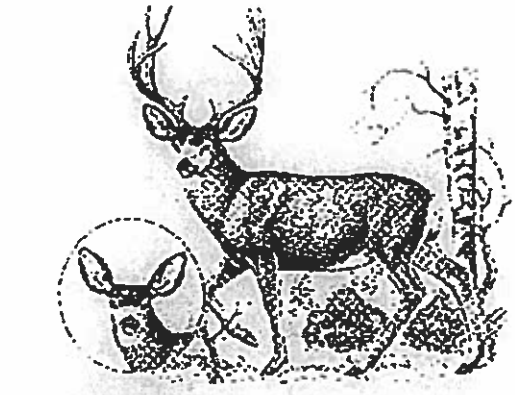

DEER MANAGEMENT PLAN
DATA ANALYSIS UNIT
D - 7

Units 11,211,12,13,131,231,22,23,and 24

Prepared By
Jeff Madison

With Contributions from J. Ellenberger, G. Byrne, and J. Gray

COLORADO · DIVISION OF WILDLIFE ·

DATA ANALYSIS UNIT PLAN
Executive Summary

DAU: D - 7 White River Deer

GMUs: 11,211,12,13,131,231,22,23,and 24.

Current Population Estimate: 67,500

Old Population Objective: 75,000

New Population Objective: 67,500

Percent Change: 10% decrease from old objective
No change from current estimate

Sex Ratio Objective: 20/100/60 Current Sex Ratio: 17.4/100/50

Changes from current objective/management (if any):

The last objective established by the DAU planning process for D-7 was 85,000 deer. It became clear in 1990 that this objective was to high for habitat conditions and a provisional objective of 75,000 was established. A further reduction to 67,500 is recommended until production and survival increases. The new objective should produce a smaller deer herd that is healthier, more productive, has a higher winter survival, and less impact on winter ranges. The new management direction with this deer herd will be in line with the optimum carrying capacity for maximum sustained yield, not maximum carrying capacity.

Describe significant issues raised during public involvement sessions and how the plan addresses those issues:

The issues raised were more focused on distribution problems than on numbers problems, although some landowners did recommend a herd reduction. Private land and deer/livestock problems were few, occurring mostly in areas of traditional deer winter range. A reasonable reduction at this time serves both the DOW, with a change in management philosophy, and the livestock producers, by lessened potential conflict. The Coordinated Resource Management process and the HPP process, as a part of this plan will also focus on site specific distribution problems.

Concerns by sportsmen centered not around herd size, but in increasing and maintaining mature buck numbers. Rather than look to limited license or some type of point limitation, the reduction of the herd to match the maximum sustained yield in concert with a short buck season is recommended to maintain or increase buck numbers.

D-7
Data Analysis Unit Plan

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Appendix

D-7 DAU PLAN DRAFT NOVEMBER 93

Introduction and Purpose

Historically, big game seasons were set either as a result of tradition or political pressures. However well intentioned, past wildlife manager's lack of information often resulted in seasons that little resembled what was actually going on with big game populations or habitat. To a lesser degree, the setting of big game hunting seasons are still traditional and political, however, in Colorado things have changed. The various publics such as the U.S. Forest Service, Bureau of Land Management, sportsmen, guides and outfitters, ranchers, and Chambers of Commerce all have vital interest in the size and composition of the various big game herds.

The Colorado Division of Wildlife is accountable to all of these groups to maintain the state's big game herds at population levels that have been through a public review process and approved by the Colorado Wildlife Commission.

Each individual herd of deer, elk, and antelope is referred to as a Data Analysis Unit (DAU). The DAU boundaries are drawn so that they approximate an individual herd unit where most of the animals are born, raised, and die with as little ingress or egress from other herds as possible. Normally each DAU is composed of several game management units (GMU) that divide the DAU into workable subunits, primarily for harvest management.

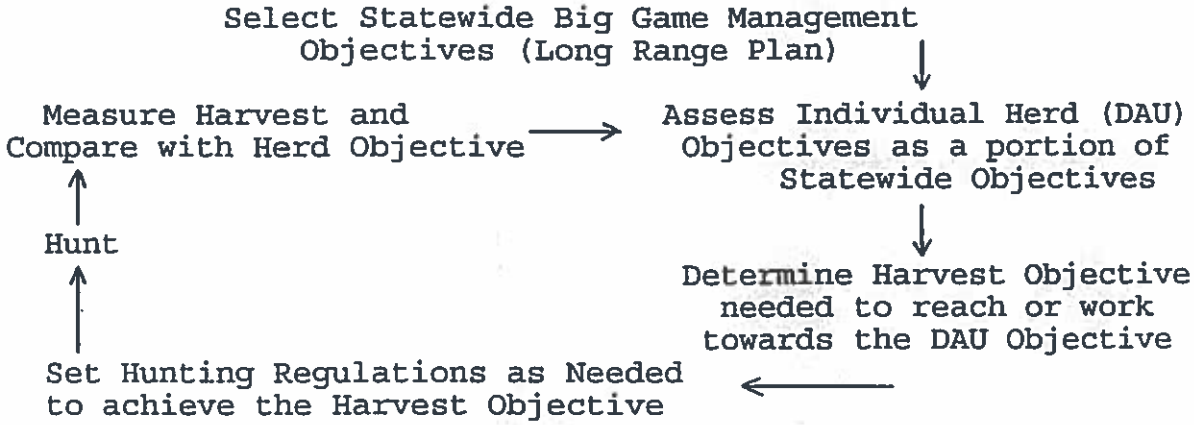
The DAU PLAN deals with two primary decisions - how many animals should the DAU contain, and to a lesser extent, what should be the desired sex ratio (expressed as number of males per 100 females). These numbers are then referred to as the DAU population and composition objectives.

Secondarily, the DAU PLAN collects and organizes most of the important management data for the particular herd into one utilitarian planning document; determines the DAU issues through a public scoping process; identifies alternative solutions to the issues and problems determined in this process; and selects a preferred alternative.

The DAU Plan process is designed to examine the public desires and biological herd capabilities and determine what is an appropriate balance. The public is involved in the determination of these goals by way of public meetings and comments to the Colorado Wildlife Commission. The herd objectives are usually set for a five year period.

The herd population objective drives the most important decisions in the annual big game season setting process - how many animals need to be harvested to maintain or work toward the established objective. The management by objective approach is a long term process based on an annual cycle of information collection, analysis, and decision making that culminates each year

in a hunting season (see the diagram below). The cyclic objective setting approach is designed to key the decision making process to the collection and analysis of information. It also focuses the decision makers, the Wildlife Commission, on "what it is we want."



Description of the Data Analysis Unit

Location DAU D-7 is located in west-central Colorado and is commonly referred to as the White River Deer DAU. Nine Game Management Units (GMUs) are included in D-7: GMUs 11, 211, 12, 13, 131, 231, 22, 23, and 24. The DAU is bounded on the north by Highway 318 and the Yampa River; on the east by U.S. Highway 40, Highway 131, and the Yampa-Williams Fork River divide; on the south by the Colorado-White River divide; and on the west by Douglas Creek-Piceance Creek Divide, Pinyon Ridge, Twelevemile Gulch, and the Little Snake River. DAU D-7 contains approximately 4084 square miles. See map (figure 1).

Physiography

Topography - The major topographic characteristics of D-7 are the Piceance Basin in the southwest, separated from the Axial Basin in the northwest by the Danforth Hills, the Roan Plateau to the south and the Flattops in the southeast. The major drainage include portions of the Yampa, Colorado, and White rivers and all of the Williams Fork River. Elevations range from a high of 12,000 feet at Shingle Peak on the Flattops to a low of 5389 on the White River in the western portion of the DAU.

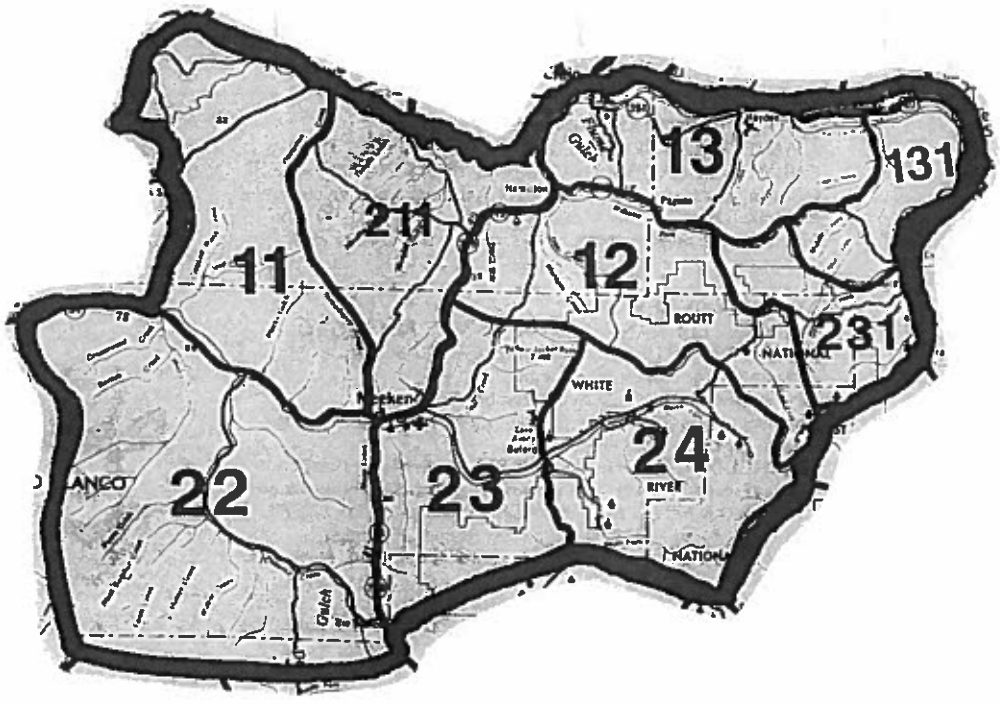
Climate - The climate varies greatly, east to west across the DAU. The high elevations of the eastern portion have severe winters,

DAU D-7

Description of the Data Analysis Unit

Location

DAU D-7 is located in west-central Colorado and is commonly referred to as the White River Deer DAU. Nine Game Management Units (GMUs) are included in DAU D-7: GMUs 11, 211, 12, 13, 131, 231, 22, 23, and 24. The DAU is bounded on the north by Highway 318 and the Yampa River; on the east by U.S. Highway 40, Highway 131, and the Yampa-Williams Fork River divide; on the south by the Colorado-White River divide; and on the west by Douglas Creek-Piceance Creek Divide, Pinyon Ridge, Twelvemile Gulch, and the Little Snake River.



heavy snowfall, and short cool summers. The portions to the west in Units 22 and 11, usually have comparatively mild winters with moderate snowfall and warm, dry summers. The mean annual precipitation varies from 12 inches near Craig to 23 inches near Steamboat Springs.

Vegetation - The varied topography and elevation in the DAU contributes significantly to differences in habitat types across the area. Generally, vegetation types range from the montane/subalpine zone on the eastern, high elevations areas of the flattops and associated mountainous terrain, to the transitional zone in the middle elevations of Units 23, 12 and 211, with the great basin zone at the lower elevations on the west half of the DAU in areas of the Piceance Basin (Unit 22) and Crooked Wash (Unit 11).

The montane/subalpine zone is characterized by spruce-fir and aspen vegetation types. Depending on the degree of canopy closure and resultant understory of grasses and forbs, the spruce-fir areas represent moderate to good summer and fall forage. Aspen and associated aspen meadows provide high quality forage, spring through fall, throughout their occurrence. This habitat provides excellent spring through fall cover. Aspen habitat with associated free water is also extremely important as fawning areas, especially when there is sufficient understory.

Transitional Zone vegetation consists of mountain shrubs and native grasses. Most prevalent in this zone is Gambles oak interspersed with mountain big sage. Also common is serviceberry, mountain mahogany and chokecherry. This zone, roughly from 7000 to 8,500 feet in elevation, is very important for both food and cover. The lower half of the zone serves as winter range in light to average winters.

The Great Basin Zone, seen generally below the 7000 foot elevation, is dominated by sagebrush shrubland, pinyon-juniper woodland and grasslands. This zone is used primarily as winter range by deer although smaller year-around populations exist. North aspects of high ridges throughout this zone and extending into the transitional zone is Pinyon-Juniper which serves as important winter cover and limited winter forage. In areas where sufficient irrigation water exists, sage brush flats have been converted for hay production of alfalfa or native grasses such as timothy or smooth broome.

Wetland/riparian vegetation types are found along the river bottoms and associated irrigated meadows. Most significant are the upper White River, the Yampa River corridor running along northern portions of the DAU, and the Williams Fork River. These areas are occupied by cottonwoods and willows. These areas are extremely valuable as wildlife habitat and supports the greatest abundance and diversity of wildlife.

LAND STATUS

The White River DAU is comprised of 4084 square miles. Of this 20.9 % (855 sq. mi.) is National Forest Service land, 36.7 % (1,500 sq. mi.) is Bureau of Land Management land, 3.3 % (125 sq. mi.) is State Land Board land, 37.7 % (1,540 sq. mi.) is private land and 1.6 % is DOW land (66 sq. mi.).

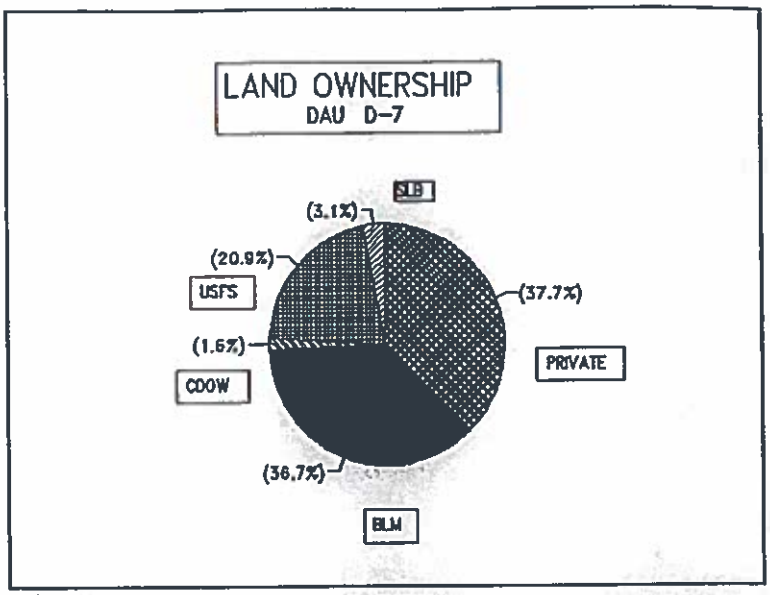


Figure 2

The area within the DAU is classified by use and importance to various wildlife species using the CDOW Northwest Regions' Wildlife Resource Information System (WRIS). WRIS mapping indicates that the DAU contains 1,919 square miles of winter range, 632 square miles of severe winter range, 257 square miles of winter concentration areas. Severe winter range is defined as the area of winter range where 90% of the individual animals are located when the annual snowpack is as its maximum in the two worst winters out of ten. Definitions for other WRIS classifications are given in appendix B.

