licenses than are presently available would likely be necessary to hold the population at the new lower level.
Fiscal Impacts – At lower population levels income to the state and local economies would decrease by providing sustained increased harvest.

3. Decrease population Objective to 12,000-14,000 (25% decrease)

General Discussion –This would reduce hunting opportunity across all segments of the hunting public including archery, muzzle-loading and rifle hunters. This alternative would decrease the level of hunter satisfaction and would be contrary to the wishes of most hunters, but would be the most favorable alternative to the local ranching population. With the limitations on obtaining antlerless harvest within the DAU this population objective may not be obtainable. Antler-less license numbers would have to be increased along with more either-sex licenses being issued. Hunter numbers would have to be increased in an area with limited public access opportunities. Hunter numbers have reached a threshold in this area and it is unlikely that we would be able to increase antlerless harvest to a point where we can reach this objective.
Game Damage – Game damage problems may be below present levels, with most damage occurring during severe winters. Landowners would notice a decrease in the size of herds and fence damage may decrease. At this level elk would

possibly utilize natural forage to a greater extent and probably disperse over the winter range to a greater degree, which may reduce damage complaints.
Habitat Improvement – At this level, winter populations would likely be closer to what the winter range might carry during severe winters. Habitat improvement projects might not be as important or could be delayed or reduced in size or number. Competition with deer would be reduced. Vegetation may recover somewhat from the current condition on winter ranges.
Season Framework – The current season framework would be maintained with more licenses available to hunters. More either-sex licenses would be made available along with changes to bag limits would be necessary to reach the harvest objective After the initial herd reduction to reach herd objective the license numbers in the late season would be reduced. It is unlikely that we would be able to maintain the higher harvest levels during the regular season so late seasons would be retained with license reductions. Private land only and regular season antlerless licenses would be reduced to maintain the population at a lower objective.
Fiscal Impacts – At a lower population level, license sales would be decreased. Local businesses would see a decline in hunter related income.

Herd Composition (Bull/Cow Ratio)

General Discussion – The current bull/cow ratio is a result of limited access in the area due to the large amount of private land in the DAU causing a decrease in the antlered harvest over several years. This has increased the opportunity for more bull elk to survive several hunting seasons and in most parts of the DAU. The exception is GMU 85 where most of the public land occurs; in this area our bull cow ratios are slightly lower than the remaining portions of the DAU. Accurate bull cow ratios are hard to obtain as some portions of the DAU are not regularly flow and wintering populations of bulls are harder to find in the regularly flown areas. Most areas with unlimited antlered licenses are unable to maintain a bull cow ratio of above 20-25 bulls per 100 cows even with an antler point restriction in place. It is generally accepted that observed ratios are lower than actual ratios. The average number of observed bulls per 100 cows since 1995 is 35, while the population model has projected the average since 1985 at 35 bulls per 100 cows. The current long-term objective is 50 bulls per 100 cows.

1. **Maintain current post-hunt sex ratio objective of 45-50 bulls/100 cows**.

Habitat Improvement and Game Damage – This alternative would not have any effect on the habitat, the need for habitat improvement projects or game damage complaints. Since a population objective has been established, the total number of elk remains the same.
Season Framework – The season framework could be maintained in its present format with a slight reduction in the available limited antlered licenses.
Survival rates, quality and quantity of Harvest – With the current management of the population including over-the-counter licenses the objective may not be obtainable. In area with little public access it is possible but in areas with more

access the bull cow ratio will be more like 20 bulls per 100 cows. To obtain this ratio would require totally limited licenses.
Fiscal Impacts – Without going to totally limited licenses would have to be dramatically reduced in the first and fourth seasons, resulting in fiscal impacts for those two seasons. In the second and third seasons there would be no change in this parameter.

1. Decrease current post-hunt sex ratio objective to 40-45 bulls/100 cows.

Habitat Improvement and Game Damage - This alternative would not have any effect on the habitat, the need for habitat improvement projects or game damage complaints. Since a population objective has been established, the total number of elk remains the same.
Season Framework – The season framework could be maintained in its present format. Due to various factors the observed bull/cow ratio has stabilized at about 35 bulls per 100 cows. It is believed that the current bull/cow ratio is at this level.
Survivial Rates, Quality and Quantity of Harvest –The quality of harvest would not likely change, as it is not likely that we would see a major change in the age structure of the bulls.
Fiscal Impact – The number of hunters and license sales would remain the same.

