

**ELK MANAGEMENT PLAN
FOR
E-1 DATA ANALYSIS UNIT**

Game Management Units: 2 and 201

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DAU E-1 EXECUTIVE SUMMARY

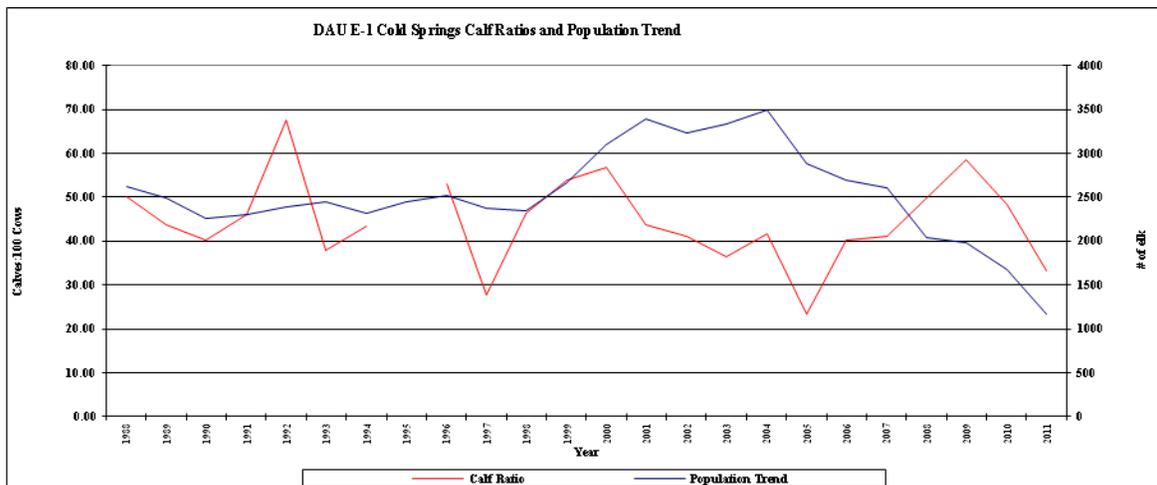
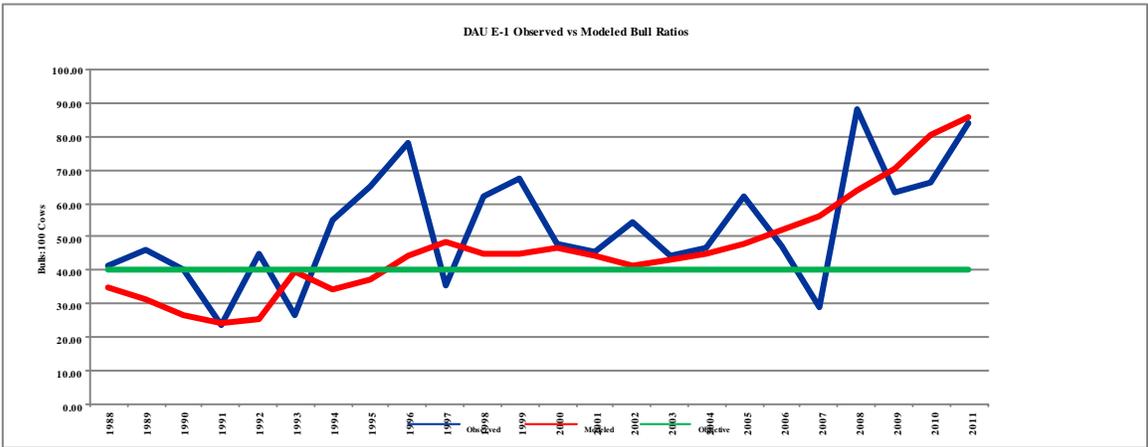
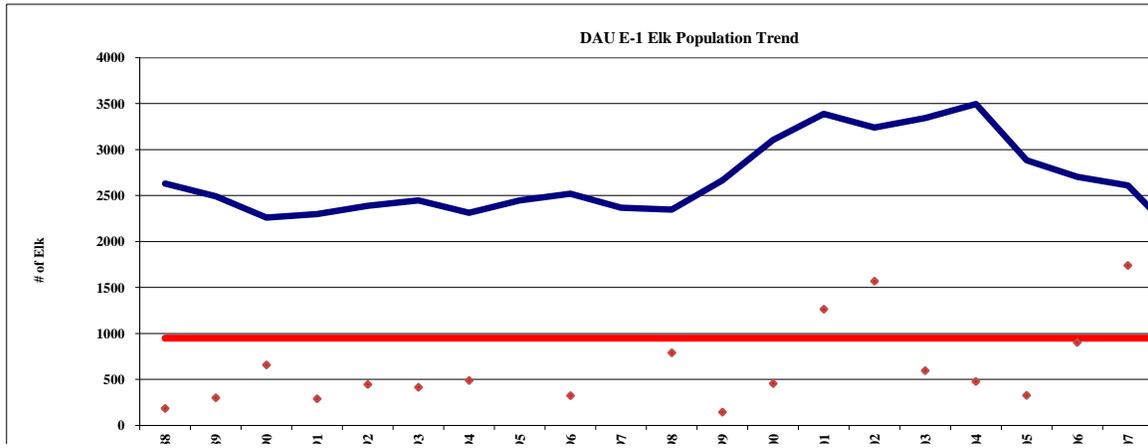
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GMUs: 2 and 201

Land Ownership: 77% BLM, 9% Private, 7% NM, 6% State, 1% NWR

Post-hunt Population: 1991 Objective 950 2011 Estimate 1,200 – 2,000 Recommended 700 - 1700

Post-hunt Sex Ratio (Bulls/100 Cows): Objective 40 2011 Observed 88 2011 Modeled 58 Recommended >40



E-1 Background

The current population objective for DAU E-1 (GMU 2 and 201) is 950 elk. This population objective was set in 1991. The post-hunt population estimate in 2011 was 1200-2000 elk in the DAU. The most recent refinements to the CPW computer modeling procedures have substantially increased modeled estimates of post-season elk populations in many areas of western Colorado, including DAU E-1. These changes were largely due to the term in which these populations can be modeled. Past modeling programs allowed for a maximum modeling period of 10 years. The current modeling program allows for models to run for 20 plus years depending on the amount of data that has been collected for the DAU. In addition, more accurate estimates of adult and calf survival data are being used in the models. These survival estimates are much higher than the estimates used in previous models. It is proposed that the long term population objective for this herd be managed as a population range as opposed to a point estimate number. The flexibility to manage this elk herd within a range would allow the CPW to be more adaptive in their management and take the appropriate steps needed to increase or decrease elk numbers to match ecological conditions. In 2006, antlerless licenses in this DAU were made additional in an effort to increase cow harvest. In addition, late season hunts were established in 2008 to increase cow harvest in the DAU.

Computer modeling data shows a stable population trend from 1988-1998. From 1999-2001, population trends increased steadily reaching the highest levels from 2001-2004. Recent population trends (2005-2011) have shown a steady decrease with the increasing antlerless harvest rates since 2004.

The management objective for the E-1 elk herd has been to maintain the sex ratio at 40 bulls:100 cows since 1979. To manage for these high bull ratios, antlered license numbers have been restricted to allow for increased bull quality. DAU E-1 is included in the 20% of the DAU's managed for quality in Colorado.

The post-hunt age ratio (calves:100 cows) has averaged 44.5 since 1988. The highest age ratio was 67.5 calves:100 cows in 1992 and the lowest was 23.5 calves:100 cows in 2005. The long-term trend for the cow:calf ratios shows a slightly declining trend. Calf ratios showed a more drastic decline from 2000-2006, which coincides with the onset of drought conditions in this area and the peak of the elk population. Modeled estimates of this population indicate the population has been steadily declining since 2004.

E-1 Significant Issues

The management issues identified in this DAU are primarily associated with elk distribution, winter range habitat capability, and early spring elk use on public lands as elk migrate back to summer ranges. On-line survey results identified high bull:cow ratios, low cow numbers, bull quality, shed antler hunting, and preference point creep affecting hunter opportunity as the most common issues with elk hunter satisfaction. The effects of the elk population on greater sage-grouse were also considered in developing this DAU plan.

Elk distribution is the biggest challenge in achieving annual cow harvest objectives in the DAU. Hunter pressure and elk distribution are an annual management concern when setting license numbers for the DAU. Elk seek refuge within Dinosaur National Monument to avoid hunting pressure in GMU 2, whereas, interstate elk movement is an issue in GMU 201. GMU 201 is bordered on the north by Wyoming and west by Utah. For management purposes, more coordinated efforts are being made with adjacent states to conduct concurrent antlerless seasons in an effort to increase cow harvest. A telemetry study was initiated in 2012 to better understand interstate elk movement and its effect on elk distribution, harvest and population management. In addition, more of an emphasis has been placed on late season hunts to achieve antlerless harvest objectives. It is important for the CPW to work cooperatively with private landowners, federal land management agencies, Wyoming Game and Fish, Utah Division of Wildlife Resources, and Dinosaur National Monument to manage this population to the long term DAU objective.

In addition to elk distribution, changes in elk behavior have resulted in range expansion and, in some cases, year round elk use on winter ranges. Elk movement across state lines and the Dinosaur National Monument boundary create refuge situations that create challenges to achieving harvest objectives. The arid climate that characterizes

this DAU and cyclical drought conditions also create challenges in managing elk populations within nutritional carrying capacities of the range. Mild winter conditions and summer drought cycles prevailed across the DAU during the early 2000's causing concern about range conditions and the sustainability of elk numbers which were at peak population levels during this time. Concerns regarding drought stressed range conditions amongst management agencies and livestock operators resulted in a concerted effort to reduce elk numbers across the DAU. Management efforts implemented to reduce elk numbers to allow for range rest and recovery included designating cow licenses additional and implementing a late cow elk season in the DAU. These efforts proved successful in reducing elk numbers across the DAU and the population has been in a downward trend since 2004. Increased antlerless elk harvest since 2001 has resulted in a 40% reduction in the E-1 elk population.

Major concerns regarding historical and current elk population levels in DAU E-1 are centered on competition between elk and livestock. Federal land management agencies and livestock operators support the quality management strategy for elk but have expressed concern about overall numbers of elk in the DAU. These concerns are focused on spring and summer grazing competition between elk and cattle. In contrast, sportsmen, outfitters, and some landowners are in support of current or slight increases to population levels.

It should be recognized that local issues and problems associated with elk distribution can and will occur at any population level and it is beyond the scope of this DAU plan to address some of these localized distribution issues. Game damage permits and kill permits may provide effective solutions to manage localized game damage situations.

Public Process

CPW conducted a public meeting in Browns Park and an online public survey in the summer of 2012 to assess public desires for the future management of the E-1 elk DAU. In addition, CPW met with and/or requested formal comments from the Moffat County Board of County Commissioners, the Moffat County Land Use Board, the Colorado State Land Board, the Northwest Colorado HPP Committee, the Browns Park National Wildlife Refuge, and the Bureau of Land Management, Little Snake Field Office. The DAU plan was also posted on the CPW public website for two separate public comment periods. Results of those outreach efforts are presented in the appendices that follow this DAU plan.

In general, there is limited support for the population objective of 950 elk set in 1991; the majority of stakeholders support managing for an elk population that is slightly higher than current population levels. However, comments from Moffat County and others requested that CPW consider an additional (lower) population objective alternative and that CPW consider the effects of elk on portions of the landscape that do not meet BLM standards and guidelines for rangeland management, the effects of elk on greater sage-grouse within the DAU, and plans to adjust elk populations during future periods of drought.

CPW conducted several additional assessments to address these concerns, which are addressed in detail in the DAU plan. Habitat assessment models for the DAU suggest that managing for a population range of 700 – 1700 elk is at the lower end of elk population thresholds that the habitat can support, based on a 10 year average precipitation rate, average livestock numbers for the area as reported by Colorado agricultural statistics, and a population of 1000 antelope. In addition, a grazing analysis was performed using the BLM's methodology for a 73,400 acre area in GMU 201 that included the top of Cold Springs Mountain, Diamond Peak, Middle Mountain and the Three Corners area. This analysis included varied scenarios to account for variable range conditions due to drought or wet years. The analysis yielded an elk and cattle AUM allocation for this area that averaged approximately 14,000 AUMs with a range of 13,000 – 15,000. Since 2000, combined elk and cattle AUMs for this area have averaged 11,700 and ranged from a high of 15,000 AUMs in 2007 to a low of 7400 AUMs in 2012. Both of these analyses also provide ample residual forage to meet greater sage-grouse habitat conditions and to provide for general rangeland health.

E-1 Management Alternatives

Population Objective Alternatives:

Four post-hunt population objective alternatives were originally proposed for E-1 (1) 1000 - 2000, (2) 1500 - 2500, and (3) 2000 – 3000. At public request, CPW later included a fourth population objective alternative (4) 500 – 1500 following the initial public comment period and re-circulated the draft DAU plan for additional public comment. The CPW does not recommend managing for more than 2,500 elk in E-1 because of concerns about nutritional carrying capacities of the habitat. The majority of public comments received thus far support population levels ranging from no change to a slight increase from current elk population levels for E-1, although there is some landowner and public entity support for a population objective range of 500 – 1500 elk.

Sex Ratio Alternatives:

Management alternatives for E-1 that were presented for public comment include: (1) manage the herd unit for bull ratios of 35 – 40 bulls:100 cows with very limited antlered licenses and separate antlered and antlerless seasons for a quality hunting experience (trophy management), (2) manage for moderate antlered license limitations, 23-27 bulls:100, with concurrent antlered and antlerless seasons, or (3) Over the Counter (OTC) elk management for all seasons, 15-20 bulls:100 cows, with concurrent antlered and antlerless seasons.

CPW Recommendation to the Parks and Wildlife Commission

Population Objective: 700 - 1700

The CPW recommends managing this elk population in an objective range of 700 – 1700 elk. The current population estimate is in the mid to upper portion of this range. This recommendation is a blend of two of the alternatives that were presented to the public and attempts to balance competing public sentiments calling for a stable to increasing elk population and calls for a reduction in the elk population from current levels. Managing for a range of 700 – 1700 elk will allow for the flexibility to manage this elk herd at a level commensurate with varying habitat conditions.