LAND USE

Much of the land within the White River DAU has remained open and undeveloped. The main industries are ranching, energy production and outdoor recreation, primarily in the form of hunting but including fishing, backpacking, and off road vehicle use. Much of the southeast portion of the DAU is included in the Flattops Wilderness Area (Unit 24). General development has occurred mainly along the river corridors. A number of large, open pit coal mines are located in the northeastern section of the DAU in Units 211, 12, and 13. In the west, there has been oil field development (Unit 11 and Unit 211) and the southwest has two major oil shale developments which have been non-operational for 10 years.

Agriculture in the form of cattle and sheep ranching is spread across the DAU. Private lands are used primarily for hay

production and winter forage both for livestock and wildlife. Public lands are used as both winter forage (west) and summer forage (east) under an allotment system administered by the Bureau of Land Management and the U.S. Forest Service. There is also some wheat production, mostly in the Little Beaver Basin and in Axial Basin.

Hunting for both big and small game is an important business in the DAU. It is estimated that hunting directly contributes $ 16 million annually to the economy of Moffat and Rio Blanco counties with an additional $ 12 million in secondary expenditures (1990 estimates). Hunters can pursue elk, deer, antelope, bear, mountain lion, rabbits, sage grouse, blue grouse, sharptail grouse, waterfowl and numerous other game animals in the DAU.

HABITAT CONDITION AND CAPABILITY

Public Lands

There are three Ranger Districts of the U.S. Forest Service, the Bear's Ears District and the Yampa District on the Routt National Forest, and Blanco District on the White River National Forest.

The Bear's Ears district has____ grazing allotments occurring within DAU D-7. ____ of the allotments are being used at present for livestock grazing and ____ are vacant. The period of utilization varies, primarily occurring from late June through September. The ____ allotments, comprised of _____ acres, have a total of _____ AUMs available to sheep, cattle, and horses. Of these, _____ AUMs were utilized in 1992. An additional _____ AUMS are allocated for wildlife use.

The Yampa district has _____ grazing allotments occurring totally or partially within DAU D-7. _____ of the allotments are vacant and were not used in 1992. The _____allotments, comprised of _____ acres, have a total of _____ AUMs available to sheep cattle, and horses. Of these, _____ AUMs were utilized in 1992.

There are two Resource Areas of the Bureau of Land Management within the DAU, the Little Snake Resource Area and the White River Resource Area.

The Little Snake Resource Area has 115 grazing allotments which are contained in DAU D-7, comprised of 123,832 acres, having a total of 22,495 AUMs available to sheep, cattle, and horses. Of these, 13,624 AUMs were utilized in 1992. The wildlife resource has been allocated 66,000 AUMs throughout the Little Snake Resource area of which D-7 is only a portion. There is no individual assignment of wildlife AUMs by allotment.

The White River Resource Area has _____ grazing allotments which are contained in DAU D-7, comprised of _____ acres, having a total of _____ AUMs available to sheep, cattle, and horses. Of these, 13,624 AUMs were utilized in 1992. Wildlife has been

allocated _____ AUMs in the D-7 portion of the resource area.

The Habitat Partnership Program and its' role in The DAU Plan

Colorado's Habitat Partnership Program (HPP) was started by the Division of Wildlife in 1989 to better address the problems private landowners and Federal land management agencies have had with big game animals. The program is designed to solve forage and fence problems directly with local input. A committee of local land owners, sportsmen and Federal agency personnel is established to ensure appropriate public involvement in identifying range management problems and recommending solutions to these problems. Five percent of the total big game license revenue produced from an area is available to the committee for habitat work and other methods to alleviate conflicts.

The committee produces a 5-year Big Game Distribution Management Plan. This plan identifies locations and seasons of big game concentrations which the landowner/land manager consider to be conflict areas. For each conflict identified, the plan includes a strategy agreed to by the Division and the landowner/land manager for eliminating or reducing the conflict.

Another significant portion of the each committee's involvement in local big game management is participation in the DAU planning process. They insure that private land habitat issues are considered in setting the DAU objectives and that conflict areas are identified and solution strategies are appropriate.

The HPP program in DAU D-7 was begun in 1993. Because of the large area of the DAU it was decided that D-7 would be served by three separate committees, in Meeker, Glenwood Spring, and Steamboat Springs. The committee members have contributed to setting the objectives of this DAU plan and identifying conflict areas. The White River committee Distribution Management Plan has not yet been completed. When complete, it will be included as a portion of the DAU plan (appendix A).

Public Land Wildlife/Livestock Conflict Areas

The land use agencies and the HPP committees were asked to identify allotments where conflicts occur between livestock and deer within DAU D-7. Examples of conflicts were given as situations where deer had forced a change or delay in the period of use on an allotment, or forage utilization by deer had caused a reduction in AUMs of forage available for livestock.

None of the Forest Service ranger districts reported deer/livestock conflict areas. The ranger districts in D-7 supply primarily summer range for deer, and at present numbers they are not causing problems in that range. The White River ranger district identified concern for riparian conditions in specific areas, but attributes the problem to a combination of livestock and

elk.

The Little Snake Resource Area of the BLM reported an area of habitat conflict in the Axial Basin area and an area of habitat concern in the northern portion of Unit 11.

Axial Basin is an area of traditional deer winter range and with the combination of deer use, livestock use, and several years of drought, the BLM is concerned that the forage base is being over-utilized. This problem is already being addressed by the Axial Basin Coordinated Resource Management Committee.

In the northern portion of Unit 11, an important area of deer winter range, there has been a series of large wildfires over the last 10 years that have consumed approximately 40,000 acres. Lost in those fires were some of the largest, best stands of bitterbrush found in the DAU. Because of the high quality for deer of the winter range lost, and the conversion of that range to primarily grass which favors elk, there is a general concern that deer carrying capacity has been reduced.

Private Lands

Input on habitat conditions and capability on private was sought in both the public meetings and through the HPP committee. Since many of the landowners in this area depend on outfitting or leasing to hunters for much of their annual income, quality and quantity of the game herds is of importance to them beyond the usual concern for competition with livestock.

Private Land Wildlife/Livestock Conflict Areas

Past Management History

Because of the importance and size of the White River deer herd, more work and research has been done with this herd than perhaps any deer in the state. There is a abundance of background information developed since the 1950s and which continues to this day. Much of the work has been centered around the Little Hills Experiment Station in the heart of the Piceance Basin. There have been studies of the distribution, movement, mortality, and food habits. The ongoing compensatory morality study on fawns is an outgrowth of work begun in the early 1980s to look at the effects of the, then upcoming, oil shale development. Much of the information developed with this herd has gone directly to shape the management of these deer as well as other deer herds around the state.

Post-Hunt Population Size

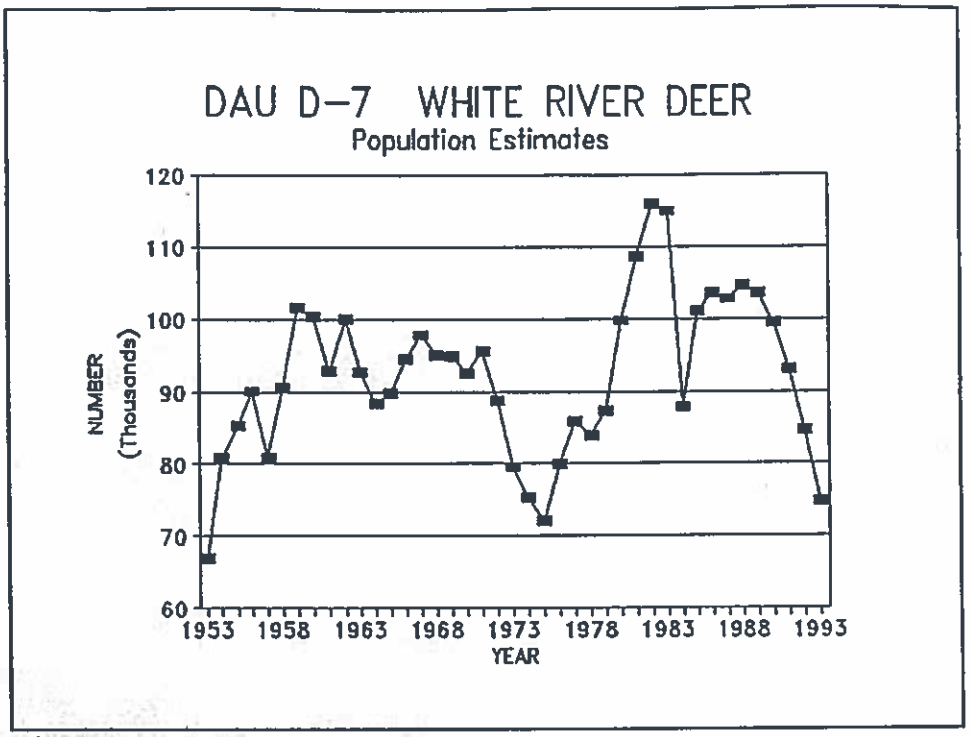


Figure 3

The DOW uses computer modeling to estimate the deer population in this DAU. This process uses a personal computer and a herd modeling program called POP-II. Estimates of mortality, initial population size, sex ratio at birth, wounding loss, and winter severity along with actual harvest numbers are entered into the program. The model is then "run" numerous times until it reasonably "aligns" with the measured post-hunting season age and sex ratio data. This data is collected annually by helicopter survey done in December.

The present model indicates the number of deer in the DAU post-hunt has varied considerably, from a high of 116,000 in 1982 to a low of 72,000 in 1975. The winters of 72-73, 73-74, 78-79, and 83-84 were notably harsh, and contributed to unusually high winter mortality. Most significant of the bad winters was the winter of 1983-84 when the herd was reduced by nearly 1/4.

Some caution is advised in putting much weight on the population estimates before 1970. Estimates given during the 50s and 60s are now thought to be much lower than actual, perhaps by as much as one half.

Table 1 and Figure 3 give estimates of the post-hunt population in both tabular and graphic form.

Disclaimer

Estimating population numbers of wild animals over large geographic areas is an extremely difficult and approximate science. Numerous attempts have been made to accurately count all 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. High-tech methods using infra-red sensing have also met with very limited success. The Colorado Division of Wildlife recognizes this as a serious problem with our management efforts. The DOW attempts to minimize this problem by using the latest technology and inventory methodology that is available. Most population estimates are derived using computer model simulations that involve estimates of mortality rates, hunter harvest, wounding loss and annual production. These simulations are then adjusted to align on measured post-hunting season age and sex ratio classification counts and, in some cases, density estimates derived from line transect and quadrat surveys.

The DOW recognizes the limitation of the system and strives to do the best job with the resources available. If better information becomes available, such as new estimates of survival/mortality, wounding loss, sex ratio, density estimates, or new modeling techniques and programs, the DOW reserves the right to use this new information and the new techniques. Making these changes may result in significant changes in the population size estimate or management strategies. It is recommended that the population estimate presented in this document be used only as an index or as trend data and not as a completely accurate attempt to enumerate all of the animals in the particular DAU.

For example, the computer model parameters used for D-7 until 1987 estimated a maximum population of 74,000 in 1977. The model parameters used from 1987 to 1991 estimated a maximum of 126,000 in 1982. The model, which was reworked with the most current data and modeling methods as a portion of this DAU plan, now estimates the herd maximum at 116,000 , also in 1982. More significant to present management, it also changes the 1992 post-hunt estimate from 72,000 to 84,500.

In all cases, this does not represent a sudden, dramatic change in the number of animals actually on the ground. It is just a better estimate of what that number is.

A printout of the 1993 Pop-II model is included in appendix D.