2. Decrease the Post-hunt Sex Ratio to 35-40 bulls/100 cows.

This is the current average bull cow ratio for the DAU; this takes into account the unlimited licenses for the second and third seasons, the limited access in some areas and the better access in others.

Habitat Improvement and Game Damage - This alternative would not have any effect on the habitat, the need for habitat improvement projects or game damage complaints. Since a population objective has been established, the total number of elk remains the same.
Season Framework – The season framework could be maintained in its present format. Due to various factors the observed bull/cow ratio has stabilized at about 35 bulls per 100 cows. It is believed that the current bull/cow ratio is at this level.
Survivial Rates, Quality and Quantity of Harvest –The quality of harvest would not likely change, as it is not likely that we would see a major change in the age structure of the bulls.
Fiscal Impact – The number of hunters and license sales would remain the same.

Appendix A: 2006 Hunter Questionnaire results

Survey Purpose and Intent

The purpose of this questionnaire was to assess public attitudes toward elk management in the Trinidad, La Veta and San Luis areas, specifically in Game Management Units 83, 85, 140 and 851. The Colorado Division of Wildlife (CDOW) is responsible for developing elk population management plans for the Trinchera DAU.

In Colorado, big game populations are managed for specific geographic areas, called Data Analysis Units (DAU). The DAU plan analyzes information for two primary decisions: 1) how many animals should the DAU support and 2) what is the herd's most appropriate male to female ratio, better known as the sex ratio. The DAU planning process examines the biological capabilities of the elk and elk herds, and public preferences. An appropriate balance of each is sought and reflected in the herd objectives, which are set for a five year period of time. Annual hunting seasons are then designed with the intent of keeping the population at or near the selected herd objectives.

Public input is an important part of the DAU planning process. It is vital that public desires are integrated into these plans so that established goals are widely accepted and biologically sound. In an attempt to maximize public input, a questionnaire was developed and distributed to interested publics.

In the development of DAU plans, results of surveys such as this one are considered along with other forms of input the CDOW receives from land management agencies and the public, via public meetings, letters, phone calls, and testimony before the Colorado Wildlife Commission. All public input is integrated with other significant elements in making the final selection of a preferred alternative for population and composition (male/female ratios) objectives for the elk herds in GMUs 83, 85, 140 and 851. The Colorado Wildlife Commission makes final determination on the herd objectives which will then be in effect for five years.

Methods

The target population for the study consisted of residents of the Trinidad, La Veta and San Luis areas, individuals owning land in the Trinidad, La Veta and San Luis areas, and individuals who hunted elk in the Trinidad, La Veta and San Luis areas.

Surveys were distributed by Area-11 officers in the field during all the fall archery, muzzleloader and second and third rifle elk hunting seasons in the appropriate GMUs. Surveys were also distributed to landowners by District Managers. Five-hundred surveys were mailed to a randomly selected segment of the 2400+ successful drawing license holders within the aforementioned GMU's.

An additional segment of landowners were mailed an additional questionnaire. Those landowners in GMU's 85, 140 and 851 were mailed a questionnaire that addressed elk and elk management options and questions while those landowners in GMU 83 had the local DWM hand deliver the questionnaires about elk management options to them.

All surveys had a postage paid envelope attached with instructions for return mailing. 500 questionnaires were mailed to license holders within the appropriate GMU's. 155 questionnaires were completed and returned for a response rate of 31%.

Note: This survey effort is not a "scientific study" in the strictest sense of the term. While efforts were made to obtain a significant mix of residents, landowners, and hunters, the sample is not a representative cross-section of the target population. "Representativeness" refers to the

extent to which relevant populations were included in a study and whether or not a probabilistic sampling scheme was used.