Sex Ratio: >40 bulls:100 cows

The CPW recommendation is to manage the sex ratio to maintain >40 bulls:100 cows. During the past 5 years (2008 - 2012), the herd has averaged 73 bulls:100 cows with a range of 61 – 88 bulls:100 cows. Bull ratios can vary widely from year to year based on the number and composition of elk classified each year. Since bulls traditionally occupy the same winter ranges every year observers generally get a representative sample of bulls. However, distribution of cow-calf groups across the DAU varies greatly so if a representative sample of cow-calf groups is not obtained bull ratios are often inflated. Managing for >40 bulls:100 cows will allow continued production of trophy class bull elk from this DAU.

Management Strategy: Status Quo (Maintain Trophy Management)

The DAU management strategy recommendation by the CPW is status quo. Currently, E-1 is totally specified for all seasons and managed for quality bull elk hunting. Season structures within DAU E-1 include limited archery and muzzleloader seasons, an early rifle bull elk season, and 4 limited regular season antlerless hunts. In addition, late season antlerless hunts were established in 2008 as a management tool to reduce elk populations in the DAU. Hunter success in the DAU would remain relatively high under this strategy. Success has averaged 44% over the last 5 years. The overall DAU management recommendation is to maintain this unit as a quality bull elk hunting DAU with very limited bull licenses.

INTRODUCTION AND PURPOSE

Primary Goals

The population objective set for DAU E-1 in 1991 was 950 elk. CPW computer modeling procedures have changed substantially since the last DAU plan revision. The modeling changes resulted in modeled post-season elk population estimates higher than those projected in the early 1990's. These changes were largely due to more accurate estimates of elk survival rates and the ability to model populations over longer periods of time. Traditionally long term population objectives for DAU plans have been point estimates. It is proposed that the population objective for this herd be managed as a population range. Managing this elk herd within a population range would allow the CPW to be more adaptive in their management and take the appropriate steps needed to increase or decrease elk numbers depending on climatic and/or habitat conditions. The short term goal is to manage this elk herd at the lower end of the objective range to allow for range rest and recovery. The goal for the ten year term of this plan is to manage to the most appropriate population level within the objective range based on climatic and/or habitat conditions.

Secondary Goals

The secondary goal of this plan is to implement creative management strategies that incorporate appropriate antlerless harvest rates to maintain the population within the long term population objective while managing for quality bull elk hunting. Applying the appropriate management prescription in this DAU is challenging due to interstate elk movement and refuges within Dinosaur National Monument (DNM). Finding the balance between managing for quality bull elk hunting and achieving desired cow harvest objectives is challenging. It is a balance between hunter pressure, interstate elk season structures, and quality bull management. Too much hunting pressure can affect elk distribution by pushing elk into refuge areas or adjacent states which adversely affects hunter success and potentially compromises bull harvest depending on timing of other states' bull seasons. In 2006, antlerless licenses in this DAU were made additional (List B) in an effort to increase cow harvest while managing hunter pressure. Various other strategies, such as late seasons, are being used to manage cow harvest in the DAU. Managing this elk herd within the long term objective range will produce an elk herd that is healthier and more productive, allow for range rest and recovery, potentially decrease elk distribution issues, decrease deer/elk competition on winter ranges, and potentially reduce localized elk/livestock competition.

Management by Objective

The purpose of this document and the DAU planning process is to provide the CPW with a population objective for DAU E-1 that is biologically, socially, and politically acceptable. Specifically, the DAU plan identifies desired population and sex ratio (number of bulls per 100 cows) objectives that guide CPW's elk management practices within DAU E-1. The CPW is required by statute to manage all wildlife species for the benefit of all Colorado residents and visitors to the state. To ensure public needs are met, it is imperative that the CPW maintain big game herds at population levels agreed upon through a public review process (DAU planning) and approved by the Parks and Wildlife Commission. In addition to state and federal agencies, there are a wide range of stakeholders with various interests in the management of Colorado's big game, including livestock producers, guides and outfitters, sportsmen, wildlife viewers, recreationists, and local businesses.

Elk populations are generally managed by herds that occupy specific geographic areas, referred to by the CPW as a Data Analysis Unit (DAU). Each DAU is typically composed of several game management units (GMUs) that divide the DAU into smaller areas designed to control hunter distribution and harvest. The boundaries of a given DAU should encompass those areas that provide year-around habitat for most of the elk herd, including breeding, parturition, winter range, security areas, and summer range. Ideally, movement of elk into or out of the DAU is minimal. However, because elk are highly mobile, movement among DAU's is not uncommon. When elk move across DAU boundaries, management becomes more difficult and population estimates less precise.

The CPW has adopted an objective setting process based on the preparation of a DAU Plan. Stakeholders help determine population goals through public meetings and other methods sponsored by the CPW, and written comments are incorporated into the plan that is then presented to the Colorado Parks and Wildlife Commission for approval. Federal land management agencies are also included in the process to assist with habitat condition assessment and ensure federal land-use practices are consistent with CPW's elk management. Local committees of the Habitat Partnership Program (HPP) may play a significant role in the DAU planning process by identifying potential problems or areas of concern. The HPP program brings together representatives from the BLM, USFS, CPW, livestock producers and hunting interests into working groups. HPP participation in DAU planning helps ensure private land habitat issues are considered, conflict areas are identified, and that solution strategies are appropriate.

The CPW then compiles and summarizes all relevant issues identified during the public input process and consultation with federal land management agencies. Issues are ranked according to importance and categorized as biological, social, recreational, or economical. It is then the CPW's responsibility to develop biologically acceptable population objectives that consider the issues identified during the public planning process. Population objectives and associated management strategies developed by CPW are referred to as the 'preferred alternative', and include both a desired population level and sex ratio objective. The preferred alternative requires approval from the Parks and Wildlife Commission before being adopted as the active DAU plan.

Following review and approval by the Parks and Wildlife Commission, the population objectives in the DAU plan become management targets that guide the annual permit setting process. Management by objective is an annual process or cycle that involves data collection, analysis, evaluation, and adjustments (if necessary) made in the type and number of permits allocated to the GMUs of the DAU. The population and sex ratio objective in the DAU plan determine how many and what types of animals need to be harvested. For example, if the herd were over the population objective, the number of antlerless licenses would likely be increased. Or if the sex ratio (number of bulls:100 cows) exceeds objective levels, more bull tags would become available. Properly implemented, this cyclic approach and annual evaluation not only measures progress toward objectives, but also identifies any lack of progress. Successful management must be approached as a cyclic process that continually feeds back upon itself for evaluation, adjustment, and fine-tuning.

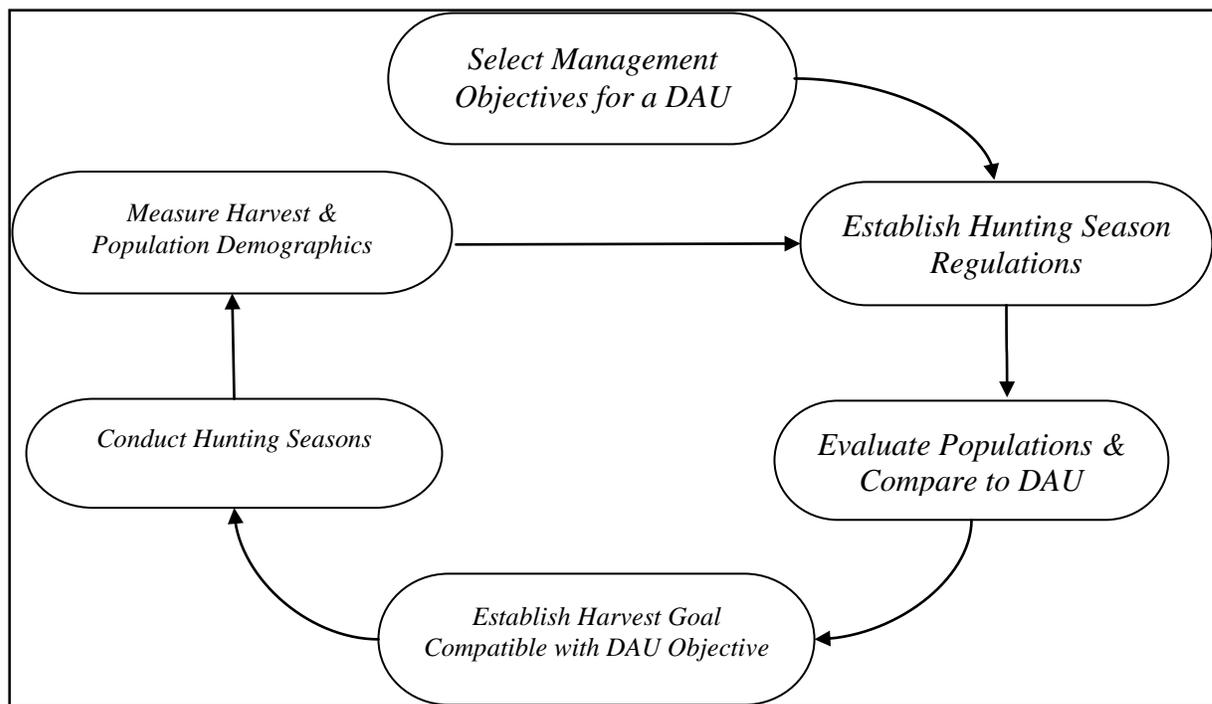


Figure 1. Annual management cycle used by Colorado Parks and Wildlife

DESCRIPTION OF DAU

LOCATION

The E-1 DAU is located in northwest Colorado and includes 2 game management units (GMUs 2 and 201) (Figure 2). The DAU is located in Moffat County and is bounded on the north by the Colorado/Wyoming state line, the east by the Little Snake River, the south by the Yampa River, and on the west by the Green River and Utah/Colorado state line. The DAU includes 1434 mi². GMU 1, located to the south and west of the Green River, was separated from DAU E-1 in the 1990s into a new DAU (E-47). Elk movement patterns and communities of interest in GMU 1 differ substantially from E-1; thus, GMU 1 is not considered in this DAU plan.

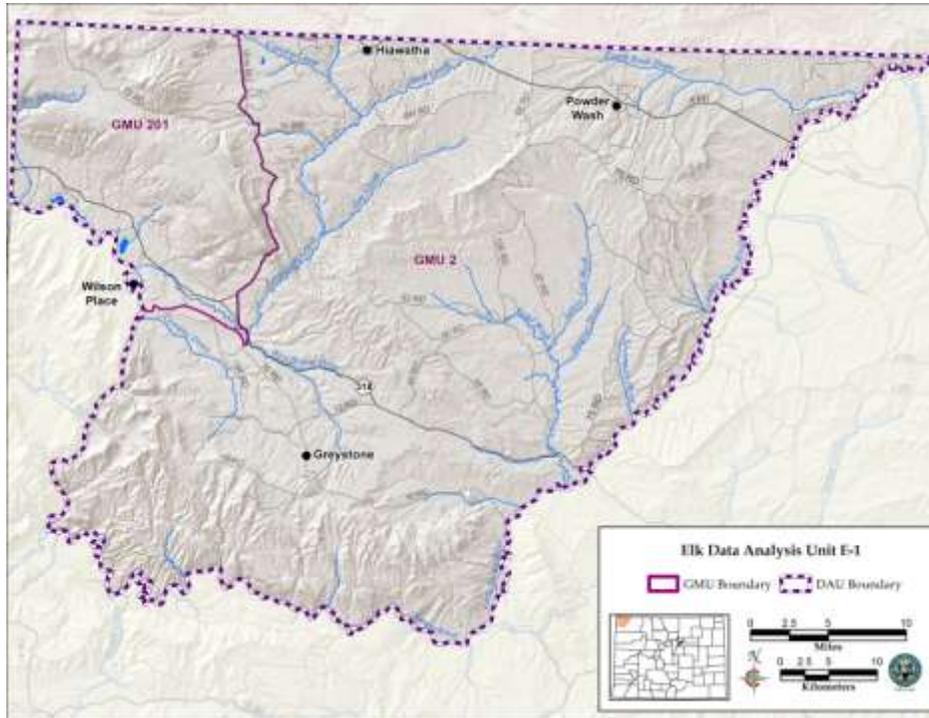


Figure 2. Map showing the geographic boundaries for DAU E-1 in northwest Colorado.

PHYSIOGRAPHY

Topography

DAU E-1 is a high semi-arid plateau bisected by stream-cut canyons. Cold Springs Mountain, Douglas Mountain, Lone Mountain, Lodore Canyon, Lookout Mountain, Sandwash Basin, and the Vermillion Bluffs are the prominent features in the DAU. The Green River, and especially its tributary, the Yampa River, cut deep canyons in the plateau. Middle Mountain is the highest point in the unit at 9,559 feet. The lowest point in the DAU occurs on the Green River at the Colorado/Utah state line and is approximately 5,100 feet.

Climate

Climate in this DAU is semi-arid with dry, hot summers and dry, cold winters. Elevations below 6,000 feet receive approximately 7 to 9 inches of annual precipitation, while elevations between 6,000 and 9,000 feet receive between 11 and 15 inches. Daily and seasonal temperatures vary widely. January is typically the coldest month of the year, when minimum temperatures occasionally fall below zero. Snowfall at the headquarters of Dinosaur National Monument averages 39 inches per year.

Vegetation

Vegetation in the DAU consists of semi-arid types such as sagebrush (*Artemisia spp.*) steppe communities, pinyon-juniper, and desert shrubs. Spruce-fir and aspen (*Populus tremuloides*) are found on protected north facing slopes at higher elevations. Pinyon-juniper woodlands are found mostly on south facing slopes, but also occur in lower regions of north facing slopes. Ponderosa pine (*Pinus ponderosa*) forests also occur on Douglas Mountain in the southern portion of GMU 2. Sagebrush communities are found throughout the DAU. Desert shrub species include mountain mahogany (*Cercocarpus montanus*), bitterbrush (*Purshia tridentata*) and curlleaf mountain mahogany (*Cercocarpus ledifolius*). The curlleaf mountain mahogany occurs only in a limited area located on Limestone Ridge. Shadscale (*Atriplex confertifolia*) occurs in abundance in the northeast part of the DAU. Table 1 lists the percentage of major vegetation types found in each GMU.

Spruce/fir stands provide excellent thermal cover during summer months and security areas during the hunting seasons. Aspen stands are usually found in areas with high soil moisture content and are often associated with diverse, productive grass and forb understories. Aspen stands provide high quality elk forage throughout the spring, summer, and fall. Additionally, aspen habitats provide moderate cover and are commonly used by elk for calving areas.