Post-Hunt Herd Composition

Post-Hunt herd composition of this herd has been monitored annually in at least a portion of the DAU since 1971 with helicopter classification flights. These classifications are made in December of each year. The classifications are not, and are not intended to be, a total count, but are designed to give a

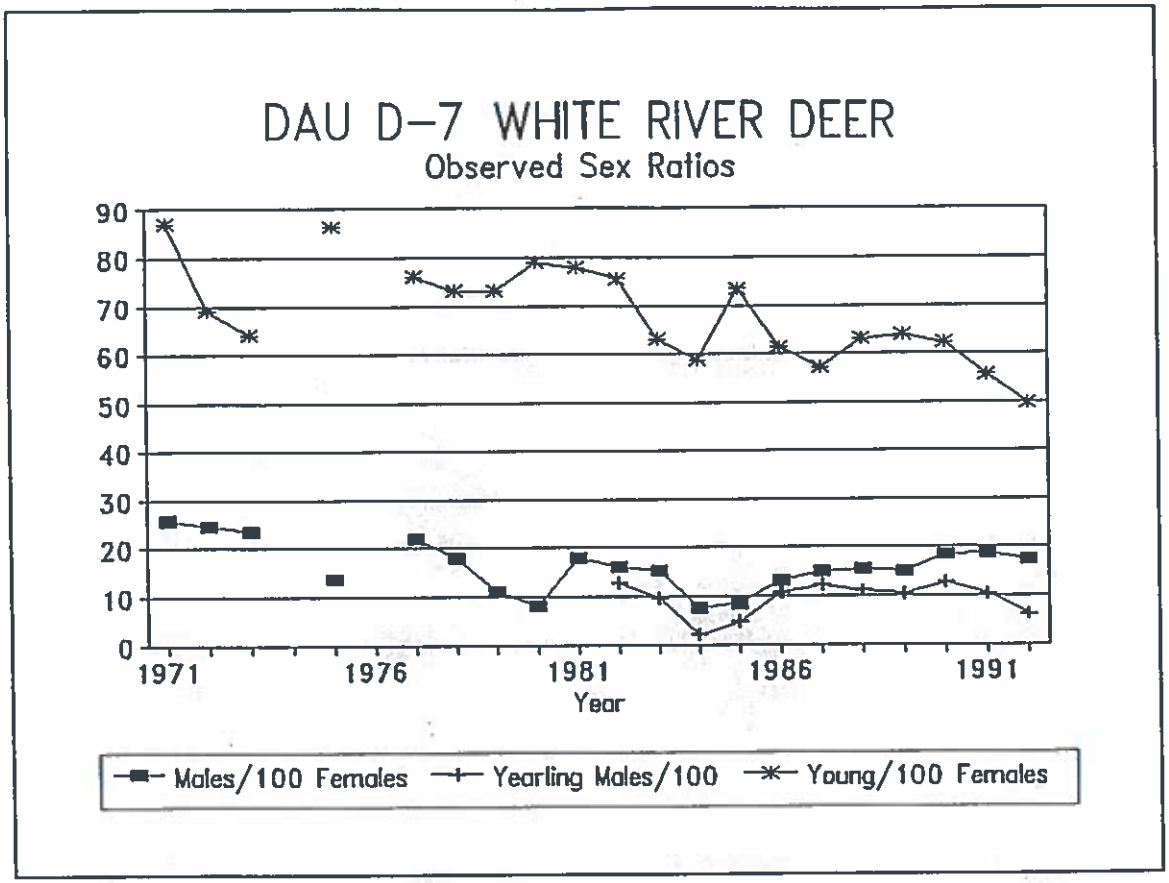


Figure 4

statistically valid estimate of sex and age ratio. A summary of these classifications is given in figure 4. The management of the White River deer herd has been aimed at maintaining the sex ratio at 18 males / 100 females since 1986 by using the 3-point antler restriction. Under this management, only buck deer with at least 3 antler points on one side could be harvested in the first two rifle seasons.

Before 1986, the regulations on bucks required only that the deer have an antler length of 5 inches or more. Under this management, buck/doe ratios had gone as low as 7.1 /100 and averaged 11.7 /100 between 1980 and 1985. Depending on hunter pressure, almost all legal bucks were harvested in some years.

At the point in 1986 that the DOW implemented the 4-point regulation on elk, the 3-point regulation was also begun on deer. The reasoning was to improve buck/doe ratios overall and to increase the number of larger trophy bucks. The buck/doe ratio did increase within the year (13.2) and has maintained above that level since. The average for 1986 to 1991 was 16.1 bucks/100 does.

While very well accepted by the general hunting public, the 3

point regulation became a hotly debated subject within the DOW. While buck/doe numbers did come up as a result of the regulation, it did so as a result of an increase in the yearling component of the herd, not in an increase in mature bucks. In fact, in many areas the number of mature bucks actually decreased.

There was also the problem of bucks, not large enough to be legally harvested, being shot and left in the field. This number proved to be very significant, in some areas resulting in an estimated 40% additional illegal harvest.

These factors led to the removal of the 3-point regulation for the 1992 season. But in order to still maintain an acceptable buck/doe ratio it was felt that some measure of protection was necessary. This was the impetus for the 3-day buck season starting in 1992. During the first year of the 3 day limitation, the overall buck/doe ratio did not change significantly, but the ratio of yearling bucks to adult bucks did change substantially, the number of yearling bucks going down form 10.4 to 6.2/100 does.

The post-hunt age ratio (fawn to doe ratio) also showed the same sort of dip in the mid 1980s as did the buck/doe ratio. Average ratios during the 1970s was 75.5 fawns/ 100 does. The average through the 1980s was down to 67.3 /100 with the low point in 1987 of 57/100. The doe/fawn ratio continue to fall in the 1990s reaching a low of 49.7 in 1992. It is thought that this decline is a result of a deer herd near capacity and competition with an expanded elk herd.

Harvest History

Of all the measurements of herd status done by the DOW, the harvest figures are the most accurate information generated. Harvest estimates are produced by typical statistical sampling techniques, not by any attempt of a total sample or count.

Harvest has fluctuated widely since 1953 (Table 1 and Figure 5 and 6). The largest harvest was in 1963 with 25,064 deer harvested that year. The lowest recorded harvest was in 1986 when 3931 were taken. Harvest regimes have varied widely over the years from very liberal to very
restrictive, mainly in response to population levels dictated by winter severity.

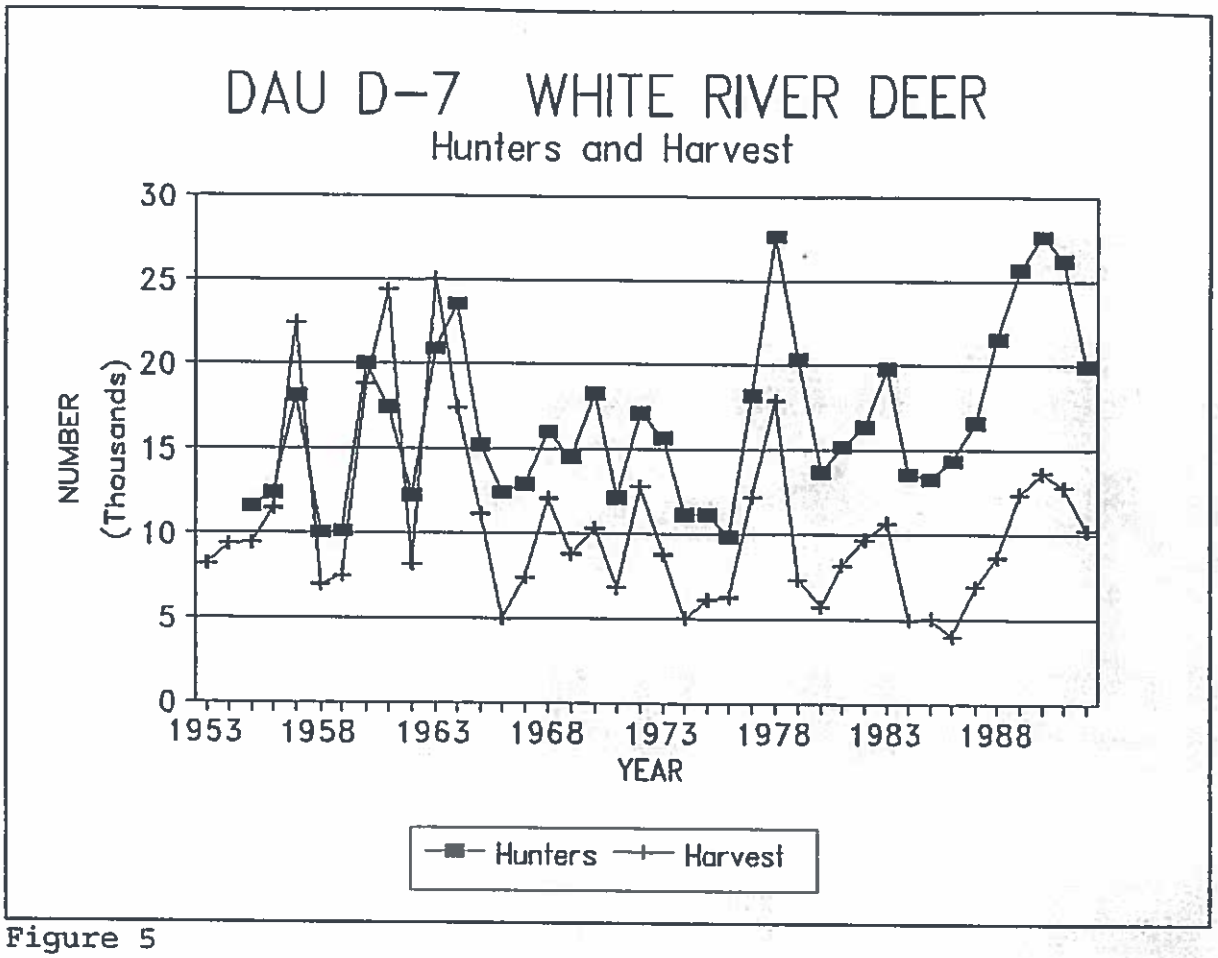


Figure 5

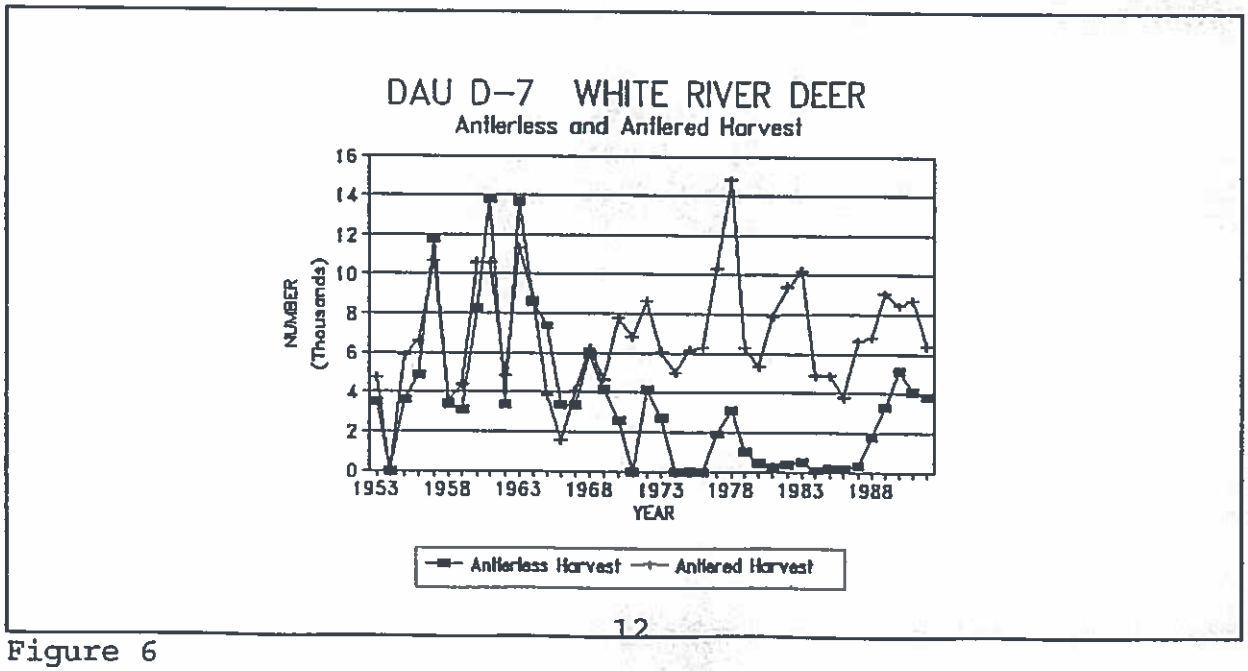


Figure 6

D-7 DAU PLAN DRAFT NOVEMBER 93

DAU D-7 MANAGEMENT OBJECTIVES

ISSUES AND STRATEGIES

ISSUES AND CONCERNS

Meetings to discuss issues and concerns for each DAU under consideration were held with the local Division of Wildlife personnel (DOW), Blanco, Rifle and Yampa Ranger Districts of U.S. Forest Service staff (USFS), White River, Rifle, Little Snake, and Glenwood Springs Areas of Bureau of Land Management (BLM), local Habitat Partnership Program committees (HPP), and the general public (PUBLIC) in open meetings in Steamboat Springs, Craig, Meeker, Rifle, and Glenwood Springs. Issues and concerns were noted and are summarized here in the general headings of biological, political, and social with no importance given to order. Also, some statements are clearly contradictory with others and/or may not be support by existing data. This section is to be viewed as a summary of inputs with no judgements made of the statements.

BIOLOGICAL

There is a lack of good habitat information, often times a professional judgement is all we have. BLM

We need to break into the annual planning cycle and consider habitat a separate decision factor. BLM

It would be helpful to create a map of range conditions which is correlated with animal numbers. FS

It is not possible to have the total data on allotment capacity. FS

We need to know what sorts of data need to be collected by the Land Management Agencies and in what areas, to impact the DOW recommendations. BLM

We need to focus on limiting factors, such as winter range, and look at those jointly. FS

The quality of the browse species is dropping. BLM

For D-7, 100,000 is not realistic, 75,000 is much more reasonable. HPP

More infant fawns were found dead this summer, and we think foxes

are the cause. PUBLIC

The hunting season in the breeding season is causing late, weak fawns that have trouble surviving the winter. HPP

It looks like the migratory patterns have changed. HPP

Part of the DAU has too many deer (Units 23, 24), and in part of the DAU numbers are below where they should be (Unit 22). HPP

Coyotes are taking a lot of deer fawns. They need to be controlled. PUBLIC

Lions are a problem with deer, and they are especially impacting the bigger bucks. PUBLIC

The high elk numbers are having a negative effect on deer. HPP

In Unit 22 the forage allocation for deer is higher than what is now being used. BLM

The grass species are taking over at the expense of browse. There are lots of decadent stands of browse. BLM

Deer numbers in Unit 13 have fallen recently. FS

Intensive fire suppression on winter range has contributed to increased browse decadence and reduction in carrying capacity. DOW

SOCIAL

We need more areas for a quality hunt because of changing hunting demands. BLM

The expectation by the non-hunting public is for more natural populations, maybe 30 bucks/100 does or higher. BLM

A person with a bow gets to hunt 30 days while a person with a rifle only gets 3 days. This is a fairness issue, and that is not fair. HPP

We should look at totally limited licenses on bucks to smooth out the highs and lows. PUBLIC

The loss of hunters will become a problem. HPP

Hunters want a quality experience and they are not getting it. PUBLIC

Every hunter wants the Buck/Doe ratio to go up. PUBLIC

We cannot provide hunting to the entire U.S. HPP

We need to control does and increase the quality on bucks. PUBLIC

Deer numbers and sex ratios are about right, however mature males may be too low. FS

POLITICAL

Landowners think that there are just to many animals, deer and elk. HPP

Allocate private landowners a number of licenses to sell, they need to get some benefit from the game. PUBLIC

As the numbers of game animals go up, it represents a tax on private landowners. PUBLIC

How are we going to manage deer with the idea of biodiversity? PUBLIC

Issue Resolution

Many of the identified issues relate directly to the primary objectives of this plan, the population objective and herd composition objective, and will be discussed in those sections. There are however, a number of separate issues that came out of the various scoping sessions that, while not a direct related to the primary objectives, do warrant discussion and resolution.