Results

Results are presented in two sections. "Survey Highlights" summarizes the important results of this survey, particularly as they apply to the DAU plan objectives. The "Summary of Open-ended Comments" categorizes the additional comments received and provides insight into the main issues that people thought were important for the CDOW to consider.

The actual results of the survey may be reviewed at the Pueblo Service Center by contacting Allen Vitt, Terrestrial Biologist at 719-561-5306.

SURVEY HIGHLIGHTS

ABOUT THE RESPONDENTS

X Of the 155 respondents, 75% are Colorado residents and 25% are non-residents.

X Of the 155 respondents, 34% live in the DAU's listed, for an average of 27 years. 37% own or lease property in the DAU's, with an average of 501 acres.

ELK

X People are very interested and concerned about the elk population in the Trinchera DAU. The majority of respondents (70%) are "very interested" in seeing elk in the Trinchera DAU, and 93% are "very interested" in hunting elk. Forty-nine percent of respondents indicated they were "very interested" in learning more about elk management, and 36% are "very interested" in providing input for (or participating in) decisions about elk management in the Trinchera DAU.

X Concerns about elk welfare are issues that interest people. Fifty-nine percent of respondents were "very concerned" about the reduction in elk habitat due to increased human population and development; 28% were "very concerned" about predation on elk by coyotes, bears, and mountain lions with 31% "very concerned" about predation on elk by dogs; and 44% were "very concerned" about the potential of starvation of elk during winter.

X The majority of respondents (35%) indicated they would like to see the population remain at 18,000 elk with 24% favoring a decrease in the population objective to 16,000 elk and 29% favoring a decrease in the population objective to 14,000 elk.

X The majority of respondents (84%) want to see a bull:cow ratio of 45-50 bulls per 100 cows.

X Regarding elk management by the CDOW, 25% of respondents thought the CDOW was doing a "fair" job, 30% thought the CDOW was doing a "very-good" job and 35% of respondents thought the CDOW was doing a "good" job of managing elk in the Trinchera DAU.

X Thirty-three percent of hunters were "somewhat- satisfied" with their past elk hunting experiences in the Trinchera DAU. While 23% were "very-satisfied" and 21% were "somewhat-dissatisfied" with past elk hunting experiences.

X Eighteen percent felt "moderately crowded", 37% felt "slightly" crowded and 39% felt "not crowded at all" while hunting elk in the Trinchera DAU.

X Thirty-three percent of people rated the quality of elk hunting in the Trinchera DAU as "very-good", with 25% of the people rating the quality of elk hunting as "good" and 28% rating the quality as "fair.

X In the Trinchera DAU, 48% of respondents indicated "obtaining meat" was the most important factor when elk hunting; for 21% it was to "get a trophy" elk, and for 18% it was "few contacts with other hunters".

X When asked "If you indicated that you prefer an increase in the elk population objective please rank the following methods you would support:"
Thirty-two respondents ranked predator control as the first method they would support to improve elk populations in the area. Thirty-two ranked "controlling access to important calving and wintering areas" as their first choice, with 27 ranking "controlled burns" as their first choice. Controlling grazing on public land was the forth most popular choice with educating and promoting "Holistic grazing" management practices on private land being ranked sixth. Mechanical treatment to improve habitat was the seventh most popular practice to increase the elk population within the DAU.

X When asked "If you indicated a decrease in the elk population objective please rank the following methods you would support:"
Thirty-eight respondents ranked "more either-sex licenses" as the first method they would support to decrease the elk population in the area. Twenty-nine respondents wanted more antlerless licenses during the regular seasons and 27 respondents wanted more antlerless licenses during the late seasons. Eighteen respondents listed "longer antlerless seasons" as their first choice and 18 respondents listed "more PLO antlerless seasons" and 16 respondents' listed "earlier antlerless elk seasons" as their first choice.

SUMMARY OF OPEN-ENDED COMMENTS

At the end of the questionnaire, people were asked to provide additional comments they would like to make about elk in south-central area. Numerous comments were received. These comments provide insight into the main issues that are important to people in elk management. The comments were analyzed by categorizing them into like groups and reporting the number of comments in each group. Comments were grouped into 13 categories, reported below; the number of comments received for each category is enclosed by parentheses. The categories are listed in descending order based on the number of comments received. A few of the typical responses are highlighted by arrows.