The desert/basin zones are dominated by a mix of sagebrush steppe, pinyon-juniper, and desert shrub. This zone is used primarily as winter range by elk although isolated year-around populations exist. North aspects of high ridges throughout this zone and extending into the mountain-shrub zone contain pinyon-juniper woodlands which serve as important winter cover and limited winter forage. In areas where sufficient irrigation water exists, native vegetation has been converted for hay production of alfalfa or native grasses such as timothy (*Phleum pretense*) or smooth brome (*Bromus inermis*).

Wetland/riparian vegetation types are found along the river bottoms and associated irrigated meadows. Most notable are the Yampa and Green River corridors making up the southern and western DAU boundaries. These corridors are dominated by boxelder (*Acer negundo*), cottonwood (*Populus fremontii*), and willows (*Salix spp.*). These areas are extremely valuable as wildlife habitat and support the greatest abundance and diversity of wildlife.

Table 1. Percentage of major vegetation types found in GMU's 2 and 201.

Vegetation Type	2	201	DAU Total
<i>Aspen</i>	<1%	3%	1%
<i>Sagebrush</i>	51%	53%	51%
<i>Agriculture</i>	1%	<1%	<1%
<i>Pinyon-Juniper</i>	25%	25%	25%
<i>Salt Desert Shrub</i>	17%	5%	15%
<i>Riparian</i>	<1%	2%	<1%
<i>Mixed Conifer</i>	<1%	1%	<1%
<i>Lodgepole Pine</i>	<1%	2%	<1%
<i>Greasewood</i>	1%	2%	1%
<i>Mountain Shrub</i>	1%	4%	1%
<i>Recent Burn</i>	<1%	<1%	<1%
<i>Invasives</i>	1%	1%	1%
<i>Ponderosa</i>	1%	--	1%
<i>Cliff-Canyon</i>	2%	<1%	2%
<i>Grasslands</i>	1%	<1%	1%
<i>Open Water</i>	<1%	1%	<1%

LAND USE

Land Status

DAU E-1 includes a total of 1434 mi² (Table 2). Bureau of Land Management (BLM) comprises 77 % (1107 mi²) of the DAU, private lands 9% (125 mi²), State Land Board 6 % (87 mi²), 7% (98 mi²) Dinosaur National Monument, 1% (12 mi²) Brown’s Park National Wildlife Refuge (BPNWR), and < 1% (4 mi²) State Wildlife Areas (SWA) managed by the CPW (Figure 3).

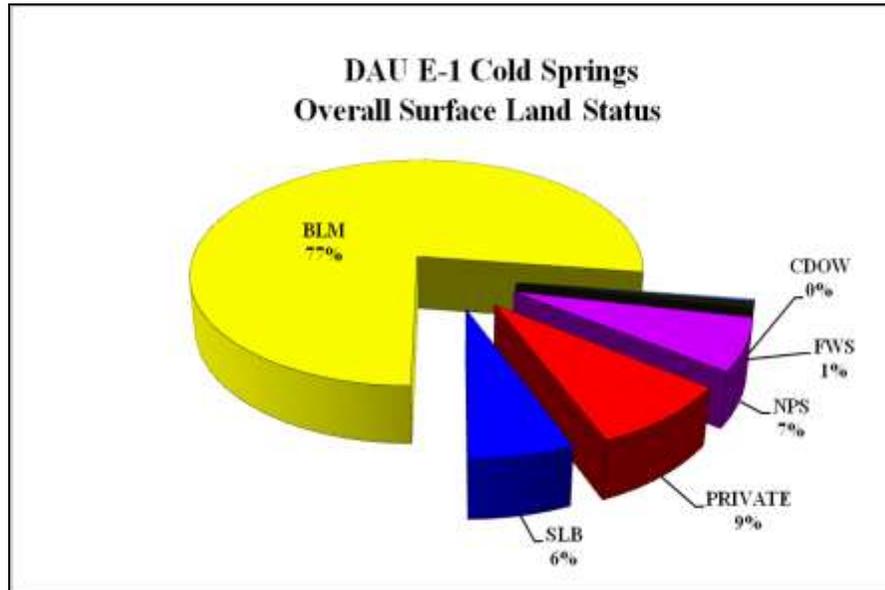


Figure 3. Graphical representation of surface land status in DAU E-1.

Table 2. Land area and ownership by GMU in the Cold Springs DAU.

GMU	PVT		BLM		DNM		BPNWR		SLB		SWA		Total
	mi ²	%	mi ²	%	mi ²	%	mi ²	%	mi ²	%	mi ²	%	
2	104	8%	937	65%	99	7%	0	0%	54	4%	1	0%	1195
201	19	1%	171	12%	0	0%	13	1%	33	2%	11	0%	240
Total	125	9%	1107	77%	98	7%	12	1%	87	6%	4	<1%	1434

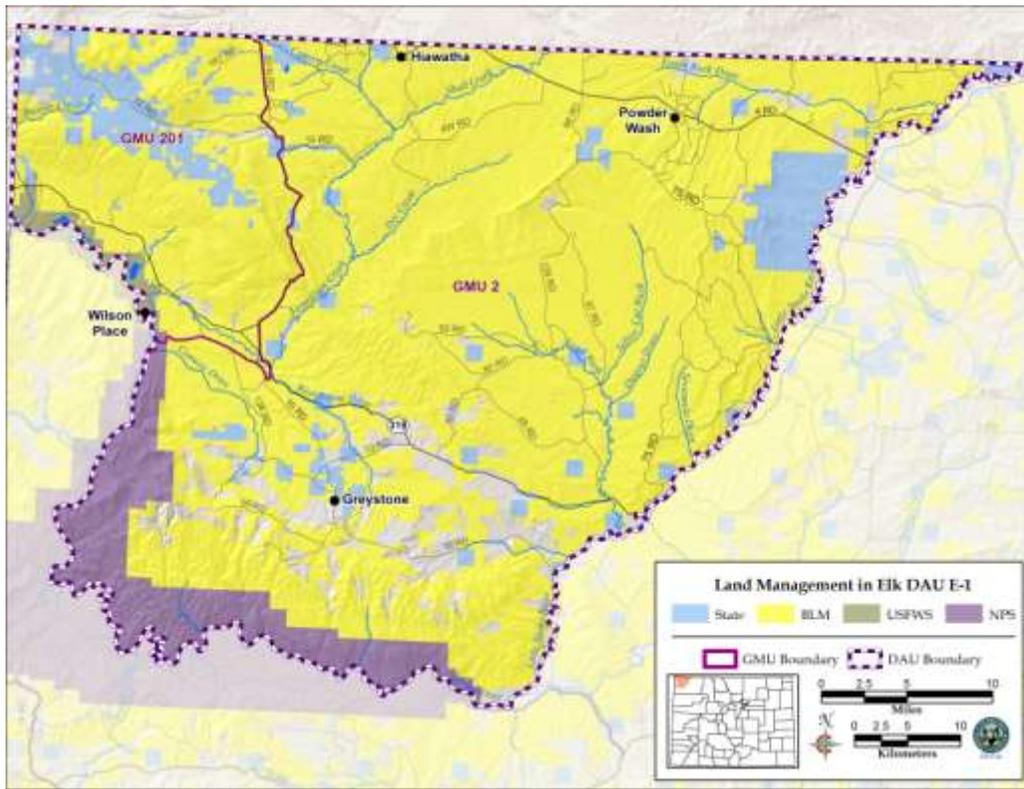


Figure 4. DAU E-1 map showing the surface land status in the DAU.

Ownership

Land ownership in DAU E-1 is 77% BLM, 9% private, 7% DNM, 6% State, and 1% BPNWR. There are no municipalities in this DAU.

Development

Due to the remoteness of this area, urbanization is not a significant issue or concern in E-1. Greystone is the only small rural subdivision in the Brown’s Park area.

Agriculture

Ranching occurs throughout the DAU, and is a predominant land use on private and public lands. Domestic livestock grazing was first introduced into the DAU in the 1840’s during the California gold rush. During the 1860’s and 1870’s Brown’s Park acquired a reputation for cattle rustlers and horse thieves. Large herds of cattle were grazed into the early years of the 20th century. Most ranges were grazed seasonally by these herds of livestock. However, historical accounts indicate tens of thousands of cattle would be pushed into Brown’s Park to winter on native ranges. Wintering so many cattle in Brown’s Park often caused significant conflict between the larger operators within the Park, such as the Two Bar and the Bassetts, and smaller operators that would push their cattle into Brown’s Park to winter. These accounts describe how the intense grazing in Brown’s Park altered native lush grass communities to sagebrush dominated communities. In fact, some reports describe the expansion of cedar trees into once grass dominated communities due to grazing pressure from livestock. The cattle industry boomed in the early 1900’s when transportation came to the Yampa Valley and allowed for the transshipment of cattle to Denver.

Livestock grazing on federal lands was unregulated until 1934 after the adoption of the Taylor Grazing Act and the formation of the U.S. Grazing Service. Livestock numbers gradually began to decline during the 1930's due to drought. Season and duration of use also changed considerably during this period. Large, common allotments were split into smaller individual allotments. Opportunities to rotate livestock or to use ranges seasonally changed on a landscape scale. Changes to grazing duration, intensity, timing, and frequency have improved range conditions over time. However, the cumulative impacts of historical overgrazing and cyclical drought events have forever altered the native vegetation communities that once occurred in this area. In turn, this has allowed competitive invasive species such as cheat grass and others to become more dominant in the vegetative communities across the landscape. These changes have undoubtedly affected long term carrying capacities of ungulates on the landscape.

Irrigated grass and alfalfa hay production are the major farming practices in the DAU. Irrigated hay production primarily occurs on private lands along the Green River and Vermillion and Talamantes Creeks.

Grazing allotments administered by the BLM include allotments for sheep, horses, and cattle.

Recreation

The eastern portion of the DAU is a popular destination for recreation. Specifically, Sand Wash Basin is a popular destination for off-road motorized vehicle use. Off-road use is highest during summer months with some minimal use during the winter. The BLM has designated the southern portion of the Sand Wash Basin as a Special Resource Management Area (SRMA) allowing the use of off-road vehicle recreation in this area.

Since this DAU is managed for quality, shed antler hunting has gained significant popularity. This is especially true since the implementation of shed antler hunting seasons in both Utah and Wyoming. The Cold Springs and Douglas Mountain areas receive a significant increase in shed antler hunting pressure from late March through mid-May. This has the potential to affect wintering wildlife, as the presence of antler hunters may cause increased stress during this critical time of year.

Energy Development

There are two basins within the DAU where significant oil and gas exploration occurs. Active exploration and production of oil and gas is currently occurring in the Hiawatha and Powder Wash fields.

The Hiawatha field has a long history dating back to the 1920's, with the first discovery well drilled in 1927. The total Hiawatha project area includes 157,361 acres containing a mix of federal, state, and private lands spanning the Colorado/Wyoming state line. The total project acreage in Colorado contained within DAU E-1 is 56,749 acres. Approximately one-third (1,403) of the proposed wells could be located within the Hiawatha project area in Colorado. Although the total number of wells drilled in the project area depends on a number of factors, it is projected that all wells will be drilled within the next 20 to 30 years.

Much like the Hiawatha field, the Powder Wash – Ace Field, has a long history, with the original discovery and completion well being drilled in 1931. The field is located in Townships 11 and 12 N, Ranges 97 and 98 W in the north-central portion of GMU 2, approximately 3 miles south of the Wyoming state line. Currently, the field is active with exploratory and producing wells occurring within the field.

Energy development in these fields could potentially have impacts on winter range carrying capacities but will not likely have significant impacts to elk due to the majority of elk wintering in other portions of the DAU.

HERD MANAGEMENT HISTORY

The CPW uses a computer modeling process to estimate the size of elk populations in each DAU. The computer modeling programs used by CPW biologists have changed significantly since the early 1970's. The most recent change in modeling programs occurred in 1999, when CPW switched from a program called POP II to a computer spreadsheet model. Since switching to the spreadsheet model, continual efforts are being made to better refine these models. These refinements often result in changes to the population estimates for a DAU. All of the modeling programs have worked in the same basic manner, using an initial population size, sex ratio at birth, survival rates, wounding loss rate, harvest success, winter severity, and sex/age data to estimate a population. Modeled post-hunt population estimates are generated by solving for the best fit between measured (observed) vs. predicted post-hunt sex ratio data for E-1. Alignment of sex ratios in a DAU managed for quality is difficult, as sex ratios differ markedly from normal levels. Aligning observed and predicted bull ratios in a DAU managed for quality tends to inflate modeled population estimates. The model attempts to account for these high bull ratios by calculating a higher population. To allow for a more accurate estimation in the population and better alignment, an emigration factor is used to account for some level of bulls leaving the DAU. The basis of the emigration factor used in these models is from a telemetry study conducted in DAU E-21 (GMU 10). E-21 is also managed for quality. Results from this study indicated up to 50% of the 2 ½ year-old bulls in the DAU emigrated out of the DAU.

Quadrat census and line transect techniques are sometimes used to provide a second, independent estimate of population size for mule deer and pronghorn. However, quadrat survey methods have not been used to estimate elk populations in the past is because of the inherent variability associated with conducting these surveys, due to the social nature of elk and their tendency to congregate in large groups across their winter ranges. CPW is currently working on developing a quadrat survey methodology for obtaining more refined elk population estimates. Conducting quadrat surveys for elk is expensive, time consuming and risky for personnel flying the survey. Currently, no other western states conduct quadrat surveys for estimating elk populations.

Population Size Estimates

It is recommended that the population estimate range presented in this document be used only as an index or trend, rather than a precise calculation of the number of elk in the DAU. Estimating numbers and sex/age composition of free-ranging animals over large geographic areas is extremely difficult. In addition to budget and time constraints, the accuracy of population estimates and sex/age composition surveys may be influenced by weather, habitat type, species, group size, and a number of other factors. CPW recognizes these limitations and strives to produce the best estimates with the resources available. Additionally, CPW reports statistical variation and error associated with the population estimation procedures currently being used.

Most population estimates are derived from computer model simulations using basic population parameters, such as adult survival, calf survival, calf production, sex/age composition, wounding loss rates, sex ratios at birth, and harvest data. Computer simulations are typically adjusted to align with observed post-hunt age and sex composition data because these data tend to be the most reliable. Although CPW uses the latest technology and accepted methodologies, we are aware that the precision of population estimates may be variable. As more reliable or accurate information becomes available on survival rates, wounding loss, density estimates, and whenever new modeling techniques or programs have emerged, these have been assimilated into the process for estimating populations. These changes may result in significant differences in the population size estimate and make new management strategies more appropriate. It is recommended that the population estimates presented in this document not be viewed as an exact representation of the number of animals in the DAU; instead, their utility is in helping to evaluate population trends over time.