Competition with Elk

There is considerable concern that the high elk numbers of recent years have contributed to a decline in local deer herds. The problem is thought to be competition for critical space, such as fawning/calving areas or quality winter range, more than that for forage. While this effect is not clearly demonstrated, it should be considered when establishing new population objectives.

Forage Allocation

One of the recurrent themes in all the public and agency meetings was the discussion of how the forage resource should be

divided between livestock and wildlife, particularly deer and elk. Much of the general and hunting public feel that stocking rates for livestock are too high, while landowners and land agencies often point to high game populations being the cause of forage problems and conflicts.

It has been an established standard that land resource agencies such as the BLM and the Forest Service are primarily concerned with habitat management while the DOW manages the animal populations. Unfortunately, good information on carrying capacity of public rangelands and present utilization rates specific to livestock or wildlife is very limited. Without this basic information, judgements on what are equitable allocations of the forage base are difficult.

The DOW should work more closely with the land use agencies to establish better estimates of capacity and utilization, especially on forage conflict areas. As can be seen in the grazing allotment summaries (appendix C), few of the allotments have a formal allocation of forage to wildlife. The equitable allocation of the forage base between livestock and wildlife should be established across all habitat types, with special consideration given to critical areas.

The Concept of Carrying Capacity

During the current formulation of this plan as with past drafts, the subject of carrying capacity of the DAU has been a prominent concern and discussion item. In order to address those concerns in relation to this DAU plan a brief discussion of carrying capacity is necessary.

In its most basic terms, carrying capacity of any system is the number of animals it can sustain over time without depleting the support system. At carrying capacity the population reaches an equilibrium with the habitat. The number of births each year equals the number of deaths, therefore, maintaining a population at this level would not allow for a harvestable surplus. Also, the animals in such a population and vegetation it depends on would be in relatively poor condition and when a severe winter or other catastrophic event occurs, a large die-off is inevitable.

This is a fairly simple as a concept, but when applied to deer and elk on open range and for that matter, livestock, it becomes very much more difficult. How many Animal Unit Months (AUMs) can a given piece of range or area support and not deplete the range or result in high winter mortality? The problem is the tremendous amount of variability in the quantity of vegetative production and availability. How much moisture, what time of year will it come, how many sunny days, mean temperature, extremes in temperature, crusting of the snow, and the like all contribute to differences in annual production.

Because of the limitations and vulnerabilities of a herd

managed at capacity, the Division of Wildlife standard for management is more accurately described as Maximum Sustain Yield (MSY). At MSY, herd size is considerably below carrying capacity, to allow for a harvestable surplus. MSY also provides other advantages, such has higher production per adult female, better herd health, better range condition, and a greater buffer against losses in severe winters. A more complete discussion of MSY is available in appendix E.

Extensive studies being done in the Piceance Basin, beginning in 1981, tend to reinforce the validity of MSY management in a large western mule deer herd. This work was begun as a movement study to document deer adaptation to the then impending oil shale industry in the basin. It was soon discovered the fawn mortality was much higher than previously suspected, nearly 50% in an average winter, and subsequent study has focused on why.

While at this time work continues on that study, it is now thought that the Piceance deer herd has been at near capacity with depleted forage conditions for many years past. As a consequence, does on the winter range are strongly competing with their fawns for the limited forage and the fawns are losing. Once a deer reaches adulthood, survival is very high. The result is a very unproductive deer herd, with greatly reduced harvestable surplus. Current philosophies of management are calling for lower overall herd sizes while maintaining past harvest objectives.

The question usually asked in relation to the DAU plan is, How can you set a population objective without knowing a number that the area can support, without knowing carrying capacity? As discussed previously, herd size is a constantly updated and refined estimate. The estimate of carrying capacity is also an approximation, much looser in formulation than that of herd size. It usually comes down to a consensus of interested parties as to what the demands on the forage, both wildlife and livestock, are presently, and what that "feels" like in terms of general range condition. Hence, the DAU Plan process.

Communication with Land Owners and Land Use Agencies

An issue that was raised several times during the agency and public meetings was that of a perceived lack of communication on wildlife concerns between them and the DOW. This ranged from a feeling that we need to solicit more public/agency input before decisions are made, to the idea that the input that is solicited never reaches the Commission level because of the internal bureaucracy that exists in the DOW.

The DOW regulation process does include a three step process for public input. As this process is better known and utilized this problem should be reduced. The HPP process should also give localized problems much more specific attention than can be achieved in statewide regulation setting.

Predator Control

A subject that came up several times during the public meeting was the issue of predator control. It was implied or outright stated that predators, primarily coyotes, were in large part contributing to the overall decline in deer populations and specifically responsible for declines in fawn survival. It is felt by these persons that the Division of Wildlife should take a more active role in predator control.

A review of the research done, looking at the effects on deer populations that coyotes and coyote "control" has, does not support these perceptions. Most studies found that coyotes have little effect on deer numbers when the population is near or at capacity of the range. In these situations, the numbers of deer taken by predators simply replace other mortality factors, usually death by starvation.

Preadtor control was done in conjunction with the deer research in Unit 22 during 1983 and 1984. Here, fawn mortality in an area of extensive coyote control was found to be mostly from malnutrition. In the study area without predator control, fawn mortality was much higher due to predators but overall fawn mortality was nearly equal between the two areas.

It is only in those areas that deer populations are below the capacity of the range that extensive predator control efforts seem to be effective in saving deer. The problem is that this cannot be done on a large scale because of logistics and reduced cost effectiveness.

Fire Control

The issue of fire policy and fire suppression and its effect on winter range conditions was often put forward in internal DOW discussions. The thought is that aggressive wildfire suppression, primarily by the BLM in this DAU, has contributed to the trend towards increased decadence of the browse species in winter range areas. This cause and effect is unproven at this time, we do know that fire played a much more significant role at the time deer population in this DAU were their highest.

Work should begin, in conjunction with the BLM, to use fire to manipulate browse serial stages in areas of important winter range and evaluate its effect. Also, overall fire policy should be examined to determine if greater areas of "let burn" for wildfires can and should be established.

D-7 DAU PLAN DRAFT NOVEMBER 93

1. POPULATION LEVEL

Refinements in the computer modeling parameters in 1992 have increased the post-season estimate of the herd size from 77,000 to 84,500. The new model indicates that the herd most recently peaked at 104,500 in post-hunt 1988 and due to increased antlerless permits has declined since that time. With the antlerless licenses allocated for 1993 it was anticipated that the present goal of 75,000 should be reached by post-hunt 1993. However, higher than normal mortality in late spring of 1993 in conjunction will the licenses allocated will likely take the population closer to 67,500 after the 1993 season.

Alternative Management Strategies

1.1 Increase the herd objective to 85,000 to match 1992 herd estimates.

History of Alternative - This is the level estimated for post 1992. This objective was the official objective for this herd during the 1980s. After the Little Hills research results indicated the herd was generally in poor condition with low fawn survival, it was decided that this objective was no longer realistic. A provisional objective was set in 1991 of 75,000. This objective would require an increase of 14% over the old (present) objective.

Game Damage - The population at this level has produced minor damage problems across the DAU, primarily forage competition on winter range. Damage problems would remain most common with this population alternative because of the level of competition for available forage.

Season Structure - No changes from the current season structure would be required. The larger population would provide maximum harvest potential during years following mild winters. However, mortality during a severe winter would be high and could result in a widely fluctuating herd levels and considerable changes in antlerless permit numbers. This could and has produced a boom-bust cycle where antlerless permits are cycled from none to many thousand.

Survival Rates, Quantity and Quality of the Harvest - The potential for quality bucks and high buck/doe ratios will be limited with this alternative because of poorer nutrition and higher fawn mortality rates. Total harvest would vary considerably.

Fiscal Impacts - Income to the DOW and local business, including landowners, would fluctuate widely with the boom and bust cycle of the herd at this objective. Cost of game damage and necessary habitat manipulations would be highest at this objective.

1.2 Maintain the current herd objective of 75,000.

History of Alternative - This has been the provisional herd objective since 1991 but the refined model indicates that herd numbers have been above this since 1975, often considerably above. With the number of either-sex licenses allocated for the 1993 seasons, this objective should be reached by post-hunt 1993.

Game Damage - Damage by deer would be expected to be light at this herd level, coming mostly from competition for forage during hard winters and remaining distribution problems.

Season Framework - The present season framework could be maintained. A greater than normal number of antlerless licenses were required for the 1992 and 1993 seasons in order to reduce numbers back to objective. After the objective is reached, doe harvest would be reduced to hold the herd at this level.
Survival Rates, Quantity and Quality of the Harvest - Survival rates for fawns and bucks should improve over those seen with present herd levels. This should improve both quantity and quality of the harvest and somewhat buffer the large decline seen during a bad winter.

Fiscal Impacts - Income will not reach the highs seen with the first alternatives but should more stable through time without the large changes in antlerless permit numbers.

1.3 Decrease the herd objective to 67,500.

History of Alternative - This alternative would require a reduction of 10% from the current objective of 75,000.

Game Damage - There should be little or no game damage at this level except during the most extreme winters. Some distribution problems may remain, but well within the ability of the HPP program to deal with.

Season Structure - The present season structure would remain the same with this objective. It was anticipated that the post 1993 population in D-7 would be near 75,000. With the additional mortality seen late into the winter and early

spring of 1993, it is now estimated that the herd may in fact already be close to 67,500. If this alternative was selected, antlerless permits would be maintained to keep the herd at the lower level.

Survival Rates, Quantity and Quality of the Harvest - Considering the concepts of MSY management, survival of all age classes should be highest at this objective. Maximum forage will be available. This alternative should produce the highest quality of bucks. Whether or not the loss of production capability, because of the reduction in adult does, would be compensated or exceeded by the increase in fawn survival remains to be seen. If so, harvest objective could remain at or near the same levels. Buck harvest should also remain near present levels, with slightly higher quality, depending on hunter pressure.

Fiscal Impacts - Income would remain high during the reduction of the herd. After that point, income would moderate at a somewhat lower level, but without the boom and bust influences.

2. Herd Composition - Sex Ratios

Of all the issues brought forward during the agency and public meetings, the most consistent was the concern for the lack of "quality" bucks as a component of the buck/doe ratio. The concern was voiced as both a wish to have more mature bucks available for harvest and the thought that low buck/doe ratios may be contributing to reduced overall health of the herd.

Sex ratios under the 3-point regulation since 1986 have held at approximately 14 bucks/100 does. The first year of the 3-day buck season produced 17.4 bucks/100 does. Of these 6.2/100 are yearling males.

Alternative Management Strategies

2.1 <u>Manage the herd for an increase of males / 100 does to 40 with a greater number of "trophy" bucks.</u>

History of Alternative - Sex ratios of this type are found only in quality areas with totally limited licenses. It is not anticipated that the new 3-day buck season will protect bucks to the degree necessary to achieve this goal. This is a management alternative that comes up often from the public, most often from experienced hunters that hold "trophy" as their stated standard of quality.

Season Framework - A totally specified number of licenses

could be used without changing the present season framework, However, there would be no need to maintain the short 3-day season if licenses were limited. Other possible methods would be an even shorter season on bucks overall, closing the November portion of the season when bucks are more susceptible to hunters, or point limitations more restrictive than the 3-point limitation already tried.

Survival Rates, Quantity and Quality of Harvest - Fewer total bucks will be harvested under this option because of the natural mortality occurring to the bucks remaining longer in the population. Also, because of the additional bucks being carried in the population, the total number of antlerless deer would have to be reduced to keep total numbers of deer at objective. This would reduce the production potential of the herd and lead to fewer overall licenses. The quality of the bucks harvested in terms of size and antlers would be increased. Initially, a reduction in buck licenses by a least 1/2 of present levels could be required to create the higher buck/doe ratio.

Fiscal Impacts - If totally limited licenses were used, total hunter numbers would decrease dramaticly, probably by half. If shorter seasons were implemented, although a season shorter than 3 days is hard to imagine, it would probably reduces hunter numbers and would reduce recreation days, both having an effect on local businesses. Income to outfitters, guides, and local ranchers who lease their ground, would probably remain nearly the same, with the reduction in hunter days being offset by the increased fees possible for "trophy" hunting.

2.2 <u>Increase the buck doe ratio to 25-30 bucks/100 does with emphasis on mature bucks.</u>

History of Alternative - Maintenance of mature buck numbers was the original intent of the 3-point regulation, which for reasons already discussed, had limited success, at an unacceptable cost in terms of illegal yearlings shot and left.

Season Framework- Buck ratios this high are not possible without some sort of protection on specific age classes. The 3-point minimum has been tried and rejected. Another possible framework would be a reverse point limitation where there is an unlimited number of over the counter buck licenses for bucks with 3 points on a side or less, and a limited number of "any buck" licenses. Under this system, it would require a "any buck" license to take a buck with 4-points or more on a

side. The number of "any buck" licenses would be closely regulated from year to year in order to maintain a high mature buck component. The number of "any buck" trophy licenses would have to remain small in order to meet the goal of this option.

Survival Rates, Quantity and Quality of Harvest- Survival rates would not be effected, in that the number of additional mature bucks in the herd would not that significant relative to the overall herd numbers. Quantity of harvest on all but mature bucks would not be expected to change present numbers. The number of trophy bucks taken each year would have to be reduced at first in order to increase their numbers.

Fiscal Impacts- No major changes would be expected from present income levels to all concerned.

2.3 Maintain the current objective of 20 bucks / 100 does.

History of Alternative - Since the start of the 3-point regulation in 1986, buck/doe ratios have maintained at this level, although the majority of these are yearling bucks. With the elimination of the point regulation and the beginning of the 3-day buck seasons starting in 1992, no significant change in the buck/doe ratio was seen. Also, the either sex licenses should reduce hunter pressure on bucks somewhat.

Season Framework- No change from the current season structure would be necessary.

Survival Rates, Quantity and Quality of Harvest - These would not change from the present levels.