1. Elk license issues (30 comments)

   % Provide more either-sex and antlerless licenses.

   % Issue over-the counter antlerless licenses for 3 years to reduce the elk population.

   % Allow hunters to possess both a bull and a cow tag for the regular season.

   % Limit the number of bull licenses; do not be so liberal on license allocation.

   % Make all licenses available by drawing only.

   % Have a spike season.

   % Have a later bull season; increase the opportunities during the late seasons.

   % Lower Non-resident fees.

2. Hunting access issues, including the use/misuse of all-terrain vehicles. (29 comments)

   % Improve the access to private lands.

   % Restrict ATV use to game retrieval only.

   % Relax the restrictions on ATV's for seniors.

   % More ATV restrictions on public land.

3. Issues that affect hunting opportunity such as changes in hunting regulations, licensing, quality aspects. (23 comments)

   % Require only one habitat stamp per hunter or fisherman.

   % Get rid of the drawing make all licenses available over-the-counter.

   % Do not require hunters or fishermen to buy a habitat stamp.

   % Extend the season for seniors of Las Animas County only.

   % Allow residents that have not filled their tag to hunt during the fourth season.

   % Do not allow rifle bear, turkey or muzzleloading hunting to occur during the archery season.

   % Have less seasons but make them longer.

% Create a December antlerless season in GMU 83.

% Issue more youth licenses.

4. Issues related to the quality and quantity of elk and elk habitat (13 comments)

% Improve the elk habitat on public land.

% Create more food plots.

% Burning timber is needed to provide habitat.

% Control the rate of development in the area.

5. Elk population issues (10 comments)

% Increase the elk population.

% Increase the bull to cow ratio, manage for trophy bulls.

% Feed those animals instead of them being killed by trains and automobiles.

% Reduce the numbers of cows in the herds.

6. Some residents feel that non-resident licenses should be limited in some manner (7 comments)

% Too many non-resident tags for the number of resident tags. Increase the number of residents licenses.

% Do not allow any non-resident hunters.

7. Issues related to methane development and impacts to hunting (5 comments)

% The methane companies should be required to blend in the well pads and roads, make them less visible.

% Restrict the amount of methane well drilling in the area and study its effects on elk habitat and elk populations.

% Pioneer Energy should not be doing an elk study it is a conflict of interest.

8. Miscellaneous Comments (5 comments)

% There needs to be an impuissance to educate dog walkers and pinõn pickers on safety during hunting seasons.

% The DOW needs to pay more money for elk damage.

% Out of state hunting is becoming too expensive.

% Quit spending money on TV ads, It could be put to better use other ways.

9. Landowner preference in obtaining a elk license (5 comments)

% There should be fewer licenses given to landowners and outfitters.

% Landowners should be given one license at no charge for every species on their property.

% Issue more landowner vouchers.

10. Issues relating to predator control and how it may impact elk and elk populations (4 comments)

There is concern that predators including dogs, coyotes, mountain lion and black bear, are killing a significant portion of the elk population. The general feeling is that the CDOW should take action to reduce the number of predators.

% Issue more bear licenses.

% Manage the cats.

% The DOW needs to do more to address the problem of dogs chasing wildlife.

11. Wildlife Ranching issues and concerns (3 comments)

% Improve the RFW season structure, allow archery and muzzloading seasons for public hunters.

% Allow non-residents to apply for RFW licenses.

12. Issues related to hunting on the Bosque del Oso SWA (5 comments)

% Issue more licenses on the BDO SWA.

% Place a parking area near Monte Leon Canyon.

% For every December antlerless season on the BDO SWA issue one either-sex license.

% The January season on the Bosque was a smart elk management decision.

% Open a few more roads on the Bosque del Oso SWA.

Appendix B: 2007 Landowner and Public Meeting Questionnaire results

Results

Results are presented in two sections. "Survey Highlights" summarizes the important results of this survey, particularly as they apply to the DAU plan objectives. The "Summary of Open-ended Comments" categorizes the additional comments received and provides insight into the main issues that people thought were important for the CDOW to consider.