Historical Elk Population

A 1963 article published in Colorado Outdoors, authored by Wright Dickinson, highlights a historical account of elk populations on Cold Springs Mountain. Dickinson writes about his father-in-law, Charlie Sparks, and his

accounts of big game populations when he first arrived in northwestern Colorado in 1865. Sparks described large numbers of elk, deer, and antelope roaming Cold Springs Mountain. However, as the years passed, Sparks noted significant declines in wildlife populations in the area. He attributed these declines to unregulated harvest. By 1910, elk were gone from Cold Springs. Sparks proposed restocking the range with elk and asked the National Park Service for help in carrying out this project. In 1913, elk from Jackson Hole, Wyoming were captured and shipped by rail to Rock Springs, Wyoming. Sparks picked up the crated elk from Rock Springs and transported the elk via wagon to the Sparks Ranch headquarters. A 20 acre enclosure had been fenced to hold the eight yearling cows and two yearling bulls from Jackson Hole. Sparks spent the next 10 years growing this herd. By 1923, the herd had out grown the facility and Sparks’ winter hay supply. In the fall of 1923 Sparks opened the gates of his “Elk Ranch” and released nearly 200 elk onto public lands. This herd provided the foundation for the elk that roam the Cold Springs Mountain area today.

Post-Hunt Population Size

Modeled estimates of this population show the E-1 elk herd as having a relatively stable population trend from 1988 – 1998, averaging just over 2500 elk. This trend steadily increased from 1999 – 2004, peaking at 3500 elk in 2004. Since 2004, populations have been declining due to significant increases in cow harvest. Current modeled population estimates are 1200 - 2000 elk (post-hunt 2011). Efforts to reduce this elk herd from peak levels around 2004 have been successful.

The E-1 elk herd has averaged about 2500 animals since 1988. During the 1990s the herd averaged 2400 animals. Drought conditions significantly impacted range conditions in this area during the early 2000s when elk populations were at their highest, averaging almost 3200 animals. The growth of this elk population from 1999 – 2004 coincides with a conservative number of antlerless licenses being issued from 1999 – 2002. Concerns over the impacts of high elk numbers on drought stressed ranges precipitated the issuance of increased antlerless licenses starting in 2003. The bulk of these license increases occurred in GMU 2. In addition, a late cow elk season was instituted in 2008. These increases in antlerless licenses proved successful at reducing elk numbers, and since 2004, elk populations in the DAU have been steadily declining. In fact, public comment received during the DAU planning process indicates hunters and landowners feel cow elk numbers are too low, especially in GMU 2.

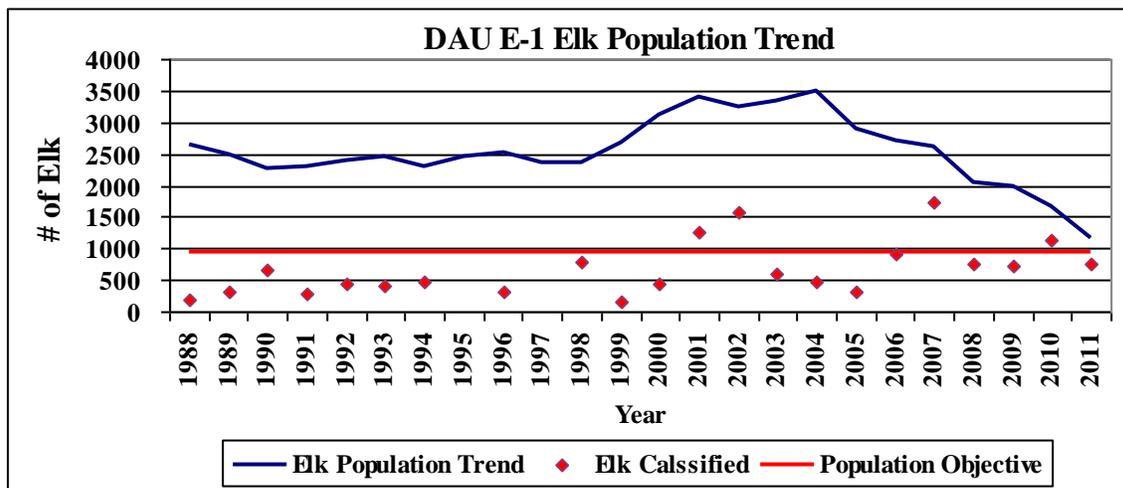


Figure 5. DAU E-1 elk population trend.

Post-Hunt Herd Composition

Records indicate herd counts for this DAU date back to 1968. Post-hunt age and sex ratio monitoring data on file for this herd dates back to 1970. From 1970 – 1987, sex-age flights for this DAU were not flown on an annual basis due to budget constraints. Since 1988, annual flights have been flown consistently. Helicopter flights have been the most common method used to conduct classification flights in late December, January, or early February. To conduct the survey, a helicopter is used to position the observer over the elk, then each elk in the group is

classified into one of five categories: cows, calves, yearling bulls, young bulls, and mature bulls. After the flight, the data are summarized by drainage and Game Management Unit. Age (calves per 100 cows) and sex ratio (bulls per 100 cows) are then calculated by GMU and DAU. The flights do not result in a total count, but rather a sample large enough (10-25%) to estimate the sex and age ratio. Sample size varies annually due to factors such as weather, animal distribution, and budgets that may limit flight time.

Calf Ratios - The post-hunt age ratio (calves:100 cows) has averaged 44.6 since 1988. The highest age ratio was 67.5 calves:100 cows in 1992 and the lowest was 23.5 calves:100 cows in 2005. During the past five years (2007-2011) calf ratios have averaged 46.2. The long-term calf ratio trend shows a slight downward trend. Calf ratios in E-1 can have significant annual variation depending on the sample sizes observed each year.

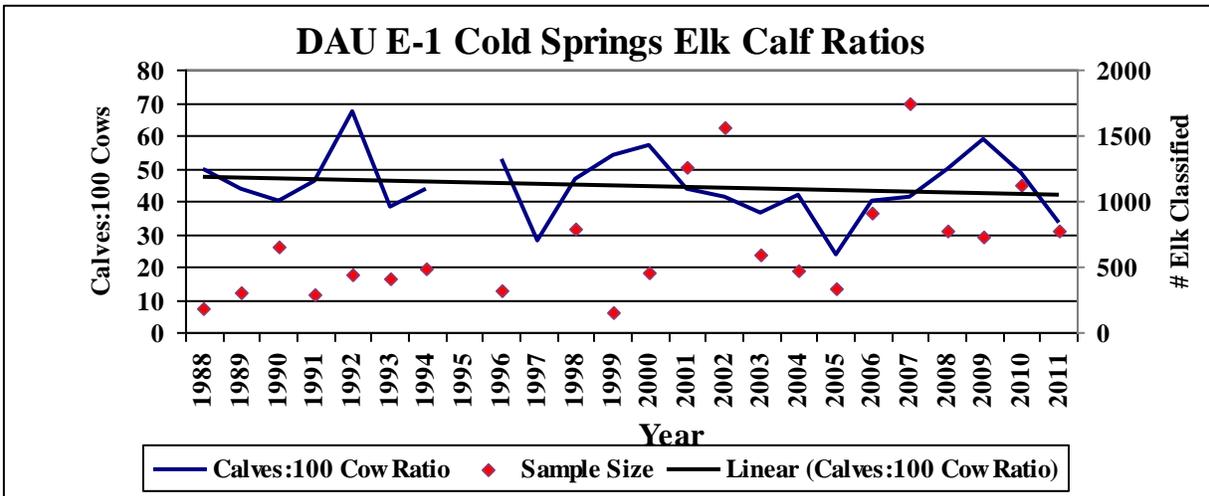


Figure 6. DAU E-1 elk calf ratios.

Bull Ratios -- The management objective for the Cold Springs elk herd has been to maintain a sex ratio of 35-40 bulls:100 cows. Bull ratios for this DAU have been managed with a limited quota since the DAU reopened to hunting in 1979 after being closed to hunting for two years. Since 1988 bull ratios have averaged 52.8. The highest sex ratio was observed in 2008, 88.2 bulls:100 cows. The lowest bull ratio was 23.4 in 1991. This low ratio was likely a result of a small sample size that year. Higher bull ratios have been observed over the past 4 years. Observed mature bull ratios for the DAU have averaged 37.3 bulls since 2008. The 5 and 3 year average, overall bull ratios have been 66.3 and 71.3 bulls:100 cows, respectively. Increased cow harvest since 2008 has likely influenced these higher ratios.

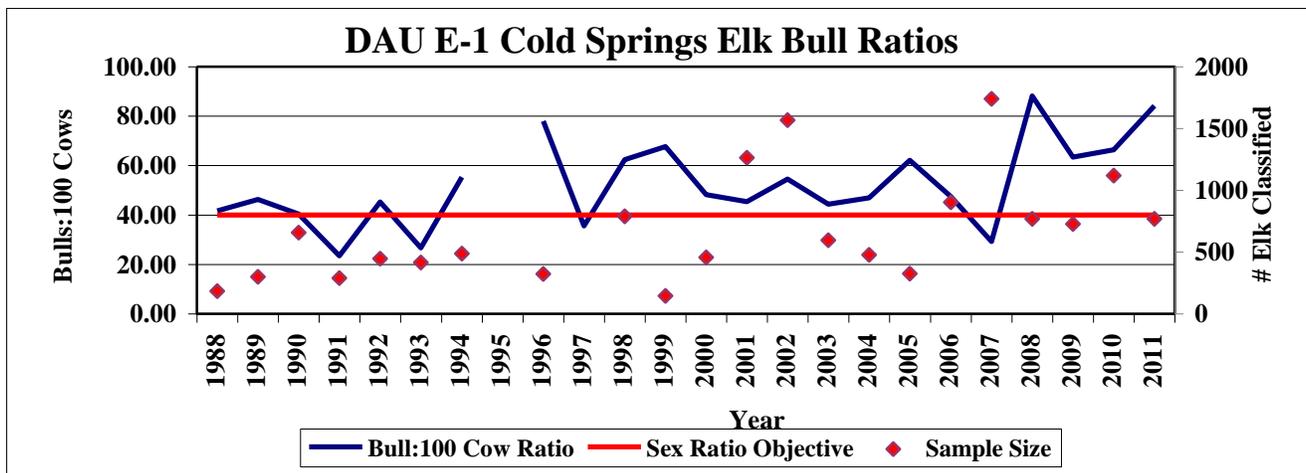


Figure 7. DAU E-1 bull elk ratios.

Harvest History

Harvest estimates are produced by typical statistical sampling techniques, not by any attempt of a total sample or count. CPW conducts telephone surveys annually to obtain harvest statistics.

Harvest figures are available for this DAU back to 1969. In that year, a total of 127 elk were harvested in E-1. The numbers of elk harvested from 1974 – 1983 are the lowest recorded for the DAU. Since '83, total harvest has slowly climbed to a high of 445 animals in 2008, although, elk harvest reached another low during the late '90s and early 2000's. The average number of elk harvested since 1969 is 193 elk. In an attempt to decrease the elk population, the number of antlerless elk licenses since 2003 have increased substantially.

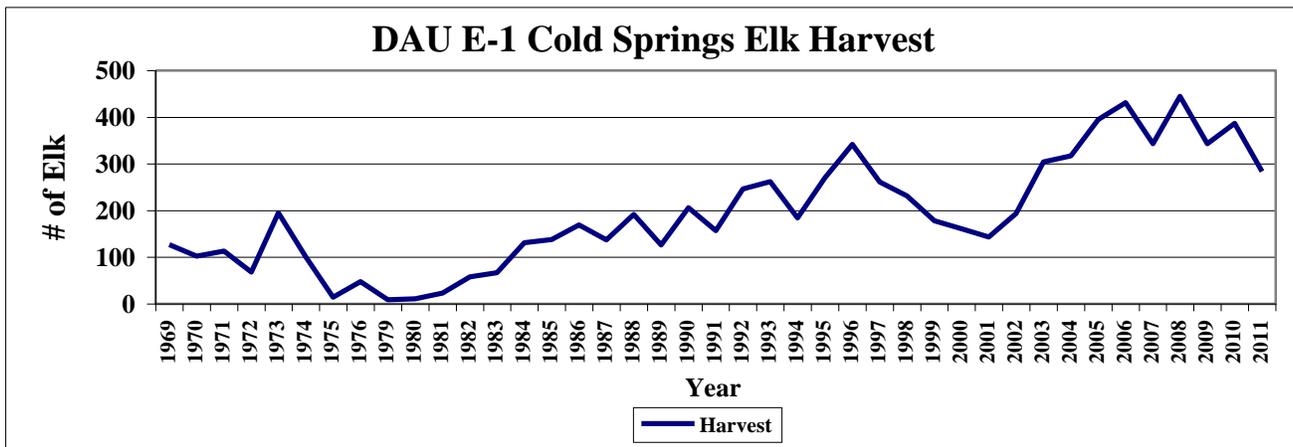


Figure 8. DAU E-1 elk harvest.

Bull Harvest - Bull hunting for the DAU has been limited since 1979. Bull harvest since that time has averaged almost 60 bulls. Average bull harvest has steadily increased since the 1980s. During the 1980s bull harvest averaged 50 animals. In the 1990s, the average number of bulls increased to 65, and has averaged 68 bulls harvested since 2000. The highest number of bulls harvested was 84 in 1990. The lowest bull harvest, 9 animals, occurred in 1979, the year after the DAU re-opened to elk hunting with quality management objectives. The history of hunting seasons and the structure of those seasons for this DAU have always included a limited bull harvest strategy.