Fiscal Impacts - As a result of the 3-point regulation, hunter numbers at first fell and then rose to record numbers. The same pattern is expected with the 3-day buck/ either sex season structure. As long as these regulations maintain the present or better buck/doe ratios, income to all concerned should remain high.

2.4 Allow the buck/doe ratio to decline to a level of 10-12 bucks/ 100 does.

History of Alternative - This is the level seen during the early 1980s when hunter pressure on bucks exceeded the production ability of the herd. Following severe winters and in units with good access, buck levels fell even lower.

Season Framework - The 3-day buck season and other protective measures could be eliminated.

Survival Rates, Quality and Quantity of Harvest - This alternative would allow for the highest number of bucks to be harvested. The bulk of the buck harvest would be of yearlings with few larger bucks even being in the herd. "Trophy animals" would seldom be seen. Doe numbers could be increased somewhat to supplement the fewer number of bucks being carried in the population. This in turn would increase total fawns produced annually as long as population levels remained below the point that density dependent survival reduction was incurred.

Fiscal Impact - Income to the DOW would not change substantially. Local income could be reduced significantly because of the reluctance of hunters to pay outfitters or leases for lower quality animals.

ALTERNATIVE SELECTION

Preferred Alternative:

Population Objective: 67,500 Deer. Alternative 1.3

Sex Ratio Objective : 20 bucks/100 does Alternative 2.3

Justification:

The White River Deer Herd has long been considered the premier deer herd in the state, the flagship. What happens in D-7 often influences the deer management standards across the state. On that basis, management practices that are considered for D-7, must be evaluated not only on its effects in the DAU, but also on what effect they will have on the rest of the state. It is within that context that the preferred alternatives are recommended.

Because of the mortality studies done within the DAU in Unit 22 and conditions seen in other deer DAUs, it has been the direction of the Division of Wildlife to manage deer herds at lower numbers than in the past. The reduced numbers are consistent with the idea of a very productive MSY level. Carrying this herd at a lower level should increase both the production and survival and may well result in nearly the same harvestable surplus annually.

The preferred sex ratio objective, is probably more contentious, as represents the situation as it now exists. While the option of either a totally limited number of antlered licenses or a limited number of mature buck licenses to increase the ratio

of mature bucks/doe looks appealing, it is probably not prudent or necessary to go to these extremes at this point.

The 3-day season has not been given enough time to evaluate its effects. It may well be that this approach, which has already been implemented, may ultimately produce the higher mature buck numbers many desire. In conjunction with the 3-day season, if the reduction in overall herd numbers produces the predicted increase in production, the buck/doe ratio will increase without limited licenses.

Management Implementation

As stated before, as a result of the winter of 1993, herd numbers are currently estimated near the lower 67,500 objective. Either sex licenses will continue to be used, but at a much lower level than in the past few years. Season and license availability for hunting antlered deer will not change.

No change in management is necessary to maintain the sex ratio objective. There may be opportunity to adjust the 3-day limit on buck hunting if buck numbers begin to rise above the objective.

DAU D-7 White River Deer

Pouplation Estimates, Hunters and Harvest

YEAR	POPULATION (POST-HUNT)	TOTAL HUNTERS	TOTAL HARVEST	ANTLERLESS HARVEST	ANTLERED HARVEST
1953	66909	NA	8198	3470	4728
1954	80716	NA	9389		
1955	85256	11599	9446	3613	5833
1956	90087	12363	11460	4857	6603
1957	80869	18115	22473	11811	10662
1958	90564	10039	6983	3395	3588
1959	101568	10094	7454	3107	4347
1960	100240	19998	18821	8232	10589
1961	92775	17386	24426	13823	10603
1962	99926	12244	8168	3362	4806
1963	92683	20935	25064	13713	11351
1964	88359	23602	17423	8634	8789
1965	89762	15241	11206	7384	3822
1966	94463	12420	4950	3381	1569
1967	97755	12921	7413	3346	4067
1968	94998	15994	12126	5910	6216
1969	94801	14541	8810	4138	4672
1970	92574	18263	10338	2593	7745
1971	95496	12149	6814	0	6814
1972	88729	17108	12813	4160	8653
1973	79487	15683	8790	2712	6078
1974	75206	11145	4998	0	4998
1975	72066	11162	6158	0	6158
1976	79908	9868	6281	0	6281
1977	85803	18182	12229	1891	10338
1978	83919	27639	17936	3109	14827
1979	87308	20383	7294	989	6305
1980	99682	13681	5700	376	5324
1981	108507	15180	8157	243	7914
1982	115860	16384	9736	345	9391
1983	114881	19810	10686	506	10180
1984	87794	13587	4952	65	4887
1985	101061	13299	5014	151	4863
1986	103525	14341	3931	154	3777
1987	102822	16604	6898	263	6635
1988	104691	21581	8653	1821	6832
1989	103618	25695	12364	3303	9061
1990	99327	27681	13599	5130	8469
1991	93018	26281	12822	4076	8746
1992	84543	19912	10257	3838	6419
1993	74738				
AVERAGE	91575	NA	10460	3514	6670
1950s	85138	NA	10772	4322	5109
1960s	94576	16528	13841	7192	6648
1970s	84050	16158	9365	1545	7820
1980s	104473	15183	6882	263	6619

THE DEER HERDS OF NORTWEST COLORADO

The D-7 game management unit is full of extremes: the temperature ranges from minus 60 to 110 degrees Fahrenheit; the elevation from 5400 to 12,000 feet above sea level; the precipitation from 6 inches to 40 inches annually.

In order to survive in such an area, the process of evolution needed to be strict and rigid. Theoretically, some 40 million years ago, in the early Miocene Eurasion fauna, a time of general global cooling, a number of the Ruminanita made the move to go for it in this area. Rather than try to explain the total process, let's just call it Nature's Plan (N.P.).

For nearly 40 million years N.P. took care of the mule deer. They mated in late October and early November. The fawns were born about the time that the first green grass was coming on. The doe, utilizing the 40% protein of the young grass was able to replenish her own body and feed the fawn. Peak milk production does not start until about three weeks after the fawn arrives.

It takes at least four months for the four stomach system of the deer to develop. When the deer mated in the last week of October and the first two weeks of November, as was the case 40 years ago, the fawns arrived in May, leaving June, July, August and September for the fawn to fully develop their digestive systems. By October 15th the average fawn had about a half inch of back fat and was ready to make it on its own.

When the November deer season was instituted, the actual breeding date was moved back at least a month. The June and July fawn does not have time to properly develop and in any but ideal winter conditions will starve to death in the midst of winter. In the hard winter 1983-84 there was a massive fawn mortality rate. All of the fawns that where sent in for autopsies where found to have zero fat content.

Problems, in the mule deer herd, in the D-7 area are the ever lower number of fawns per 100 doe, the ever higher mortality rate and lack of mature bucks in the herd. All these problems can be traced back to the beginning of the November hunting season.

We must deal with the biological problem. Regrettably I don't have the formal education required for a PHD in animal science. However, I do have over 70 years of learning --hand on, day in, day out.

Forty-one years ago my family took a Sunday drive up Piceance Creek in late March. We counted over 6,000 deer in the meadows. The game warren's official count, that year, was in excess of 10,000 deer. The spring of 1994, I have been unable to find anyone who has been able to count more than 200 deer. Everyone would agree that the deer herd has outgrown the available forage, yet the survival rate of the fawn forty years ago was over twice as good as it is today.

Today the lion and coyote represent a real threat to the deer population in the D-7 game management unit. Predator control is virtually nonexistent. When predators take fawns, or fawns away from a doe, early in the season, the doe ceases milk production. The energy which would have gone toward producing milk for the fawn, is redirected to produce fat on this dry doe. Deer carry most of their extra fat internally. The problem here is that this excess fat accumulated tends to block the fallopian tube and the egg never reaches the uterus. Except on rare occasions this doe will never bear young again. An easy way to check this theory is simply to watch the doe during spring and summer in an area known to have a high predator count.

The basic problem is man and the almighty dollar. Too many licenses are sold and the five months of hunting interrupts the proper breeding date of the deer. The late born fawns have a very low survival rate. The fawn that comes July 1st would expect to receive peak milk nourishment about July 21st. By that time of the year the protein content of the forage--which is necessary for the rapid growth of the fawn--would be less than half what it would have been 45 days earlier.

The Colorado Department of Wildlife's computers do not seem to notice the change and continued to show a healthy deer population. By January 1993 the D-7 mule deer herd was shown at 84,000 animals when in reality there is no way there could have been more than 30,000 head. Doe license sales were based on stated numbers rather than actual, while further reducing the herd.

Hunting during to mating season of elk and deer has the net effect of being a synthetic evolutionarily force. Unless a correction can be made these animals will be forced into extinction.

Aesop's fable addresses the issue in "The Goose That Laid The Golden Egg". The man who owned the goose believed if he killed the goose he could have all the gold at once. He found no gold and the goose could lay no more eggs. The Game Commission should be able to understand the intent of thise fable.

Comments on CDOW's Data Analysis Unit Plan for D-7
-December 6, 1993 (Ed Hollowed, BLM)

Jeff,

No substantive comments on population objectives or composition. Think reasoning for preferred population objectives sound and will prove more compatible with BLM's multiple use mandates than current or old population targets.

The following are comments on issues, but probably tend more to ramble:

Page 14

> BLM comment pertaining to GMU 22 forage allocation: need to clarify that deer numbers are reduced from those allocated in 1979, with elk populations considerably higher. The AUM numbers indicate that the combined forage base allocated to elk and deer is nearly identical to that required for elk and deer populations prescribed under CDOW's current long term population objectives.
>
> DOW comment pertaining to intensive fire suppression--see below.

Concerning Competition with Elk (page 15):

Believe "space" is relevant to summer range conflicts, particularly Piceance (and Douglas, Blue Mountain), where mutually favored sites (aspen, water) fragmented and relatively small. But, considering behavioral characteristics and foraging strategies of elk, I think forage depletion and "high-grading" on late winter ranges by transient bands of elk may be tantamount to summer range issues. By merit of similar behavior, believe horse use on Piceance winter ranges mimics and aggravates elk competition.

Concerning Fire Control (page 18):

Believe it shakey to ascribe too much significance to recent fire suppression activities as a primary agent in accelerated seral advance or forage decadence, especially pinyon-juniper.

Difficult for me to buy into idea that fire was significantly more influential on woodland extent and distribution in past. Mature pj stands predate settlement of this country by a long shot, and current age class distribution should mirror historical fire patterns. I'm unaware of disproportionately extensive early age class (≤50 years) woodlands that would evidence this change

(excepting BLM's chainings), or extensive shrub-dominated communities bearing evidence of past mature pj occupation.

Craig District fire records indicate that 2500 acres of pinyon-juniper woodlands burned each year in the White River Resource Area from 1988-1992. If WRRA to manage these woodlands for mixed age-classes and through maturity, average rotation would be about 2700 acres per year based on a conservative maturation age of 250 years. In the more likely event that these woodlands attain mature form and function at 300-350 years, rotations would be on the order of 2000 acres per year. These rotations discount all other forms of woodland conversion (e.g. commercial firewood harvest, O&G-related clearing, prescribed treatments).

Although it appears to me that we are realizing fire-related influences on par with historic average extent, more effective fire suppression tactics over the last 40 years may be altering the dispersion (less) and average weighted size (greater) of events, conditions less than ideal for deer.

Although valid to prescribe a reduction in the mature pj base in the interest of livestock or big game forage production, (i.e. conversions exceeding the long term rotation), current land management trends (e.g. biodiversity issues) will necessitate careful consideration of big game management objectives relative to its influence on maintaining a more complete complement of community (floral and faunal) function and values.

As concerns decadence: I think community maturation limits/reduces availability or utility of understory as forage, but decadence more often a function of utilization (primarily by wintering deer on late winter ranges) beyond capability of plant to sustain vigor (i.e. complete utilization of available current annual growth and regular use of second year wood).

Excessive utilization will likely be prevalent on small scale, dispersed projects or wildfire events and will retard improvements (particularly deciduous browse) without first strongly reducing local winter populations. Effective improvement of lower elevation winter ranges may have to entail larger scale manipulations (intentionally suboptimal for efficient use by deer), with agencies having to accept localized long term depression on range capacity (not significant if conducted consistent under communities successional constraints and on a perpetual basis). Although this strategy would likely enhance forage capacity for elk, harvest should remain effective suppressor.

United States Department of Agriculture | Forest Service | Blanco Ranger District | 317 E. Market Meeker, CO 81641

Reply to: 2600

Date: January 6, 1994

Jeff Madison
Colorado Division of Wildlife
P.O. Box 2142
Meeker, CO 81641

Dear Jeff:

Below is the paragraph requested for the Deer Management Plan, Data Analysis Unit D-7 regarding grazing allotments and AUM's on the Blanco Ranger District.

"The Blanco District has 40 grazing allotments occurring totally or partially within DAU D-7. Two of the allotments are vacant and were not used in 1992. The 40 allotments, comprised of 310,389 acres, have a total of 37,402 AUM's available to sheep, cattle and horses. Of these, 36,000 AUM's were utilized in 1992."

On another note, our Aldrich Lakes Waterfowl Habitat Improvement coop expired on 12/93. We have $995.26 remaining in the account that we would like to use in FY 94. I believe what happened was we did not receive the DU Duck Stamp $$ until June, after we had already purchased the bulrush and paid for labor out of entirely Forest Service funds. We would appreciate it if you could write a brief 'Extension Amendment' from the DOW approving the use the funds in 1994. Of course, we would like the Extension Amendment yesterday, or if not, as soon as possible. Thanks Jeff, it's greatly appreciated!

Sincerely,

Mary L. Massey

Mary L. Massey
Wildlife Biologist

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
LITTLE SNAKE RESOURCE AREA
1280 INDUSTRIAL
CRAIG, COLORADO 81625

TAKE PRIDE IN AMERICA

In Reply Refer To:
6500 (170)

September 27, 1993

Mr. Jeff Madison
Colorado Division of Wildlife
P.O. Box 2142
Meeker, Colorado 81641

Dear Jeff:

Enclosed are the grazing figures for DAU D-7 that you requested. The wildlife resource has been allocated 66,000 AUMs throughout the Little Snake Resource Area. These AUMs are area wide and not by individual allotment.

The Lower Boxelder allotment located in Axial Basin has been identified in the Resource Management Plan as a winter conflict area. As your are aware, the Axial Basin Coordinated Resource Management committee is presently addressing this problem.