The actual results of the survey may be reviewed at the Pueblo Service Center by contacting Allen Vitt, Terrestrial Biologist at 719-561-5306.

SURVEY HIGHLIGHTS

ABOUT THE RESPONDENTS

X Of the 78 respondents, 97% are Colorado residents and 3% are non-residents.

X Of the 78 respondents, 81% live in the DAU's listed, for an average of 33 years. 67% own or lease property in the DAU's, with an average of 3,617 acres.

ELK

X People are very interested and concerned about the elk population in the Trinchera DAU. The majority of respondents (61%) are "very interested" in seeing elk in the Trinchera DAU, and 71% are "very interested" in hunting elk. Fifty-five percent of respondents indicated they were "very interested" in learning more about elk management, and 44% are "very interested" in providing input for (or participating in) decisions about elk management in the Trinchera DAU.

X Concerns about elk welfare are issues that interest people. Forty-five percent of respondents were "very concerned" about the reduction in elk habitat due to increased human population and development; 20% were "very concerned" about predation on elk by coyotes, bears, and mountain lions with 26% "very concerned" about predation on elk by dogs; and 48% were "very concerned" about the potential of starvation of elk during winter.

X Thirty-two percent of respondents were "very concerned" about elk and vehicle collisions. While 46% of respondents were "very concerned" about economic loss to landowners from elk damage, and 36% were "very concerned" about the revenue that elk hunting or viewing provides for local businesses.

X The majority of respondents (33%) favored a decrease in the population objective to 14,000 with 15% indicating they would like to see the population remain at 18,000 elk. Twenty-eight percent of respondents favored a decrease in the population objective to 16,000 elk.

X The majority of respondents (59%) want to see a bull:cow ratio of 45-50 bulls per 100 cows. The remaining 41% wanted to see a bull:cow ratio of 35-40 bulls per 100 cows.

X Regarding elk management by the CDOW, 37%of respondents thought the CDOW was doing a "good" job, 30% thought the CDOW was doing a "very-good" job and 19% of respondents thought the CDOW was doing a "fair" job of managing elk in the Trinchera DAU.

X Thirty-three percent of hunters were "somewhat- satisfied" with their past elk hunting experiences in the Trinchera DAU, 29% were "very-satisfied" and 22% were neither

"satisfied" nor "dissatisfied" with past elk hunting experiences.

X Thirty-one percent felt "moderately crowded", 27% felt "slightly" crowded and 29% felt "not crowded at all" while hunting elk in the Trinchera DAU.

X Sixty-four percent of people rated the quality of elk hunting in the Trinchera DAU as "good" or "very-good", with 26% of the people rating the quality of elk hunting as "fair".

X In the Trinchera DAU, 36% of respondents indicated "obtaining meat" was the most important factor when elk hunting; for 32% it was"hunting close to home"; for 19% it was to "get a trophy" elk, and for 14% it was "few contacts with other hunters".

X When asked "If you indicated that you prefer an increase in the elk population objective please rank the following methods you would support:"

Twenty-one respondents' ranked controlled burns as the first method they would support to improve elk populations in the area. Thirteen ranked each of the following practices as their first choice: "controlling access to important calving and wintering areas", "predator control" and "mechanical treatment to improve habitat". "Educating and promoting "Holistic grazing" management practices on private land" was the fifth most popular choice; with "controlling grazing on public land" being ranked sixth.

X When asked "If you indicated a decrease in the elk population objective please rank the following methods you would support:"

Twenty-two respondents ranked "more either-sex licenses" as the first method they would support to decrease the elk population in the area. Nineteen respondents wanted more antlerless licenses during the late seasons and 12 respondents wanted more antlerless licenses during the regular seasons. Sixteen respondents listed "more PLO antlerless seasons", 15 respondents' listed "longer antlerless seasons" with 9 listing "earlier antlerless elk seasons" as their first choice.