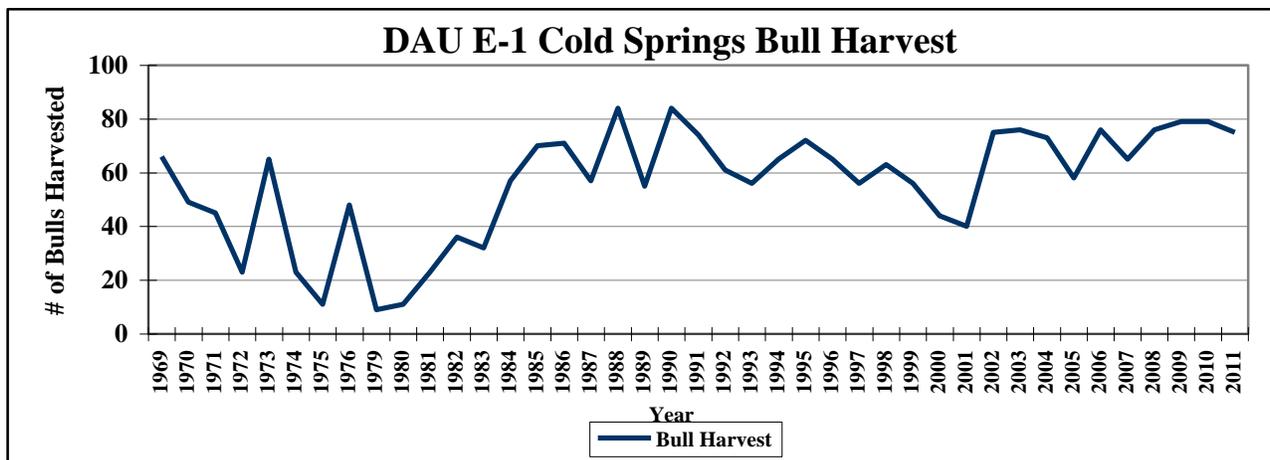


Figure 9. DAU E-1 bull harvest.

Antlerless harvest -- Antlerless harvest is influenced by management objectives. All antlerless harvest is regulated by the number of limited licenses issued by CPW. In recent years, CPW has been liberal in setting antlerless licenses in an attempt to reduce the elk population. Historical antlerless harvest records indicate relatively low numbers of cows being harvested from 1969-1975. The DAU was closed to antlerless harvest from 1976 - 1981. Cow harvest was re-instituted in 1982 and steadily increased until 1997. From 1997-2002, antlerless harvest was more conservative, resulting in a growing elk population. The conservative management approach during this time was likely due to modeled projections that indicated the elk population was at or near the long term population objective. Drought conditions in 2002 prompted concerns about high elk numbers and poor range conditions. At the same time, CPW was evaluating the modeling techniques used to estimate elk populations. These modeling changes resulted in higher projections of elk populations and more accurately reflected the actual number of elk on the ground. This combination of factors precipitated more aggressive antlerless harvest. Starting in 2003, antlerless harvest increased significantly, averaging 288 elk harvested per year. The highest antlerless elk harvest on record occurred in 2008 with 369 elk being harvested. This was also the first year the late season was instituted in the DAU. Since 2008, the hunting public has expressed concerns about low numbers of cow elk, especially in GMU 2, while some landowners in the DAU have expressed that elk numbers are more in line with long term population objectives. In response to these concerns and a declining population trend reflected in the computer model, antlerless license numbers and harvest have incrementally declined since 2008.

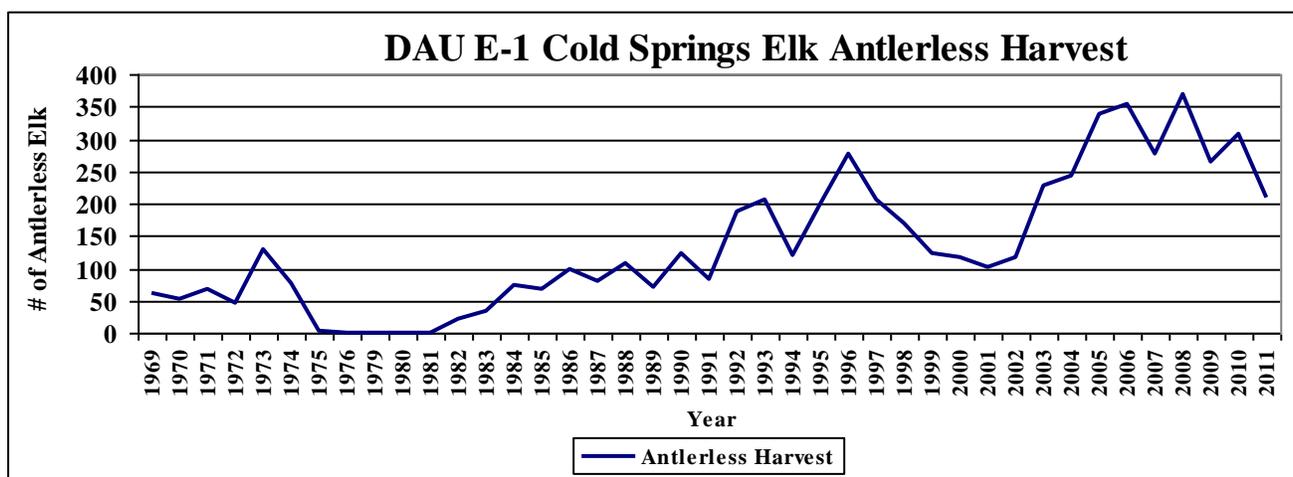


Figure 10. DAU E-1 antlerless elk harvest.

Hunting Season History

Since 1969, annual elk hunting seasons in E-1 have always had limited archery and rifle seasons. Limited antlered muzzleloader seasons did not occur in the DAU until 1984. Season structures have varied, with limited antlered only hunts in '69 and a limited antlerless season being implemented in 1970. In 1971, deer and elk seasons were held separately and an antler point restriction for elk was implemented to protect spikes from being harvested. A 4-point antler restriction was instituted in 1972. The first early season bull hunt occurred in 1974. Antlerless elk hunts were closed in 1976. All elk seasons for the DAU were closed from 1977-1978. Hunting seasons re-opened in 1979 with an early October 1 – 14 limited antlered only hunt. This structure continued until 1983 when the season was shortened to 11 days. In 1984, archery and muzzleloader seasons were added with the early specified rifle season. Two antlerless seasons were offered in 1985. This season structure was in place through the 1990's. In 2010, CPW began a new 5-year season structure that includes:

- 1) Limited either-sex archery season
- 2) Limited antlered and antlerless muzzleloader season
- 3) Limited early either-sex rifle season
- 4) Limited first season antlerless elk only
- 5) Two combined limited mule deer and elk seasons (second and third seasons)
- 6) Limited fourth season antlerless elk only

In addition to the regular season hunts, a late season antlerless only hunt was implemented in 2008.

Hunting Pressure

Hunting pressure has increased steadily in the DAU over the last 30 years, although hunting pressure in a DAU managed for quality hunting experience is relatively low. Hunter numbers were lowest from 1979-1981 after the DAU re-opened to hunting. Hunter numbers were highest in 2008 at just over 1000. Since 2003, in an effort to reduce elk numbers, the average number of hunters per year has been close to 800.

Overall, harvest success has varied since 1969, ranging from 16.6% to 100%. Generally, success rates in quality DAUs such as E-1 are higher due to limited opportunity. The combined average success rate for bulls and cows since 1969 has been 50.5%. Hunter success was highest in 1979, when only 9 licenses were issued when the DAU re-opened to hunting after being closed for the '77 and '78 seasons. Hunter success has been fairly consistent since 1985, averaging 46%. This consistency coincides with the implementation of a season structure that includes limited archery and muzzleloader seasons, the early bull rifle season, and separate limited antlerless rifle seasons.

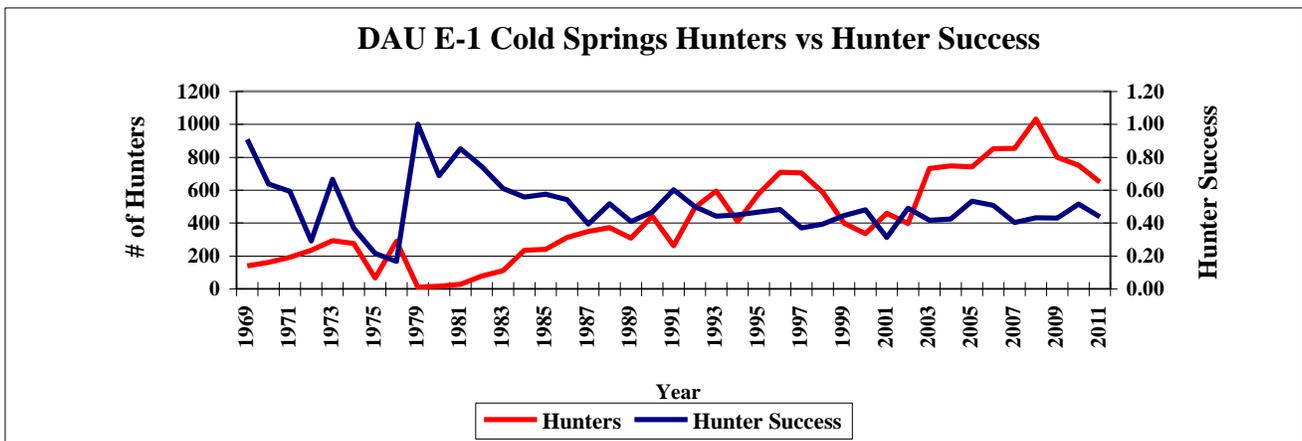


Figure 11. DAU E-1 hunter vs hunter success.

Economic Impacts

Since big game hunting in this DAU is totally specified and managed for quality, the direct economic impact to landowners and local economies is not as great as a DAU managed for hunter opportunity. However, in a 2008 *“Hunting, Fishing, and Wildlife Watching Economic Report”* prepared by BBC Research & Consultants for CPW, Moffat County ranks 7th in the state among the counties with largest proportion of employment related to hunting and fishing in 2007. An estimated 325 jobs in Moffat County are related to hunting and fishing, 4.1% of the jobs in the county. It is estimated that \$22.8 million in expenditures is contributed to Moffat County’s economy from hunting. Hunters can pursue elk, mule deer, antelope, bear, mountain lion, rabbits, sage grouse, blue grouse, chukars, waterfowl and numerous other game animals in the DAU.

CURRENT HERD MANAGEMENT

CURRENT POPULATION AND SEX RATIO OBJECTIVES

DAU: E-1 (Cold Springs Elk Herd)

GMU's: 2 and 201

Population Estimate: 1200 - 2000 (Post-Season 2011)

Population Objective: 950 (1991)

Sex Ratio Objective: 40 bulls:100 cows (1991)

Sex Ratio: 71.3 bulls:100 cows (3 year average)

CURRENT MANAGEMENT STRATEGIES

Currently E-1 is managed for a quality hunting experience and seasons with limited hunter opportunity. Archery and muzzleloader seasons are limited and require a high number of preference points to draw. The early 11 day either-sex rifle only season in E-1 requires the highest number of preference points of any GMU in the state to draw a license. The 1st - 4th rifle seasons are limited antlerless only hunts. The only antlerless hunt outside the regular seasons is a late season antlerless hunt during the month of December. There are no private land only hunts offered in this DAU. Hunter success in the DAU would remain high under this strategy. Success has averaged 44.3% over the last 5 years. Hunter pressure is low across the DAU for all seasons. The rifle seasons with the highest hunting pressure are the limited regular antlerless rifle seasons. As the herd approaches long term population objectives, the numbers of licenses issued for regular season hunts and late season opportunities will be reduced to maintain the elk population at the long term objective levels.

CURRENT MANAGEMENT CONCERNS

Management issues in E-1 include hunter, outfitter, and landowner concerns about low cow elk numbers, high bull ratios, elk and livestock competition, interstate elk movement, shed antler hunting, the long term elk population objective, elk refugia, preference point creep, and quality management.

Elk Population Levels

There are contrasting views regarding the numbers of elk in E-1. Some landowners in the DAU are concerned about the long term impacts to the range from the drought and high elk populations during the late '90s and early 2000's. In contrast, hunters and outfitters have expressed concerns over low numbers of cows in the DAU. Some landowners feel elk populations should be held below objective to allow range conditions to recover. Hunters have been frustrated in recent years and complained about the lack of cow elk, especially in GMU 2. Landowners residing in GMU 2 have expressed similar concerns. Modeled estimates and observations from classification flights would also indicate populations are low.

Elk distribution during the winter of 2010-11 provided CPW managers with some valuable insight as to how elk distribution in adjacent DAUs E-2 and E-6 influenced manager's perceptions of E-1 elk population levels. During the 2010 winter, radio collared elk from DAUs E-2 and E-6 were located in E-1. This movement occurred prior to sex and age classification flights being flown by CPW managers. Over 1,100 elk were classified in E-1 post-hunt 2010. Classifying this high number of elk in E-1, the majority of which were classified in the lower elevations of the DAU, provided valuable insight to why past management decisions were made to increase cow harvest and a

possible explanation as to why aggressive cow harvest in the past led to the current low numbers of cows in GMU 2. Without the telemetry data to verify the elk classified in E-1 were indeed from adjacent DAUs managers would have continued to make management decisions based, in part, on the numbers of elk classified in E-1. Not only does this telemetry data provide managers with information to make more informed future management decisions it also provides managers with information to reflect upon past management decisions and better understand factors that may have led to the low cow numbers in GMU 2.

Population Demographics

Many concerns have been raised regarding the population demographics for E-1. These concerns include low cow numbers, high bull ratios, and bull age structure. The overall consensus from landowners, outfitters, and some hunters that commented on the demographics of the elk herd claimed that the high bull ratios has increased competition amongst bulls competing for fewer cows in the DAU. And, as a result, bull quality has been trending downward due to antler breakage and younger bulls breeding cows while the herd bulls are preoccupied fighting to defend their harem of cows.

If these herd dynamics are indeed occurring, management solutions needed to resolve these issues would include increasing the overall elk population to increase cow elk numbers and/or increase bull harvest objectives to lower bull ratios. Based on public input the alternative to increase cow elk numbers had mixed support. Some landowner's opposed but most sportsmen supported an increase in elk numbers. Management alternatives to address the high bull ratios varied widely. Alternatives included various forms of antler point restrictions, spike only seasons, and a combination of antler point/preference point restrictions that would address both the preference point issues and bull ratios in the DAU.

Elk Distribution and Movement

Comments received during the public meetings were focused on spring elk distribution and elk movements in response to hunting pressure. There are also concerns about a resident group of elk residing on Sevenmile Ridge in the far eastern portion of GMU 2.

The primary concern regarding spring elk distribution is competition between elk and cattle for early green up, especially on Cold Springs Mountain. Competition between elk and livestock for early green up is not unique to E-1. This is a common concern especially when elk populations are above objective and/or poor range conditions result in permittees having to take reductions in stocking rates on their allotments. In addition, year round elk use by a group of elk on Sevenmile Ridge in the eastern portion of GMU 2 for the past several years has caused concern. These elk occupy winter ranges year round and there are concerns about degradation of these ranges.