A major habitat problem has developed over the last 10 years in the northern portion of Unit 11. This is due to the loss of approximately 40,000 acres of winter range by fire. It is not known at this time what this loss of habitat will do to both numbers and distribution of animals. It is evident the area has been converted from winter deer to winter elk habitat.

The main conflict area in the DAU seems to be the increased winter use in the Axial Basin. This may be caused in part by the habitat loss mentioned earlier or simply by a change in winter use patterns by the animals. This is more of a distribution than population number problem.

I hope the enclosed information aids in your re-evaluation of your DAUs. If you have any questions, please call Kendall McDowell at 303 824-4441.

Sincerely,

John E. Husband
Area Manager

Enclosure

United States Department of Agriculture | Forest Service | Blanco Ranger District | 317 E. Market Meeker, CO 81641

Reply to: 2600

Date: January 7, 1994

Colorado Division of Wildlife
Attention: John Gray
711 Independent Ave.
Grand Junction, CO 81505

Dear John:

Thank you for the opportunity to comment on the draft DAU plans for D-7 and E-6.

We have no comments regarding the D-7 draft plan; we do, however, have a few comments regarding the E-6 draft plan.

1. Under heading 'Issue Resolution' and sub-heading 'Distribution and Movement', paragraph #7: You point out that acting alone, the DOW could limit hunter participation during the early seasons by specifying the number of archers and muzzleloaders allowed in each GMU of the DAU. You go on to say that a 'total limit on early season hunter numbers in an area as large as DAU E-6 will be a very contentious issue'. We propose that another possible solution would be to delineate a smaller area within E-6 with logical topographical boundaries to designate as an 'experimental unit'. Within this unit, a subset of E-6, archery and muzzleloader licenses would be specified or eliminated for a given amount of time (5-10 years) to allow elk to remain longer on summer range. After 5-10 years, we could evaluate if this strategy did indeed change the current movement patterns. Although drastic, this would not apply to all GMUs in E-6 and would perhaps be not as contentious as a total limit of early season hunters in E-6. An example of a logical area for this scenario would be the area north of Sleepy Cat Road on the Routt and White River National Forests. We believe that this type of proposal should be seriously considered within the DAU E-6 plan as a solution to the early elk movement patterns we are observing.

2. Under heading 'Issue Resolution' and sub-heading 'Damage to Riparian Habitat': You state that 'Probably the most effective way to allow riparian areas to "heal" is to reduce cattle numbers and/or fence cattle out of riparian zones'. We would like to see the importance of livestock grazing strategies and timing of grazing included in this section. Recent literature, case studies and District experience in riparian area management stress that timing of grazing and changes in grazing systems are more effective ways of restoring riparian areas than a simple reduction in numbers. Fencing, though helpful in

extreme cases, is impractical over large areas due to high costs and maintenance. Please see enclosures on grazing strategies and timing.

3. Under 'Comments on specific allotments/problem areas - USFS': There is no Blanco District section. We refer you to our letter to Keith Giezentanner dated September 3, 1993 under the 'specific impact areas' section. We realize at this time we did not include the grazing allotment names associated with our concern areas. To clarify this I have listed below the description of the area along with the associated allotment name (please refer to the copy of our 9/3/93 letter for descriptions of impacts/on-going work in these areas). 1) **Lost Park C&H** - Lost Creek, Lost Park, 2) **Cattle Creek C&H** - East Beaver, Big Lick, Cattle Creek, 3) **Middle Miller C&H, West Marvine C&H, North Elk C&H** - Other Areas, and 4) **Morapos S&G, Milk Creek S&G** - North of Milk Creek/east to Sleepy Cat Peak. Please include these in the final DAU E-6 Plan under 'Comments on specific allotments/problem areas - USFS'; White River National Forest, Blanco District.

Once again, we appreciate the opportunity to comment on this DAU E-6 plan. Please contact Mary L. Massey of my staff with any questions regarding the points listed above.

Sincerely,

F. WILLIAM HAHNENBERG
District Ranger

enclosures

cc: J.Madison
K.Giezentanner
D.Prenzlow

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Little Snake Resource Area
1280 Industrial
Craig, Colorado 81625

In Reply Refer To:
6500 (170)

December 14, 1993

MR JEFF MADISON
COLORADO DIVISION OF WILDLIFE
PO BOX 2142
MEEKER CO 81641-2142

Dear Jeff:

My staff has reviewed the draft D-7 plan that you provided this office. We support your choice of the preferred alternative for this area. This alternative addresses the concerns that we expressed earlier, especially in regard to the loss of winter range in the north part of the area.

Thank you for the opportunity to review the document. If you have any questions, please contact Kendall McDowell at (303) 824-4441.

Sincerely,

Craig Haynes
for John E. Husband
Area Manager

STATE OF COLORADO

OFFICE OF THE EXECUTIVE DIRECTOR

Department of Natural Resources
1313 Sherman Street, Room 718
Denver, Colorado 80203
Phone (303) 866-3311
FAX: (303) 866-2115

October 28, 1993

Reed Kelley
P.O. Box 645
Meeker, CO 81641

Dear Mr. Kelley:

Thank you for your letter and article of September 7, 1993 and forgive my delay in responding. I plan to forward your letter to the Division of Wildlife as well, but wanted to offer my comments.

I agree with your assessment of the problem government faces of how to effectively connect with local residents of our state. The suggestion to set meetings in conjunction with local clubs and affiliations is good. I know our divisions usually try to tie in with local groups, but it sounds like we were unsuccessful in the examples you cited. We may also need more advance publicity of the meetings to ensure worthwhile attendance.

The Division of Wildlife (DOW) is intent on changing their "closed door" image, but it will take time for the public to trust their intentions. DOW has effectively solicited for public involvement in their current Long Range Planning process and has postponed final approval of the plan until March of 1994 specifically to continue public discourse on the plan. The Governor's Wildlife Convention held in July was also valuable in gathering public opinion. DOW utilizes public opinion surveys for these purposes as well.

Individuals within a community, such as yourself, can keep government accountable in our intentions to be more responsive to the public as well as encourage their fellow citizens to not give up on us. Thank you for your continued involvement in government as a "civilian"!

Sincerely,

Jill McLemore
Citizens' Advocate

[Having worked summers long ago with the Forest Service out of Buford, it brought back memories reading about Adams Lodge and the success of outfitting operations in the area!]

cc: Perry Olson, CDOW
Kris Moser, CDOW

SULLIVAN KELLEY FARMS

Joseph B. Sullivan
969 6th Street
P.O. Box 83
Meeker, Colorado 81641
303-878-5929

Kathleen & Reed Kelley
855 County Rd. #67
P.O. Box 645
Meeker, Colorado 81641
303-878-4666

7 SEPTEMBER 1993

MS. JILL MCLEMORE, CITIZEN ADVOCATE
DEPARTMENT OF NATURAL RESOURCES
1313 SHERMAN STREET, ROOM 718
DENVER CO 80203

DEAR MS. MCLEMORE:

I AM TAKING UP KEN SALAZAR'S INVITATION TO CONTACT YOU. THE ENCLOSED ARTICLE I WROTE FOR SATURDAY NORTHWEST PRETTY WELL DESCRIBES MY CONCERN. I HAVE TALKED WITH THE DIVISION OF WILDLIFE'S MANAGER FOR PUBLIC SERVICES, KRIS MOSER, ABOUT THIS AS I HAD SENT HIM A COPY OF THE ARTICLE. KRIS WAS THE CONTRACT OFFICER FOR THE CONSULTING WORK REFERENCED IN MY ARTICLE.

1. I WAS DISMAYED THAT KRIS' RESPONSE WAS THAT THIS WAS A REGIONAL PROBLEM AND THAT HE HAD SENT A COPY OF THE ARTICLE TO BOB CASKEY, NORTHWEST REGIONAL MANAGER IN GRAND JUNCTION [IN CASE YOU DIDN'T KNOW IT, OUR DIVISION OF WILDLIFE IS SO DECENTRALIZED THAT THE COMMON BY-WORD WITHIN THE DIVISION AND AMONG THE AWARE PUBLIC IS THAT WE HAVE FIVE DIVISIONS OF WILDLIFE IN COLORADO!]. I KNOW POOR PUBLIC PARTICIPATION IS A STATEWIDE, NOT REGIONAL, PROBLEM!

2. UNBELIEVABLY, KRIS ALSO SAID THAT SINCE THE DIVISION HASN'T HAD MUCH OF A TURNOUT AT THESE MEETINGS, THE PUBLIC OBVIOUSLY EITHER DOESN'T CARE OR FEELS THE DOW IS DOING EVERYTHING RIGHT! AS MY ARTICLE INDICATES, NEITHER IS THE CASE!

WHAT I DIDN'T KNOW WHEN I WROTE THE ARTICLE WAS THAT IN THEIR GLENWOOD SPRINGS MEETING A FEW DAYS PRIOR TO THE MEEKER MEETING, WITH THE SAME FOUR HOUR OPEN HOUSE FORMAT, ONLY FOUR MEMBERS OF THE GENERAL PUBLIC SHOWED. IN RIFLE, ONLY ONE PERSON SHOWED UP OVER THE FOUR HOURS!

I WILL BE INTERESTED IN YOUR RESPONSE. THANKS.

SINCERELY,

Reed Kelley

REED KELLEY

[I SPENT 12 YEARS IN DENVER LOBBYING FOR ENVIRONMENTAL AND SPORTSMEN'S CONSERVATION INTERESTS - NOT TO MENTION A COUPLE STINTS WITH DNR - SO I'M SOMEWHAT FAMILIAR WITH STATE GOVERNMENT. IT'S NICE TO KNOW WE HAVE AN "ADVOCATE" INSIDE THE DEPARTMENT NOW.]

CC: JERRY HART, PRESIDENT, UNITED SPORTSMEN'S COUNCIL OF COLORADO

Along the White River

Only a few attend DOW meeting

By REED KELLEY
Special to Saturday Northwest

According to the Colorado Division of Wildlife (DOW), the northwest corner of Colorado (Rio Blanco, Moffat and a third of Routt counties) produces a third again as much hunting revenue as any of the other nine sub-regions of the state. As one White River outfitter puts it, "damn near everyone in the county derives some income from wildlife-related activity" through hunting and summer recreation.

Participation in the DOW's meeting on White River deer and elk herd objectives in Meeker this past Tuesday, however, belied this importance of big game to the region. In four hours of "open house," manned by highly qualified and expensive DOW personnel, six members of the public showed up to chat about deer, elk and politics. At least five of those were individuals with whom the DOW regularly communicates anyway.

Why? It's unbelievable to think that White River Valley residents don't care about or have any opinion about big game herd objectives. Many more people were seen during the meeting time on the outskirts of town ogling and photographing the big bucks in county commissioner David Smith's hay field than were at the meeting. DOW biologist Jeff Madison admitted they probably should have had the meeting out there in the borrow pit.

A Meeker private land hunting manager suggested that if the DOW wanted a better turn-out, they might consider picking a time of year when most landowners aren't haying or harvesting crops. "Besides," he added, "everybody knows there's no point in going to these meetings because the DOW will do what they damn well please regardless of what any of us locals think or say. They don't even listen to their own field people."

A BLM manager suggested that "if the DOW had to compete for public dollars like other public agencies maybe they'd be a little more responsible to public needs and desires." (The DOW is totally fueled by license fee revenues that collect in the state's wildlife cash fund.

A couple of years ago, the DOW paid a consultant to give them some advice on public involvement. One of the recommendations made was that for meetings in towns like Meeker, the DOW have local clubs, like the Meeker Sportsmen's Club, Rio Blanco Stockgrowers, Wool Growers, etc., co-sponsor meetings where they want the interested public to participate. The Meeker Sportsmen's Club has a proven record of turning out 35 to 50 folks for DOW speakers in the past.

In Craig, the DOW scheduled their deer and elk herd unit objectives open house this past Wednesday, the same night as their co-sponsored endangered fish recovery program public meeting.

As for how the wildlife recreation business is going in the valley this year, Ron Hilkey, who retired in mid-August after nearly 15 years as Rio Blanco County's sheriff and is now fulltime in the lodging and outfitting business at Adams Lodge, has a perspective. Hilkey reports that the summer recreation traffic has been incredible — the best season ever for Adams Lodge. Most of the demand has been for horsepack flyfishing trips. Adams Lodge has the place for such folks to go, too — the legendary Marvine Lake fishing camp developed by Hilkey's uncle, the late Bob Hilkey.

Hilkey describes it as hardly camping. "The camp's now better than ever, folks sleep on cots and good sleeping pads, and are cared for by a resident couple, Meeker oldtimers Bart and Bev Christianson.

Bart's the excellent cook as well as camp humorist and storyteller while Bev makes sure the real work gets done. She is a source of good information, too, having recently retired as the front desk operator for the Blanco District Forest Service office.

Hilkey says that demand for guided fishing trips has greatly increased and Adams Lodge plans to do more of that next year. He figures that the Orvis-endorsed fishing operation of Elk Creek Lodge has upped the ante and interest in quality fishing on the White River and in the Flat Tops for the whole community. Hilkey says that he's totally booked for the fall hunting seasons and thinks the hunting will be as good as last year.

Always forgive your enemies — nothing annoys them so much.

— Oscar Wilde

Trappers Lodge will welcome Pepsi

At Trapper Lake Lodge, a 10 minute walk from Trappers Lake, brand-new employee Mike Bailey (his stage name) from Craig is super-enthused. He loves the country and the people he meets and is impressed with the people he gets to work with. Bailey says he used to work at a place in Seven Springs, Penn., and there's just no comparison with how much nicer the people are out here."

Bailey entertains as a singer and storyteller at the Golden Cavvy Lounge in Craig during the winter. He hopes to similarly regale the 33-some Pepsi folks coming to Trappers Lake Lodge this weekend.