SUMMARY OF OPEN-ENDED COMMENTS

At the end of the questionnaire, people were asked to provide additional comments they would like to make about elk in south-central area. Numerous comments were received. These comments provide insight into the main issues that are important to people in elk management. The comments were analyzed by categorizing them into like groups and reporting the number of comments in each group. Comments were grouped into 13 categories, reported below; the number of comments received for each category is enclosed by parentheses. The categories are listed in descending order based on the number of comments received. A few of the typical responses are highlighted by arrows.

1. Hunting access issues, including the use/misuse of all-terrain vehicles. (9 comments)

   % Improve the access to private lands, especially for youths.

   % Educate landowners on how to deal with hunters.

   % Place more emphasis on education and enforcement of the regulations for ATV's and private property/trespassing.

2. Elk license issues (8 comments)

   % Provide more either-sex and antlerless licenses.

   % Allow more flexibility in antlerless seasons, if you do not fill you can hunt another season.

   % Put in place a 5 points restriction on bull elk.

   % Limit the number of bull licenses; do not be so liberal on license allocation.

   % Increase the number of licenses available.

   % Make more antlerless licenses available in GMU 140.

   % Harvest less cows, there are 350 class bulls running around without harems.

3. Issues that affect hunting opportunity such as changes in hunting regulations, licensing, quality aspects. (7 comments)

   % Increase the bull:cow ratio.

   % Have more opportunities to hunt during the rut, to disrupt the breeding cycle too many cows are being bred.

   % Have two long seasons rather than 4 short ones.

   % Have less seasons but make them longer.

4. Issues related to poaching or trespassing (7 comments)

   % Trespassing is an issue how do we keep hunters out of populated areas.

   % Poaching is a problem in the area.

   % The fines and penalties for poaching need to be increased, include some jail time.

5. Elk population issues (6 comments)

% Increase the elk population.

% Harvest more elk, decrease the population.

% Increase the bull to cow ratio, manage for trophy bulls.

6. Miscellaneous Comments (3 comments)

% Feed the animals rather than let them get hit by trains and automobiles.

% Keep your elk off my private property, you would not like my cows on your lawn.

% Out of state hunting is becoming too expensive.

7. Issues related to methane development and impacts to hunting (2 comments)

% Educate the public concerning gas company drilling & activity during elk calving.

% The gas companies are impacting the elk during spring and during hunting seasons.

8. Issues related to the quality and quantity of elk and elk habitat (2 comments)

% Improve the elk habitat on public land.

% Burning timber is needed to provide habitat.

9. Issues relating to predator control and how it may impact elk and elk populations (2 comments)

% Harvest more lions.

% There is a concern that lions are being attracted to the high elk populations, and may harm children and livestock.

10. Some residents feel that non-resident licenses should be limited in some manner (1 comment)

% Decrease the number of non-resident hunters.

11. Wildlife Ranching issues and concerns (1 comment)

% Issue fewer antlered licenses on RFW properties.

12. Landowner preference in obtaining a elk license (1 comment)

% There should be more antlerless vouchers available for landowners.

Appendix C: Press release announcing public meetings on DAU plans.

News from the Colorado Division of Wildlife

Contact Name: Michael Seraphin

TRINCHERA GAME MANAGEMENT MEETINGS

The Colorado Division of Wildlife (DOW) is holding public meetings to discuss deer and elk management for the areas around Trinidad, La Veta and Fort Garland. The purpose of these meetings is to discuss the management of deer and elk in GMU's 83, 85, 140 and 851.

Meetings will be held in Trinidad on February 26th at the Trinidad State Junior College multi-purpose room and in La Veta on February 28th at the La Veta Community Center. Both meetings are 7-9 p.m.

The DOW manages big game hunting by dividing specific areas into what are known as Data Analysis Units or DAU's. Those large areas are further divided into smaller geographical areas called Game Management Units or GMU's.

This is a continuation of the DAU planning process and is a chance for public opinion to be incorporated into the DOW herd planning process. Items that will be discussed are the herd population and herd composition objectives that will govern license setting and policy issues for the next ten years.

People who cannot attend the meetings can send written comments to Allen Vitt at the DOW at 600 Reservoir Rd., Pueblo, CO 81005.

For more news about Division of Wildlife go to:
http://wildlife.state.co.us/news/index.asp?DivisionID=3

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