Movements of elk in response to hunting pressure are another concern as it relates to achieving population objectives for the DAU. E-1 is bordered on the north and west by the Colorado/Wyoming and Utah state lines and on the south by Dinosaur National Monument. Interstate movements between the 3 states are known to occur, however the extent of this exchange is not well documented. Efforts to better quantify the extent and timing in which interstate elk movements occur were initiated in 2012 by radio collaring elk in the Three Corners area. Information gathered from this collaring project will allow managers to better coordinate season dates and address interstate management concerns. Elk movement and distribution in and around Dinosaur National Monument is also a concern. Elk often seek refuge inside the Monument at the onset of hunting season where hunters do not have access to them. These types of refugia situations can influence the ability to achieve harvest objectives and affect long term population trends. Achieving harvest objectives is especially critical in drought situations when reducing numbers of elk on the landscape in a timely manner is important to long term range health.

Elk Damage

The state of Colorado is liable for compensating landowners for documented damage to commercial agricultural products, livestock forage, and fences by elk and other big game animals provided the landowner allows reasonable

hunting access and does not charge more than \$500 per hunter. The CPW also provides stack yards and fencing materials at no charge to qualifying landowners to mitigate big game damage problems.

Although elk damage claims are relatively minimal in E-1, a few landowners in E-1 have expressed concern about potential and realized elk conflicts. Primary conflicts are spring use by elk on public and private allotments prior to livestock turn out, winter range use in the eastern portions of the DAU and agricultural damage primarily on alfalfa hay fields. The major conflict areas identified in BLM Land Health Assessments (LHA) include riparian areas across many of the watersheds throughout the DAU that do not meet minimum land health standards and isolated issues involving year round elk use on winter ranges that could have negative impacts to native vegetation.

As a general rule, elk will go where they are least disturbed given adequate food resources. Hunting pressure is the best way to disturb an elk and habitat improvement projects are the best way to actively manage for adequate food resources away from conflict areas. The CPW, BLM, SLB, NPS, private landowners, and other public interests should work cooperatively to improve habitat conditions for deer, elk, and other wildlife species in the DAU that will help to alleviate damage in conflict areas.

Elk Competition with Mule Deer

Potential competition and conflicts between elk and mule deer are largely undetermined. Several studies in the western United States have found that mule deer and elk generally show only moderate diet overlap except during periods of food shortage such as periods of drought and severe winters. An elk's larger body and rumen size allow it to utilize diets higher in fiber and lower in digestibility than those tolerated by deer. Elk generally prefer to graze on grass, sedges and forbs during much of the year where as deer often elect to browse during the winter and select forbs, succulent young grass, and new leader growth during the growing season. Deer are not able to utilize high fiber, grass diets as effectively as elk and therefore have a narrower dietary tolerance. Although deer are probably better adapted to browse diets than elk (e.g. deer have tannin binding proteins in their saliva), elk can effectively utilize browse diets when necessary. In periods of food shortage, elk will out-compete deer. During most winters, there is spatial segregation between the majority of elk and deer.

Other potential inter-specific conflicts between deer and elk such as negative social interactions (e.g. species intolerance, competition for calving and fawning areas) are complex and poorly understood. For example, it has been hypothesized that large numbers of elk might force deer into less preferred habitat where the deer are more susceptible to predation. Researchers on the Uncompahgre Plateau made casual observations during a 3 year neonatal fawn survival study that there was little evidence that elk were negatively impacting deer during fawning. Elk calving on the Plateau occurred 2-4 weeks prior to fawning and by the peak of fawning elk had already grouped into nursery herds. During this study deer were often observed in close proximity to elk with no apparent negative interaction.

The Cold Springs mule deer population showed a steadily declining population trend since 1990, while at the same time the elk population remained stable. However, elk populations grew significantly through the late '90's and early 2000's which coincides with the lowest deer populations observed in the DAU. Since 2004, increased cow harvest has resulted in a reduction in elk numbers and conversely, mule deer population numbers have been increasing. Although there is no evidence to suggest the inverse population trends since 2004 are directly related to competition between the two species, there is a positive correlation to increasing deer numbers.

Elk Competition with Domestic Livestock

Concerns over elk and cattle competing for spring grass and on summer ranges across the top of Cold Springs Mountain has been a long standing issue dating back to the 1990's as documented in the comments received for the original DAU Plan. Some livestock producers believe that elk are significantly reducing their useable forage yields by grazing spring and summer rangelands prior to livestock turn out. There is also concern that the potential benefits of controlled livestock grazing are not realized when subsequent elk grazing is uncontrolled.

Studies across the west have shown that elk and cattle diets often have moderate to high overlap. However, elk and cattle use is often temporally and spatially segregated. At times elk will graze among cattle but they generally avoid concurrent use. In areas where cattle occur, elk often prefer ridges and steeper slopes, avoid roads, and do more grazing near the edges of openings than cattle. Although elk can compete with livestock, each mouthful taken by an elk is not necessarily a mouthful taken from a cow.

The point where forage use by elk actually begins to negatively affect livestock production is difficult to determine. Recent studies in Utah have indicated that elk grazing rested pastures can have little effect on forage available to cattle the following year. A cattle/elk competition study conducted on the Little Snake State Wildlife Area during the 1980's by the CPW compared calf weights in pastures grazed by varying densities of elk. The study failed to show a clear relationship between calf weights and elk numbers but did indicate a small reduction in calf weights at higher elk densities. It is important to recognize that by artificially penning cattle and elk in the same enclosures, this study obviated any resource partitioning dynamics that might normally occur.

Interactions between elk and livestock can be positive. Elk often show a preference for areas that have been previously grazed by cattle because of the nutritious re-growth. Conversely, elk can help maintain openings and create trails used by livestock. The GPS and satellite collars currently deployed in E-1 will provide data to inform future management issues associated with elk-cattle competition.

Chronic Wasting Disease (CWD)

CWD has been present in wild cervid populations since at least 1981, but probably much longer. CWD was discovered on the western slope of Colorado in 2002. CWD was first discovered in DAU E-6 during an effort to depopulate deer entrapped inside a high fenced domestic elk ranch. Currently, voluntary head submission by hunters is being used as a surveillance tool to identify the distribution and prevalence of CWD. CWD has not been detected in E-1.

The goals for managing CWD in this population include minimizing the prevalence of or eradicating the disease if possible and to keep the disease from spreading. The goal in areas that do have CWD is to maintain a less than 1% prevalence rate at the GMU level and less than 2% prevalence rate at the DAU level. Current strategies to manage for CWD include using public hunter harvest head submissions to monitor for the prevalence and distribution of the disease.

The Colorado Parks and Wildlife Commission policy is to manage the disease with three objectives:

1. Minimize the potential for the disease to spread beyond currently infected areas of the state.
2. Reduce the level of prevalence within the Class I CWD Established Areas.
3. To eliminate the disease in Class II CWD Elimination Areas.

HABITAT RESOURCE

Habitat Distribution

Winter Range

According to CPW's Natural Diversity Information Systems (NDIS), the E-1 Cold Springs DAU contains approximately 864 mi² of elk winter range, 71 mi² of severe winter range, and 258 mi² of winter concentration areas. Severe winter range is defined as the area of winter range where 90% of the elk are located when the annual snowpack is at its maximum in the two worst winters out of ten. Ownership of the winter range is included in Table 3.

Table 3. Winter range land area and ownership by GMU in Cold Springs DAU E-1.

	PVT	BLM	SLB	NPS	NWR	CPW	Total
GMU	mi ²						
2	86	501	44	47	0	12	174
201	4	143	9	0	13	4	690
Total	90	644	53	47	13	16	864

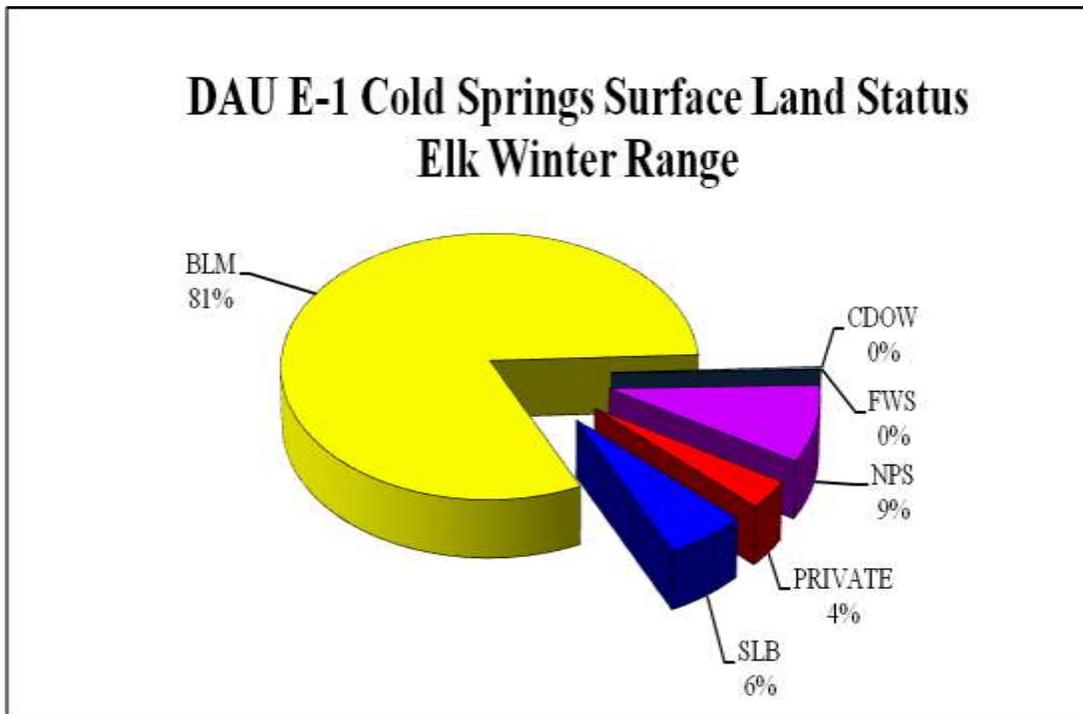


Figure 12. Percent surface land status on winter ranges in DAU E-1.

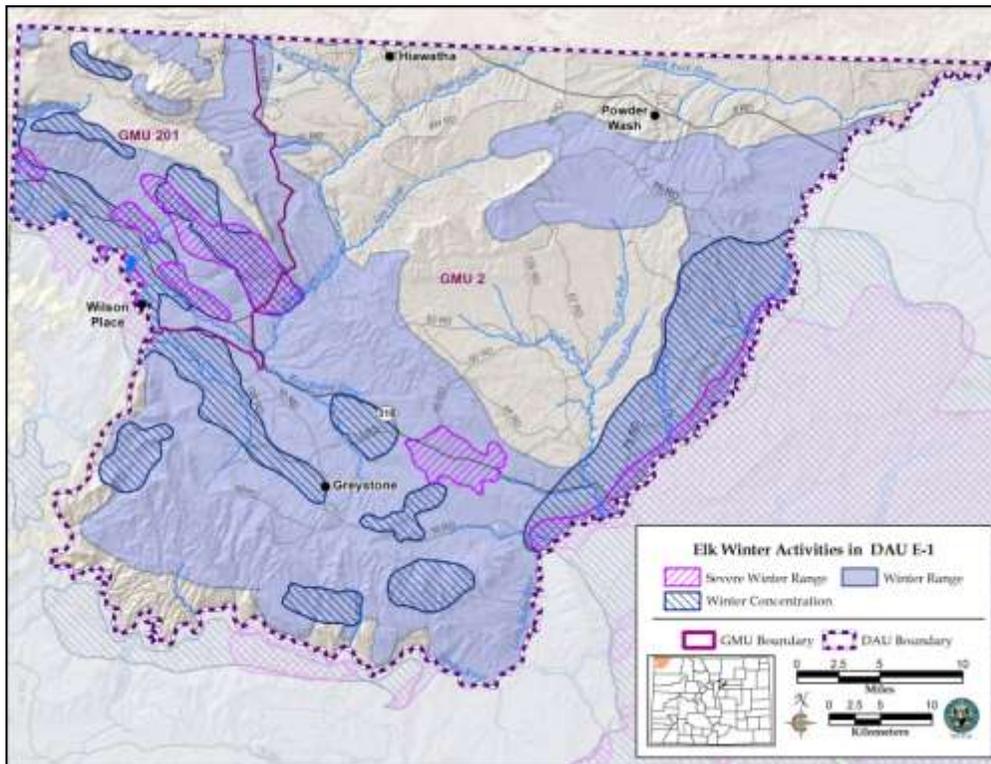


Figure 13. Mapped elk winter ranges for DAU E-1.

Summer Range

There are 677 mi² of elk summer range in DAU E-1. Three hundred fifty one square miles of the summer range has been mapped as summer concentration areas and 178 mi² is identified as production areas.

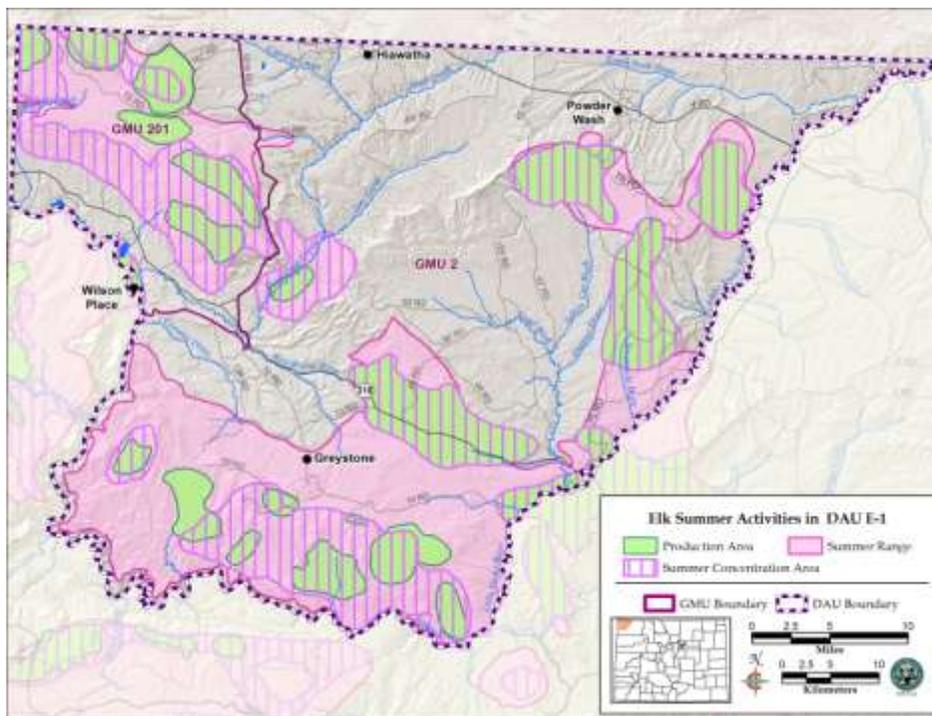


Figure 14. Mapped elk summer ranges for DAU E-1.