United States Department of Agriculture | Forest Service | Blanco Ranger District | 317 E. Market Meeker, CO 81641

Reply to: 2600

Date: September 3, 1993

Subject: DAU planning input - Blanco Ranger District

To: Keith Giezentanner

Dear Keith:

Below are our comments regarding Blanco Ranger District input to the Division of Wildlife's (DOW) Data Analysis Unit (DAU) planning process. The Blanco Ranger District includes parts of Game Management Unit's (GMU) 23, 24, and 12 within DAUs E-7 and D-7. Most of our concerns in this area deal with riparian conditions in specific areas, influenced by both livestock and big game (primarily elk) use. To restore damaged riparian areas and protect those areas currently in good condition, we employ various methods of management. Some of these include: 1) altering livestock grazing systems including stocking rates and timing, 2) building exclosures (in extreme cases), 3) planting stream banks with willows and native grass and forb seed mixes, 4) placing structures in identified streams to aid in sediment trapping and bank restoration, and 5) combinations of the above methods or others not mentioned here. We employ the above methods without differentiating between impacts caused by livestock vs. big game (nearly impossible to detect unless a grazing allotment is vacant or no elk inhabit the area in question(?)).

Specific riparian/identified impact areas we are focusing on include:

1) Lost Creek/Lost Park - On-going project following recommendations listed in Coordinated Resource Management Plan (CRMP); permanent transects in riparian areas and throughout park show improvement in conditions since the CRMP was adopted and the grazing system was changed in 1987. Portions of the stream were fenced and banks seeded, and structures placed in stream to improve bank conditions and fish habitat (Colorado River cutthroat trout, R-2 Sensitive and Candidate Category 2 species, in Lost Creek). We will continue monitoring conditions in Lost Park through permanent transects and continue looking at ways to restore this valuable riparian area.

2) East Beaver/Big Lick/Cattle Creek area - This area falls between Oak Ridge and Lost Park and is heavily used as transition range by elk as well as being a cattle allotment. On-going work to improve and monitor riparian conditions in this area include prescribed burning of upland sites and slopes to alleviate concentrations in the riparian area, permanent transects in burn (treatment) and control areas to monitor use by livestock and big game and a change in the livestock grazing system which included more rest of pastures and added private land to the allotment.

3) Other areas - Other impacted riparian areas identified include the Miller Creek, West Marvine and North Elk drainages. In these areas, restoration and/or monitoring projects are either on-going or planned.

4) North of Milk Creek/east to Sleepy Cat Peak - This area offers a high degree of solitude during the summer months and appears to be a major concentration area for elk during that time. Elk grazing/impacts are substantial here and can be detected prior to the start each year of domestic sheep grazing (on-date of June 25 or later in the Morapos, Deer Creek and Three Points allotments). A similar situation occurs around the Pagoda/Sand Peaks area west of Ripple Creek Pass in the early part of the summer. We are constantly faced with concern being expressed by the livestock industry that early season impacts to the range caused by elk negatively impact the range resource. Often times, the perception is that we change livestock grazing systems and reduce livestock stocking rates yet do nothing to address negative impacts caused by elk.

In all of the aforementioned cases, we are more concerned with distribution than with actual numbers of elk. A 'gut' feeling would be that a 10% decrease in elk numbers across the District (but especially on the north side) would help to alleviate some of the concentration in specific areas, however we understand that 10% is probably well within the Confidence Interval for the population estimate in DAU E-6 (current 1992 post-hunt population estimate of 30,178). We believe deer numbers are about right. Through field observations we believe the current sex ratio of total males:females of both elk and deer is about right, however in both cases we believe mature animals may be low (both bucks and bulls).

We are also concerned with the effects of early hunting seasons on the movements of elk from public onto adjacent private lands, contributing to the difficulty in harvesting animals. These movement patterns were substantiated by George Bear's study which involved monitoring movements of elk on the north and south sides of our District throughout summer, archery and rifle seasons. We have high hopes that the recently established Habitat Partnership Program (HPP) in the White River drainage will address some of these distribution and movement patterns.

We encourage DOW biologists/managers to review our permanent transect and associated data collected in Lost Park and on recent prescribed burn and control areas. We welcome input on our methods and ideas on how data may be collected any differently to better aid in the DAU planning process.

We have no solutions to the above items but wanted the Forest Service and DOW personnel involved in DAU planning to be aware of our concern areas and local observations. Thank you for allowing us this early opportunity for input in the planning process.

Sincerely,

/s/ Mary L. Massey

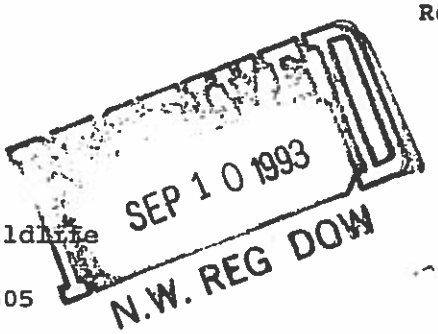
Mary L. Massey
District Wildlife Biologist

cc: J.Madison
D.Prenzlow

United States Department of Agriculture | Forest Service | White River National Forest | P.O. Box 948 Glenwood Springs, Colorado 81602 303 945-2521

Reply to: 2610

Date: September 8, 1993



Mr. John Ellenberger
Colorado Division of Wildlife
711 Independent Ave.
Grand Junction, CO 81505

Dear John;

As a follow-up to our August 11, 1993 meeting concerning DAU planning for DAU E-6, DAU D-7,42, and 43, the White River National Forest has the following comments and recommendations:

The Red Dirt Area, south of the Derby country was not mentioned at the August meeting. This area holds a significant number of elk in the winter (500-600) and should be added to the list of areas of concern from a range condition standpoint. If you need further information about this area, please contact Wayne Nelson at our Eagle Ranger District (328-6388).

Rather than reiterate information from the Rifle and Blanco Districts, I have included copies of their internal correspondence to me concerning their areas. The Rifle District also indicated that they feel that elk populations are approximately 10% higher than desired with the ratio of mature bulls somewhat low overall, but adequate in inaccessible areas of the District.

Give me a call if I can supply any additional information or if you have any questions.

KEITH I. GIEZENTANNER
Wildlife Biologist

HABITAT PARTNERSHIP, LOWER COLORADO RIVER

WHITE RIVER NATIONAL FOREST, RIFLE AND EAGLE RANGER DISTRICTS

The allotments found on the WRNF for this HPP plan are:

Rifle Ranger District:

ALLOTMENT	AUM'S	PERMITTEES
Boiler Cr. C&H	652 AUM's	Waffle House, Inc.
Clinetops C&H	1755 AUM's	Charles Ryden VIX Ranch (Chuck Klein)
Meadow Cr. C&H	2987 AUM's	West Elk Ranch (Louis,Carol Dodo). Lillian Hill Robert Mayo
Rifle Cr. C&H	3574 AUM's	George Bagley Terry Reynolds J. Gentry Carl Wittwer
Blair Mtn./Triangle Pk. S&G	375 AUM's	Harold Cherry
Clark Ridge S&G	373 AUM's	J.Robb Robinson
Corral Pt. S&G	600 AUM's	Gus Halandras
East Canyon S&G	400 AUM's	Malcolm Jolley
GV Springs S&G	900 AUM's	Harold Cherry
Mansfield/Ute S&G	770 AUM's	Elmer Roberts
Ute Cr./Spring Hill S&G	466 AUM's	Spade Livestock

VACANT ALLOTMENTS:

Blue Lake S&G
Dolan Gulch S&G
Transfer S&G
No Name C&H
Grizzly C&H

Eagle District:

ALLOTMENT	AUM'S	PERMITTEES
Derby Cr.C&H		Joe, Orris Albertson George Gates & Sons Wurtsmith Land and Cattle Burns Whole Livestock
Sunnyside C&H		Nottinghams
Lake Cr./Deep Cr.		Warren Jacobsen Dave Mayne Jim Stephans Sweetwater Livestock
Grizzly-Johnson S&G		Larry, Susan Robinson
CoffeePot S&G		Jay Golden Bair

PROBLEM AREAS/POSSIBLE TREATMENTS

RIFLE DISTRICT

1. The area including Cherry Creek and the stock driveway in T4S, R91W is in generally fair to poor habitat conditions, based on ocular estimates. The area is classified as critical elk winter range and winter concentration areas for elk, but there is also some year round use by elk in this area. Cattle use it for 15 days in the early summer, with 100 yearlings in lower Cherry Creek, and 100 yearlings in the stock driveway area, for approximately 70 AUMS taken out of the area by cattle.

   Possible treatments to improve range conditions include prescribed burning of oakbrush in the Cherry Creek drainage, reseeding, and possibly fertilization of the critical winter range.

2. Main Elk drainage along the Clinetop Road and the area south of the Mansfield trail is winter range for elk that has become overgrown and dense brush in some areas. There is alot of potential for prescribed burning in this area.

3. The Boiler Creek to Third Set spring is a very important elk security and production area. Protecting elk security in the area may help to hold them up on the Forest longer during the hunting seasons, as the BearWallow Ranch lies just below the forest, intermingled with BLM.

   Possibilities for treatments include: road closures, ATV Management with travel restrictions and law enforcement. The Rifle District has attempted to restrict motorized access into the area from the north, and the

BearWallow Ranch restricts motorized traffic from the south. There may also be possibilities for habitat treatments on the private land and BLM Below the Forest.

4. The Coulter Mesa and Bar HL Park area lacks security cover (dark timber) and has a high density of roads. It is also managed as an "open" area for travel, which means ATV's can go off roads and trails. Without adequate hiding cover, some elk tend to migrate to lower private lands during the archery season.

   Treatment possibilities: close and obliterate unneeded roads; educate ATV users, allow succession of conifers near canyons and Forest boundaries.

EAGLE DISTRICT

5. Sweetwater drainage - some habitat improvements have already been done including elk winter range in this area, and more habitat improvements could be done to hold the elk off private land.

6. Burns area: Habitat improvements on NF and BLM to hold elk of Nottingham's Ranch.

United States Department of Agriculture | Forest Service | Blanco Ranger District | 317 E. Market Meeker, CO 81641

Reply to: 2600 Date: September 3, 1993

Subject: DAU planning input - Blanco Ranger District

To: Keith Giezentanner

Dear Keith:

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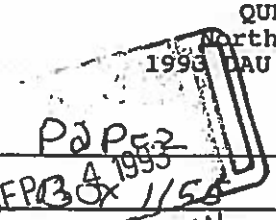
Sincerely,

/s/ Mary L. Massey

Mary L. Massey
District Wildlife Biologist

cc: J.Madison
D.Prenzlow

QUESTIONNAIRE
Northwest Colorado
1993 DAU Planning Process



NAME: Glen Popp

ADDRESS: P.O. Box 1150

CITY, STATE, ZIP CODE: Meeker Colo. 81641

WHAT GROUP DO YOU FEEL YOU MOST REPRESENT? (OPTIONAL)

- [X] LANDOWNER
- [X] GUIDE AND OUTFITTER
- [ ] BUSINESSMEN
- [X] SPORTSMEN
- [ ] ENVIRONMENTAL
- [ ] GENERAL PUBLIC
- [ ] OTHER

YOUR RECOMMENDATION (PLEASE CHECK)

White River Deer (D-7):

	HOLD	INCREASE	DECREASE	RECOMMENDED CHANGE %
Population size	X			
Buck to doe ratio		X		

Rifle Creek Deer (D-42):

	HOLD	INCREASE	DECREASE	RECOMMENDED CHANGE %
Population size				
Buck to doe ratio				

Sweetwater Ck. Deer (D-43):

	HOLD	INCREASE	DECREASE	RECOMMENDED CHANGE %
Population size				
Buck to doe ratio				

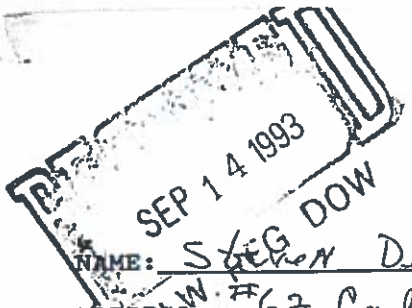
White River Elk (E-6):

	HOLD	INCREASE	DECREASE	RECOMMENDED CHANGE %
Population size	X			
Bull to cow ratio		X		

COMMENTS/ISSUES/CONCERNS: I would like to see more mature male!

Return this questionnaire to the Colorado Division of Wildlife. You can leave it with us today or mail it to:

Colorado Division of Wildlife
Attention: John Gray
711 Independent Ave.
Grand Junction, CO 81505



QUESTIONNAIRE
Northwest Colorado
1993 DAU Planning Process

NAME: Steven Dee Smith

ADDRESS: W #62 Co. Rd. 212, Lay Rte. 8C62

CITY, STATE, ZIP CODE: Craig, Co. 81625-

WHAT GROUP DO YOU FEEL YOU MOST REPRESENT? (OPTIONAL)

___ LANDOWNER
___ GUIDE AND OUTFITTER
___ BUSINESSMEN
✓ SPORTSMEN
___ ENVIRONMENTAL
___ GENERAL PUBLIC
___ OTHER

YOUR RECOMMENDATION (PLEASE CHECK)

White River Deer (D-7):

	HOLD	INCREASE	DECREASE	RECOMMENDED CHANGE %
Population size	✓	___	___	___
Buck to doe ratio	✓	___	___	___

Rifle Creek Deer (D-42):

	HOLD	INCREASE	DECREASE	RECOMMENDED CHANGE %
Population size	✓	___	___	___
Buck to doe ratio	✓	___	___	___

Sweetwater Ck. Deer (D-43):

	HOLD	INCREASE	DECREASE	RECOMMENDED CHANGE %
Population size	✓	___	___	___
Buck to doe ratio	✓	___	___	___

White River Elk (E-6):

	HOLD	INCREASE	DECREASE	RECOMMENDED CHANGE %
Population size	✓	___	___	___
Bull to cow ratio	✓	___	___	___

COMMENTS/ISSUES/CONCERNS: I feel the Department does a good job would like to see the herding of the elk elk stopped by landowners stopped! we need to keep hunting, it's important part of our Management program and heritage

Return this questionnaire to the Colorado Division of Wildlife. You can leave it with us today or mail it to:

Colorado Division of Wildlife
Attention: John Gray
711 Independent Ave.
Grand Junction, CO 81505

United States Department of Agriculture | Forest Service | Routt N.F. Yampa Ranger District | 300 Roselawn Ave. P.O. Box 7 Yampa, CO 80483 303-638-4516

Reply to: 2640

Date: September 9, 1993

John Ellenberger
Colorado Division of Wildlife
NW Region Office
711 Independent Ave
Grand Junction, CO 81505

Dear John,

Enclosed is a summary of the livestock allotments on the Yampa Ranger District that occupy the same area as the White River elk and deer herds. The comments refer primarily to elk, as there are no perceived conflicts with the deer herd at this time. We have no allotment areas specifically set aside for wildlife within the White River herd boundaries.