Habitat Condition and Capability

There is no easy or accurate way to assess habitat capability (i.e. carrying capacity) for elk on a DAU basis. Current elk numbers have exceeded estimates from 10-20 years ago. Recent habitat models developed through funding from the Habitat Partnership Program (HPP) are attempts to estimate habitat capability by using readily available inputs such as projected vegetation production values, mapped wildlife winter range polygons, wild ungulate off-takes, and livestock off-takes (Gary Wockner et al. 2005). Although such models can be useful tools for evaluating different management options, they are a simplistic view of very complex systems that are impossible to ground truth for accuracy. Carrying capacity is dynamic and can shift dramatically depending on weather conditions, the arrangement of habitat components, animal distribution, disturbance factors, and multispecies interactions. Body condition and population productivity are probably the best indicators of density-dependent effects and habitat capability. Low reproductive success, high mortality of young, and poor body condition are indicators that a population is near or above the capacity of the habitat. No quantitative data are available to assess these indicators for DAU E-1 except post-hunt calf:cow ratios. These ratios show a stable to slight downward trend over the past 25 years. During the last 5 years calf ratios have averaged 46:100 with a slightly increasing to stable trend. This DAU was heavily impacted by the drought during the early 2000's. Observed calf ratios during that same time period were also at their lowest suggesting that elk numbers may have been at or near carrying capacities of the range.

Public Land

The BLM Little Snake Resource Area and State Land Board are the two major land management agencies within the DAU. There are 33 grazing allotments within the Cold Springs DAU, totaling approximately 832,530 acres. Several of the allotments are split by DAU and stateline boundaries; thus, acreages and other allotment figures are approximate (Figure 5). The period of use varies, with summer and winter grazing depending on the allotment. Total AUMs were not identified.

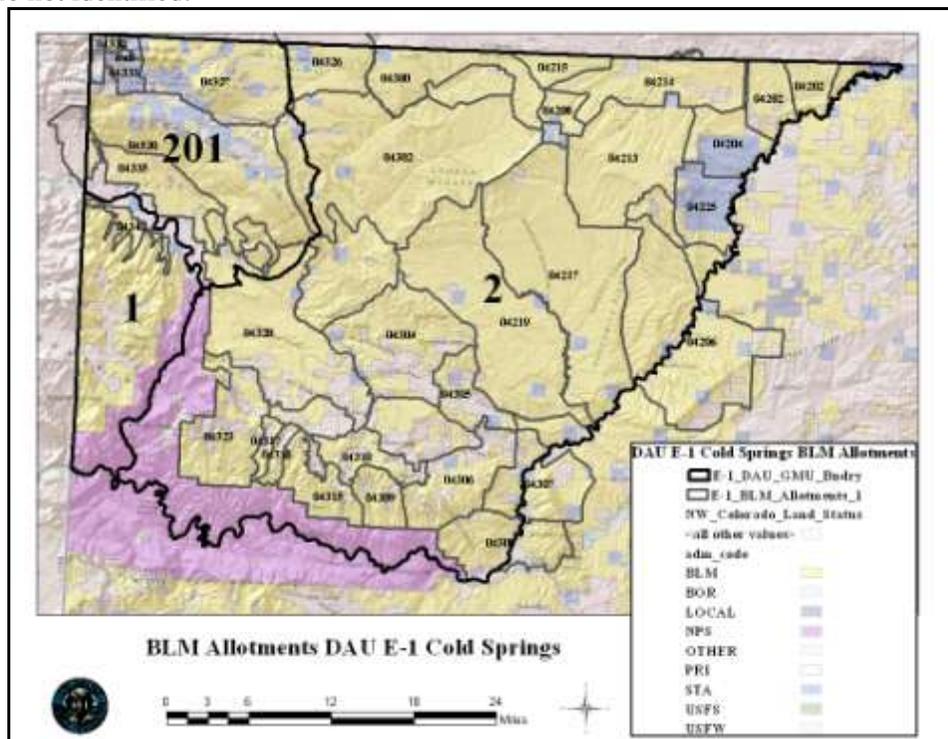


Figure 15. BLM grazing allotments for DAU E-1.

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 feels that stocking rates for livestock are too high, while landowners and land management agencies often point to

high big game populations being the cause of forage problems and conflicts.

It has been an established standard that land resource agencies such as the BLM are primarily focused on land management while CPW manages animal populations. For the purpose of the DAU planning effort, CPW requested information concerning the land health status of public rangelands, present utilization rates specific to livestock, and any specific concerns regarding the BLM and State Land Board. Additionally, the Resource Management Plans and Environmental Assessments for each of the agencies were reviewed regarding grazing management on the public lands within the DAU. For each environmental analysis, required to issue grazing leases, an assessment of land health status is conducted. Changes in allotment categorization, levels of management, and permit modifications can be made if evaluation and monitoring information indicates they are warranted in order to achieve or make significant progress toward achieving the standards for rangeland health.

CPW’s fundamental assertion is that if the land is maintained in a healthy state it will support the proposed herd objective. If evaluation and monitoring data indicate that land health is impaired by wildlife use, then specific herd management changes would be implemented via CPW’s “Management by Objective” framework.

CPW will work closely with the land management agencies to establish better estimates of capacity and utilization, especially on forage conflict areas. The radio collars currently deployed on elk across the DAU will provide CPW managers with spatial data that shows seasonal elk use patterns across many of the BLM allotments. The equitable allocation of the forage base between livestock and wildlife should be established across all habitat types, with special consideration given to critical habitats.

In January 1997, BLM approved the Standards for Public Land Health. The BLM conducts Land Health Standard Assessments by watershed. There are portions of 6 watersheds within DAU E-1. Each watershed assessment is based on 5 standards: upland soils, riparian systems, native plant and animal communities, special status species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. Assessments are conducted by an interdisciplinary team of BLM employees that randomly select multiple sites within a watershed boundary based on criteria that include past and current management, location of known riparian resources, and areas with special wildlife concerns. Assessments have been conducted on all watersheds within E-1. A summary of the completed watershed assessments are included in the following table.

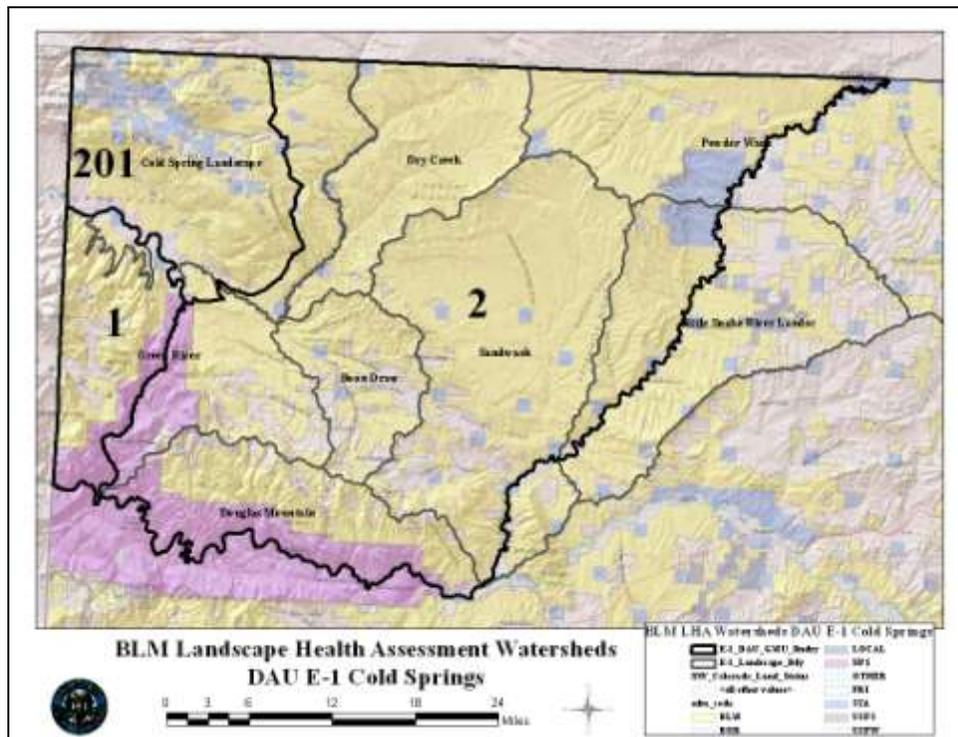


Figure 16. BLM Landscape Health Assessment Watersheds for DAU E-1.

Table 4. BLM Colorado Land Health Standard Assessments by watershed for the Cold Springs DAU E-1.

Watershed	Year Completed	Acres	Standard 1 Upland Soils	Standard 2 Riparian System	Standard 3 Plant/Animal	Standard 4 Special Species	Standard 5 Water Quality
Cold Springs	2000	207,870	Standard Met	At Risk	Standard Met	Standard Met	Standard Met
Dry Creek	2002	100,800	Standard Met	At Risk	Standard Met	Standard Met	Standard Met
Douglas Draw	2004	59,981	Standard Met	Standard Met	Standard Not Met	Standard Met	Standard Met
Douglas Mountain	2004	101,460	Standard Met	Standard Not Met	Standard Not Met	Standard Met	Standard Met
Green River	2005	156,126	Standard Met	Standard Met	Standard Met	Standard Met	Standard Met
Sandwash	2002	239,299	Standard Met	Standard Met	Standard Met	Standard Met	Standard Met
Little Snake	1999	181,173	Standard Met	Standard Not Met	Standard Met	Standard Met	Standard Met
Powderwash	2003	246,698	Standard Met	Standard Not Met	Standard Not Met	Standard Met	Standard Met

Although most watersheds met the standards set forth in Colorado Land Health Assessments conducted by the BLM, it should be noted that in some watershed assessments that met the standards were determined to “marginally” or “minimally” meet the criteria standards. The causative factors in the watersheds that did not meet the land health standards included sites dominated by weeds, drought stressed sites, sites with fire disturbance or lack of fire in the ecosystem, sites in late seral stages, and past and current grazing practices by both livestock and elk. However, it should be noted that several of the watersheds where standards are not met are in the most arid portions of the DAU where summer elk occurrence and density is the lowest (e.g., Dry Creek, Powder Wash, Little Snake). Copies of the Colorado Land Health Assessments can be obtained by contacting the Terrestrial Biologist at the Meeker Service Center (970) 878-6090 or the BLM Little Snake Field Office in Craig (970) 826-5000.

Public Land Wildlife Conflict Areas

The land use agencies were asked to identify areas where conflicts occur between livestock and elk within DAU E-1. Examples of conflicts were given as situations where elk had forced a change or delay in the period of use on an allotment, or forage utilization by elk had caused a reduction in AUMs of forage available for livestock.

The concerns and conflicts identified in the LHAs conducted by the BLM Little Snake Field Office (LSFO) regarding the size of the elk herd in E-1 were during peak elk population levels in the DAU during the early 2000s. BLM claimed the expected benefits of the reduced livestock numbers have been negated by high elk numbers. Monitoring data and land health assessments conducted by the LSFO have noted decreases in perennial grass diversity, density, and abundance, however, in most cases, the BLM states, elk have not been identified as the primary causal factor but feel high elk numbers coupled with drought are almost certainly influencing adverse changes in plant communities within the DAU. BLM was also concerned about the impacts of high elk numbers on greater sage grouse habitat. Lastly, concerns were also expressed about the number of elk residing in the eastern portion of the DAU on Sevenmile Ridge year round along the Little Snake River. This is of particular concern since the plant communities that serve as winter habitat in this area are not well adapted to season long grazing pressure. Since the early 2000s, CPW has taken measures to reduce elk numbers to address the concerns raised in the LHAs. A special hunt was instituted in 2008 to target the Sevenmile Ridge group of elk. CPW, the NW HPP committee, and local landowners all worked together to establish a hunt boundary with liberal season dates in an attempt to harvest this group of elk. Season dates are Aug 15 – Oct 31. The targeted elk harvest this season was intended for has had limited results. Success rates have been low and the elk have adapted to avoid hunting pressure by seeking refuge on private lands where public hunting access is not allowed. Perhaps the most effective management action taken in the effort to reduce elk numbers in DAU E-1 has been the establishment of the late cow elk season in 2008. Harvest success for the late season has been high and resulted in significant reductions in this elk population since the early 2000s.

Private Land

Habitat Partnership Program

Colorado's Habitat Partnership Program was started in 1989 to better address the conflicts private landowners and federal land management agencies have had with big game animals. The program is designed to assist CPW in directly solving forage and fence problems with local input. A committee of local landowners, sportsmen and federal agency personnel is established to ensure appropriate public involvement in identifying range management problems and recommending solutions to these problems. Local HPP committees may attempt to alleviate problems in areas where elk management and agricultural interests conflict.

Individual HPP Committees are responsible for developing a 5-year Distribution Management Plan (DMP) that identifies locations and seasons of big game concentrations which the landowner/land manager considers to be conflict areas. The plan provides a framework to minimize or eliminate identified big game conflicts on public and private lands through habitat enhancements, special hunts, and/or other techniques. Whereas the DAU plan sets population goals for a large geographic area, the DMP focuses on management actions that are administered at the local or individual ranch level. Funding for HPP committees and DMP programs is generated from big game license sales from their region (5% of the annual 3-year average license revenues). Additionally, HPP is authorized to compensate landowners for actual damage to fence and forage caused by big game.

Another significant portion of each HPP 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 conflict areas are identified and help develop appropriate strategies for conflict resolutions. DAU E-1 is located within the Northwest Colorado HPP Committee management area. The Northwest Colorado HPP committee was established in 1991 and is generally responsible for conflicts that occur north of the Yampa River.