We hired a temporary employee this field season to collect information on elk utilization and distribution on the district, particularly in areas where problems have been reported (over-utilization, fence damage). He spent the summer conducting utilization studies prior to and during cattle use on the allotments, and tracked and followed elk in an attempt to determine movement patterns. We were very pleased with the results, and hope to continue this work at least through 1994. We plan to pursue funds from the Habitat Partnership Program for this purpose. The enclosed document includes a summary of the information collected. If you would like a detailed copy of the data collected, we will be happy to provide it upon request.

With the information we have at this time, albeit limited, it appears that sheer numbers of elk are not a problem at current levels in relation to habitat condition and livestock management. There are some concerns with damage to fences, and with distribution on some allotments.

We appreciate the opportunity to be involved with the development of the herd plans, and look forward to the opportunity to comment on the draft plans.

Sincerely,

For KATHY M. KURTZ
District Ranger

Enclosures (1)

KGN/kn

The following allotments are located on the west side of the Yampa Ranger District (map attached) and are included in the area of study for the White River elk herd.

PERMITTEE/ALLOTMENT	NUMBERS	SEASON	HEAD MONTHS
CATTLE ALLOTMENTS			
Flattops Ranch			
Kirk Shiner			
Wayne Showmaker			
Egeria Creek C&H			
Term Permit	370 cow/calf	7/16-10/5	1024
Temp-additional	120 cow/calf	7/16-10/5	332

Range Analysis information was collected during the 1992 grazing season and it was determined that much of the allotment was in poor condition, particularly in the Aspen/Forb type. An environmental assessment is currently being conducted on this allotment, evaluating the additional 120 modification that was previously given. During the 1993 grazing season, a Private Land Permit was issued for the "Ragland" pasture adjacent to the Smith pasture of the allotment. No additional numbers were given with the PLP, it was done to maintain the previous modification of the additional 120 head. Distribution of livestock has greatly improved over the last two years. Stock pit developments are planned on the Smith pasture to assist in improving the riparian condition of Smith Creek. This allotment is a closed area for elk calving up to June 15th. Elk utilization and monitoring that occurred during the 1993 grazing season showed that utilization by elk averaged 5% in most areas with a few areas reaching 10 and 15%. Although some elk remained in the area after June 15th, the bulk of the herd had moved out of the area by that time.
Permittee is heavily impacted by elk during the winter season on private ground.
Objectives for the elk study in 1994 will be to determine a) appx numbers on the elk herd that calves in this area, and 2) where the elk move to once they leave the Egeria allotment area.

Lazy EH Ranch			
Joe and Clay deGanahl			
Bear River C&H			
Term Permit	300 yearlings	7/1-8/31	620
Private Land Permit	200 yearlings	7/1-8/31	413
Watson Creek C&H			
Term Permit	347 yearlings	7/1-8/31	717
Temp-additional numbers	38 yearlings	7/1-8/31	79
Temp-additional season	200 yearlings	7/1-8/31	107

Some range analysis was conducted on the allotments during the 1992 grazing season as well as utilization being conducted during 1990, 1992, 1993. Most of the allotment is in good and excellent condition with a few key areas receiving moderate to heavy use in 1990, and light to moderate use during 1992 and 1993. An environmental assessment is currently being conducted on these allotments. Distribution has continuously been improving due to intensive management by the permittees. Elk herd size between these two allotments is estimated at close to 300 head. This herd does not leave the area all season long. Utilization by elk has varied from 2.5% to 47% prior to livestock going on. Stock pit developments are planned to assist in distributing elk and livestock. Permittees are mostly impacted by elk regarding fence maintenance between the two allotments and between the Forest land and the private land. Permittees are heavily impacted by elk during the winter season on private ground.
Objectives of the elk study for the 1994 grazing season will to 1) continue utilization as conducted during 1993, this aids in directing the permittee away from areas to prevent over-use, 2) determine additional improvements for the allotments to maintain enough forage for both elk and livestock.

Leonard Snowden
South Hunt C&H

Term Permit	295 yearlings	7/1-8/30	600
Temp-additional numbers	105 yearlings	7/1-8/30	214

Range analysis was conducted on this allotment during the 1993 grazing season, data is currently being reviewed. From previous analysis and utilization studies, it was determined that much of this allotment is in poor and very poor range condition. Non-use has been approved for the past four years 1990, 91, 92 and 93, with a fill-in of 50% during 1992. An environmental assessment is currently being conducted on this allotment, particularly evaluating the modification for an additional 105 head as well as carrying capacity for the term numbers of 295 head. Elk utilization on this allotment ranged from 4% to 23%.
Permittee is heavily impacted by elk during the winter season on the private ground.
Objectives of the elk study for the 1994 season are 1) determine elk numbers and 2) determine how many stay and how many, if any, move out of the area.

Middle Hunt C&H

Joe and Virginia Rossi			
Term Permit	88 cow/calf	7/16-9/30	226
Jack and Wanda Redmond			
Term Permit	50 cow/calf	7/16-9/30	128
Rita Nelson			
Term Permit	49 cow/calf	7/16-9/30	126
VACANT	23 cow/calf	7/16-9/30	59

Range analysis is planned for this allotment during the 1994 grazing season at which time an environmental assessment will be conducted. Evaluation will be made regarding the vacant numbers and management of the allotment. Most of this allotment is in poor and very poor range condition and management is also poor. Some of this is attributed to the difficulty in managing such a small permit with three different permittees. Utilization has been conducted on the allotment for the past five years showing moderate and heavy use occurring consistently, and some severely heavy use occurring during 1993. Distribution is very poor. Many fences occur on the allotment but stockpit development could help in improving distribution. Change in management by permittees would need to occur before any major investments were to occur on this allotment. Elk utilization conducted on the allotment during 1993 showed one area at 5.5% and another area at 23%. It is "suspected" that there is only a small number of elk using this area (probable due to the poor range condition) and the few in the area probably are out of the area by the time livestock go on. Permittees attribute much of the use on the allotment to the number of elk there.
Objectives of the elk study in 1994 are 1) determine numbers and locations of elk presence on the allotment, 2) determine amount of utilization occurring by elk and 3) determine if elk stay on the allotment or move out and where they go if they do in fact move out.

Bob and Ann McKune
North Hunt C&H

Term Permit	221 cow/calf	7/1-10/15	796
Temp- change season	221 cow/calf	9/1-10/15	339
Closed-North Hunt Riparian Demonstration Project			116

This allotment contains a high amount of tall larkspur due the high amount of the Aspen/Forb vegetation type occuring. Livestock losses due to larkspur poisoning have been high when season long grazing has been tried. Currently permittees graze only a very short time at the end of the season. It is suspected that because of the high amount of larkspur, historical grazing patterns have over-used the riparian areas- North hunt and Spronks Creek specifically. Additional forage due to the reduced season is currently being used by the Agriculture Research Station- Poison Plants Lab for research purposes relating to tall larkspur poisoning of cattle. An environmental assessment is currently being conducted on this allotment evaluating the riparian conditions on the allotment and carrying capacity for cattle vs sheep. Elk utilization was not conducted on

this allotment during 1993 but is planned for 1994. It is estimated that a herd of appx 100 head resides in this area, but it is not known if they stay throughout the grazing season.
Objectives for the elk study in 1994 will be to 1) conduct elk utilization, 2) determine herd size, and 3) determine if elk stay in the area or if they move and if so, where do they go.

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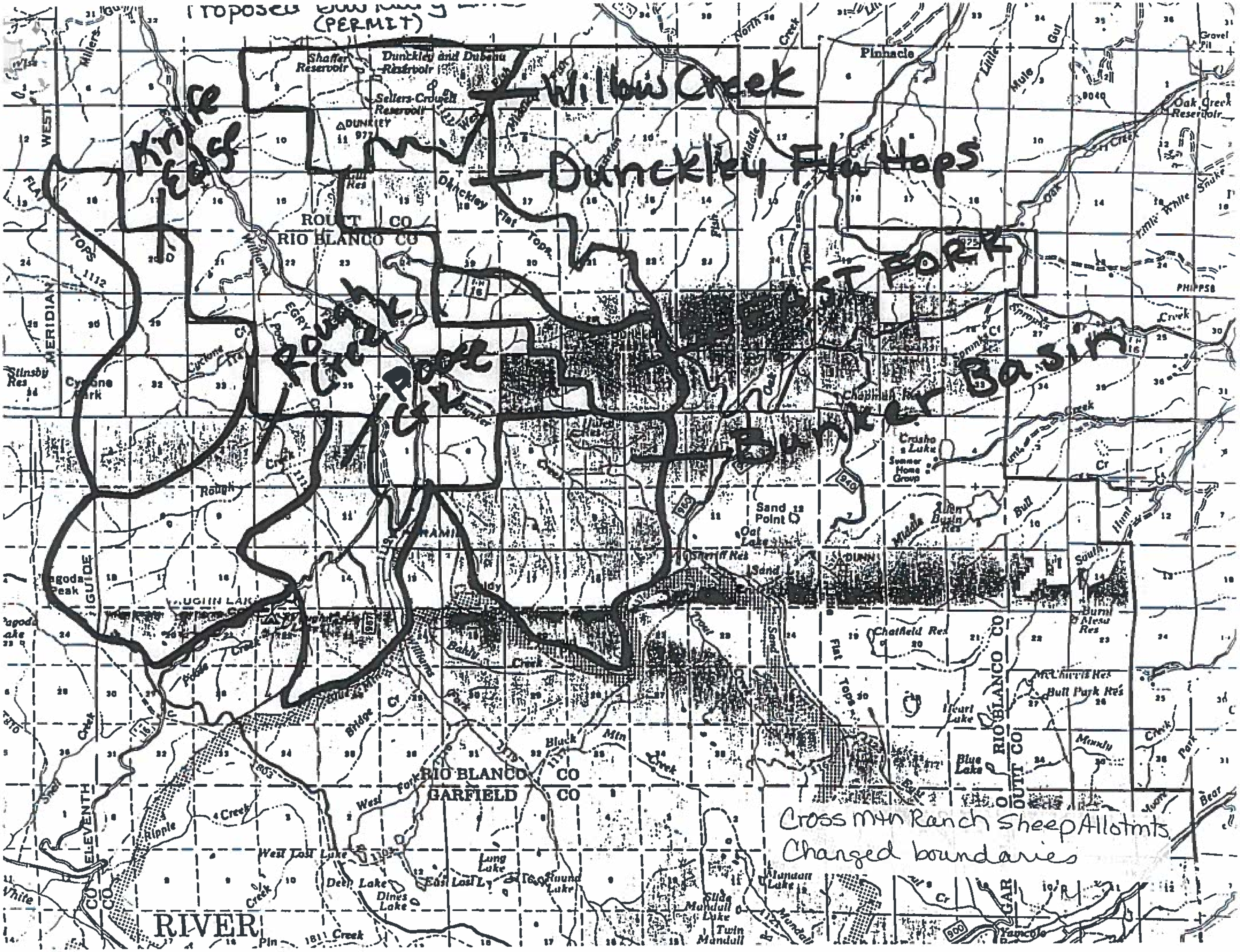
SHEEP ALLOTMENTS

Little analysis/utilization work has been conducted on most of the sheep allotments due to lack of man power from the Forest Service and due to the fact that sheep allotments tend to be in better range condition than cattle allotments due to a herder being with sheep full time (this is a very bold summation and mostly a personal call). Most of the sheep allotments on the district are up for analysis and environmental assessments during 1994 and 1995 to evaluate carrying capacity. Some observations of elk herds were conducted 1993, and if funding is available, utilization will be planned in these areas during 1994. Reports of elk herd size have been noted for the area just south of Sheriff's Reservoir, which is closed to livestock grazing (Trout Creek S&G) for watershed protection; estimated size of this herd is 300+. Large numbers- 200+, have also been reported for the area west of Devil's Causeway (Causeway S&G). Most permittees report high elk use on both their allotments and their private land adjacent to the Forest, but these reports have not been verified.

Maneotis Sheep Company			
John Maneotis			
Causeway S&G			
Term Permit	1200 ewe/lamb	7/6-9/15	2880
Coal Creek S&G			
Term Permit	1000 ewe/lamb	7/16-9/10	1900
John Peroulis and Sons			
John, Stan and Louie Peroulis			
Mt Orno S&G			
Term Permit	800 ewe/lamb	7/16-9/20	1787
Temp- change numbers	900 ewe/lamb	7/16-9/20	2010
Trout Creek S&G			
Term Permit	1200 ewe/lamb	7/6-9/15	2880
Temp- change numbers	1000 ewe/lamb	7/6-9/17	2467
Dunckley S&G			
Term Permit	875 ewe/lamb	7/6-9/5	1808
Temp- change numbers	950 ewe/lamb	7/6-9/9	2090
Andy Peroulis			
Ute S&G			
Term Permit	875 ewe/lamb	7/6-9/5	1808
VACANT			
Baldy Mt S&G			
Term Numbers	1000 ewe/lamb	7/11-9/10	
Cross Mountain Ranch Limited Partnership			
Red Cortner			
Phil Salazar			
Term Grazing Permits S&G-			
Knife Edge	1000 ewe/lamb	7/1-9/15	2567
Rough Creek	1000 ewe/lamb	7/16-9/5	1733
* **Reader Mesa**	(permit split up)		
Poose Creek	1000 ewe/lamb	7/22-9/10	1700
Bunker Basin	1000 ewe/lamb	7/10-9/10	2100

Dunckley Flattops	1000 ewe/lamb	7/11-9/1	1767
East Fork	1000 ewe/lamb	7/6-9/1	1933
Willow Creek	1000 ewe/lamb	7/16-9/10	1900
Private Land Permits=			
Previously w/Reader, now Poose			
	45 ewe/lamb	7/22-9/10	77
Willow Creek	50 ewe/lamb	7/16-9/10	95



(PERMIT)
Knife East
Willow Creek
Dunckley Flat Tops
EAST FORK
Bunker Basin
Rough Crk
Poose Crk
ROUTT CO
RIO BLANCO CO
GARFIELD CO
RIVER
Cross Mtn Ranch Sheep Allotmts
Changed boundaries