Habitat Assessment Model

In 2001, legislation required the Habitat Partnership Program to conduct an assessment of the habitat capability for their respective areas. As a result, the Habitat Assessment Model was designed as a tool to aid HPP committees in discerning the relationships between wildlife populations and habitat sustainability. The model incorporates general habitat based management principles utilizing ArcView GIS technology. The model includes existing information generated by local, state, and federal government agencies as well as input from local community members. The Habitat Model produces a range of population values with related management implications that can be used in the DAU planning process. The range of population values are based on low, mid, and high threshold values. The threshold values in the model represent a theoretical level of grazing use based on a landscape scale. For example, the low threshold in the model represents consumption of 25% of the total annual net primary production (ANPP), the midpoint equals 28.5%, and the high threshold value equals 32% consumption of ANPP. The model is run using model inputs which include a pre-winter precipitation level and additional parameters based on the area being assessed. For example, current habitat model projections for DAU E-1 using a mean precipitation rate, an estimated pronghorn population of 1,500, and 10 year average livestock numbers indicate DAU E-1 should be able to support approximately 3,500 elk and 8,200 mule deer (Table 5). Modeled population estimates indicate the DAU currently supports approximately 2,000 elk and only 1,800 mule deer.

Table 5. The Habitat Assessment Model output for DAU E-1 showing predicted, sustainable population numbers for both elk and mule deer based on the input criteria of mean precipitation rates, an estimated pronghorn population of 1,500, and 10 year average livestock numbers.

% ELK	ELK LOW	ELK MIDPNT	ELK HIGH	DEER LOW	DEER MIDPNT	DEER HIGH	% DEER
0	0	0	0	7562	20016	32471	100
10	613	1623	2633	5517	14607	23697	90
20	1031	2729	4428	4124	10916	17712	80
30	1335	3532	5730	3115	8240	13368	70
40	1565	4141	6718	2348	6212	10077	60
50	1745	4619	7493	1745	4619	7493	50
60	1891	5005	8119	1259	3333	5407	40
70	2010	5320	8630	862	2282	3702	30
80	2110	5586	9062	528	1397	2266	20
90	2195	5811	9427	244	645	1046	10
100	2269	6005	9741	0	0	0	0

Additional Habitat Capability Modeling

In addition to the HPP Habitat Assessment Model, CPW also conducted a grazing analysis using the BLM’s methodology for a 73,400 acre area in GMU 201 that included the top of Cold Spring Mountain, Diamond Peak, Middle Mountain and the Three Corners area. This area includes the principal area where elk/cattle grazing conflicts have been reported and includes the majority of area where significant elk concentrations overlap greater sage-grouse habitat in DAU E-1 as well.

This analysis looked at optimistic (moist year/good range condition) and conservative (dry year/fair range condition) to generate three Animal Unit Month (AUM-an index of grazing intensity and animal stocking rate) estimates for each condition class. CPW also considered a “desired utilization” method which allocated up to 30% of total herbaceous production to cattle and elk herbivory (in the aggregate). This method allocates an additional 10% of production to other grazers and retains 60% of total production as ungrazed. The analysis yielded an elk and cattle AUM allocation for this area that averaged approximately 14,000 AUMs with a range of 13,000 – 15,000. Since 2000, combined elk and cattle AUMs for this area have averaged 11,700 and ranged from a high of 15,000 AUMs in 2007 to a low of 7400 AUMs in 2012. Both of these analyses also provide ample residual forage to meet greater sage-grouse habitat conditions and to provide for general rangeland health. All of these analyses demonstrate that proposed elk objectives for DAU E-1 are well within the capability of the ranges in the DAU to support. Actual cattle AUM data obtained from the BLM for the Diamond Peaks and Cold Springs allotments show a declining trend in stocking rates since 2000. Utilization trends from monitoring efforts show an overall increase in percent underutilization by cattle. Considering this analysis and the overall downward trends in livestock use and elk populations shows that CPW’s preferred population objective range is very achievable, even in dry years and fair range conditions (Appendix G).

IMPACTS ON GREATER SAGE-GROUSE

Greater sage-grouse occur in many important big game areas within the northwestern quarter of Colorado. The species has been proposed for listing under the federal Endangered Species Act and is currently considered a candidate for federal listing. The Northwest Colorado Greater Sage-grouse Conservation Plan and the Colorado Statewide Greater Sage-grouse Conservation Plan both encourage CPW to consider greater sage-grouse habitat requirements when setting big game population objectives in DAU plans (Strategies I.H.3.b., page 114 and 6.2.2.1. page 346, respectively). Greater sage-grouse occur in significant numbers on Cold Spring Mountain and surrounding areas in GMU 201 and in the Powder Wash/Sand Wash area in GMU 2. Additional small concentrations of birds occur in Brown’s Park, and around Greystone. The portion of this greater sage-grouse

habitat that overlaps principal elk habitats is on Cold Spring Mountain. In general, well managed rangelands for livestock production also produce high quality greater sage-grouse habitat. The previously mentioned conservation plans also identify desired vegetation characteristics for greater sage-grouse in a range of ecological sites in Colorado.

Impacts of grazing on greater sage-grouse, whether by domestic livestock or wild ungulates, result primarily from grazing intensity sufficient to remove most or all of the standing residual forage (i.e., 50% or higher utilization of herbaceous production), thereby making it unavailable to serve as nest cover and resulting in an increase in nest failure rates. All of the grazing evaluations described above assume as a starting point that at least 50% of annual herbaceous production is retained on the landscape after grazing is complete. Meeting this standard in greater sage-grouse habitats in DAU E-1 will ensure that elk numbers and other grazing effects do not contribute to a decline in greater sage-grouse numbers in DAU E-1.

Private Land Wildlife Conflict Areas

Input on habitat conditions and capability on private land was sought in the public meetings and through the HPP committee. There was general concern regarding elk distribution on private lands where water is limited on adjacent public lands. Early spring elk distribution was also identified as a concern when elk migrate to higher elevations following green up.

ISSUES AND STRATEGIES

Issue Solicitation Process

An important aspect of the DAU planning process is obtaining input from all segments of the affected local community, including the BLM, State Land Board, HPP committees, County Commissioners, Dinosaur National Monument, Browns Park National Wildlife Refuge, private landowners, sportsmen, and the interested public. Public meetings were held to gather input from all stakeholders that have an interest in elk management, including the BLM, State Land Board, HPP committees, County Commissioners, Dinosaur National Monument, Browns Park National Wildlife Refuge and the public on the best manner to achieve the desired DAU objectives. Initial meetings were held on October 3, 2007 and supplemental scoping letters were sent out February 13, 2013 to officials from federal and state land management agencies soliciting input regarding elk management. Input from the Northwest HPP committee was sought through a presentation given to the committee February 13, 2013. These issues and concerns were noted and incorporated into this plan (Appendix E).

In an effort to solicit recommendations on the goals and objectives of the DAU plan from the interested public, the CPW held open public meetings in Craig on August 23, 2007 and Brown's Park on July 12, 2012. Current management objectives and alternatives were presented at these meetings. Input was requested from participants in the form of a questionnaire (2007) and an online survey (2012) regarding issues and concerns they might have with elk management in the DAU (Appendix B). Issues and concerns were noted during both of these meetings and incorporated into this plan.

Input from the Moffat County Board of County Commissioners (BOCC) was solicited and members of the board were invited to the local public meetings. Their comments and concerns were noted and incorporated into this plan (Appendix F).

The initial draft DAU plan was posted to solicit public comment on CPW's public website for more than 30 days in the fall of 2012. Following this public comment period, CPW added an additional population alternative for consideration in response to comments received and returned the draft DAU plan to the CPW website for additional public comment.

Issue Identification

The primary purpose of the DAU planning process is to determine objectives for the size and structure of post-hunt population. The secondary purpose of the process is to gather input from the public that have an interest in elk management on the best manner to achieve the desired DAU objectives. In the case of DAU E-1, this includes determining objectives for the size and structure of the elk herd and various alternatives to achieve the desired objectives.

Population and Sex Ratio Objectives:

- Post-hunt population size
- Post-hunt bull:cow ratio

Management Objectives:

- Should the Cold Springs DAU remain under the current management strategy?
- Should the Cold Springs DAU be managed using over-the-counter licenses?
- Should the Cold Springs DAU be managed as a quality elk DAU with all limited licenses?
- Should the Cold Springs DAU be managed with moderate limitations on all licenses?

Issues and Concerns: BLM – Little Snake Field Office

Issues and concerns raised by the Little Snake BLM Field office were centered on diminished forage production across the DAU due to continued drought conditions. BLM stated that livestock operators on public lands within the area have reduced stocking rates in response to drought conditions and the need to manage elk for long term habitat sustainability. BLM expressed support for a population alternative range of 1000 – 1500 elk. Actual livestock use for the last few years coupled with utilization data from BLMs allotment assessments has shown elk numbers within the 1000 – 1500 range are sustainable given the dietary overlap between elk and cattle. *See Appendix C for full contents of letter received from the Little Snake BLM Field Office.*

Issues and Concerns: Northwest Colorado HPP Committee

Issues and concerns raised by the Northwest Colorado Habitat Partnership Program (NW HPP) included continued quality management of the DAU and the inclusion of an action plan that addresses drought concerns be incorporated into the E-1 DAU plan. *See Appendix E for full contents of letter received from the NW HPP committee.*

Issues and Concerns: Moffat County Commissioners

Issues and concerns raised by the Moffat County Commissioners regarding the E-1 DAU plan were as follows:

1. Moffat County Commissioners requested CPW review sites with the BLM where Range Health Standards are not being met with wildlife being implicated as a causal factor.
2. CPW needs to broaden the range of population alternatives to include a range of 500 – 1500 elk for analysis and comment.
3. CPW analyze impacts to greater sage grouse habitat for each of the proposed elk population ranges.
4. DAU E-1 continued to be managed for quality hunting.
5. CPW develop an action plan for a drought scenario.

See Appendix F for full contents of letter received from the Moffat County Board of County Commissioners.

Issues and Concerns: State Land Board

Issues and concerns identified by the State Land Board (SLB) include managing elk numbers over the next ten years to a range of 500 – 1500 elk. SLB encourages CPW to manage and maintain elk populations in E-1 towards the lower end of their preferred objective range of 500 elk. SLB also expressed concern regarding CPWs ability to reduce elk populations in a timely manner from one growing season to the next following a year of drought. Elk distribution was identified as an issue to be addressed to alleviate adverse impacts to other wildlife, livestock, and range vegetation. Other issues identified by SLB were the impacts from elk on sage grouse and issues surrounding impacts from wild horses on elk habitat in the Vermillion area. Lastly, SLB commented on interstate elk movement as a potential issue in managing the E-1 elk herd.

See Appendix D for full contents of letter received from the State Land Board.

Issues and Concerns: Dinosaur National Monument

No comments were received from Dinosaur National Monument

Issues and Concerns: Brown's Park National Wildlife Refuge

No comments were received from Dinosaur National Monument

Issues and Concerns: Summary of Public Comments

Public meetings were held in 2007 and 2012 as part of the DAU Planning process. A diverse array of comments and recommendations were received from the many interested parties that attended the two public meetings. The 2007 survey was provided at the public meeting and focused on resident and local community input. A second survey was conducted after the 2012 hunting season. Over 2,000 postcards were mailed to resident and non-resident hunters that applied for an E-1 license or preference point within the last 3 years. A detailed summary of public comments and questionnaire results from the 2007 and 2012 surveys are included in Appendix A.

ALTERNATIVE DEVELOPMENT

MANAGEMENT STRATEGIES

There are three basic management strategies CPW is currently using for elk DAU's. Ideally, all units within a DAU should be managed under the same strategy. These basic management strategies consider various types of hunting opportunities including ease of participation, quality of hunting experience, level of success rates, and opportunity to harvest a quality male animal.

Methods to achieve these various opportunities include offering readily available licenses, spatial and temporal distribution of hunters and license limitations. These different management strategies afford various types of hunting opportunities and are often mutually exclusive and therefore must be balanced among the desires of hunters, landowners, and economic interests.

Strategy 1. Management for Maximum Opportunity and Economic Benefits-

This management strategy provides the best opportunity to hunt every year with the greatest likelihood of harvesting any age class of males and females in the population. Constraints on season lengths and antler-point restrictions are used to prevent excessive harvest of male animals and both over-the-counter and/or limited licenses are used to focus needed harvest on female animals to control populations. These types of hunts have higher hunter densities than other hunt types.

Strategy 2. Management for Improved Experience and Reduced Impacts-

This strategy limits the number of hunters for all methods of take for all seasons to reduce hunting pressure and improve the quality of the hunting experience. This type of hunt provides significant opportunity, but hunting opportunities are available less frequently with draw success occurring every 1 to 3 years which affects local economic benefits for both businesses and landowners. This type of management strategy would have more limited opportunity hunts to increase the diversity in age class of males in a population and the likelihood of harvesting older age class males. Licenses are moderately limited during all seasons and are used to manage hunter pressure, prevent excessive harvest of male animals, and allow the flexibility to focus needed harvest on females for population control through limited licenses. These hunts have lower hunter densities than maximum opportunity hunts.

Strategy 3. Management for Quality Animals and Quality Experience-

This strategy significantly limits the number of hunters for all methods of take and for all seasons to reduce hunting pressure and improve the quality and opportunity to harvest older age class male animals. This type of management strategy has implications for local economies, landowners, and the achievement of management objectives in surrounding units. Quality management has the greatest "costs", implying not only monetary costs to local landowners and businesses but costs associated with reductions in the frequency of draw success for the hunter. License numbers are highly restricted. Hunts with this type of management strategy have very low hunter densities compared to the maximum and limited opportunity hunts.

MANAGEMENT ALTERNATIVES CONSIDERED

Population Objective: 500 – 1500 (added following the initial public comment period)
1000 – 2000
1500 – 2500
2000 – 3000

Sex Ratio Objective: 25 – 30 bulls:100 cows
30 – 35 bulls:100 cows
35 – 40 bulls:100 cows

Alternative 1 - Status Quo - “Strategy 3”

Currently, DAU E-1 is managed for “**Strategy 3**” and is among the 20% of DAUs statewide managed for quality. Management objectives are to provide a quality hunting experience and seasons with limited hunter opportunity. Archery and muzzleloader seasons are limited and require a high number of preference points to draw. The early 11 day either-sex rifle only seasons in E-1 require the highest number of preference points of any GMU in the state to draw one of these licenses. The 1st-4th rifle seasons are limited antlerless only hunts. The only antlerless hunt outside the regular seasons is a late season antlerless hunt during the month of December. There are no private land only hunts offered in this DAU.

Alternative 2 – Manage for moderate license limitations

Managing for moderate license limitations would require a change from the current strategy with an increase in antlered licenses for the limited archery, muzzleloader and early bull seasons. Comments received through public input expressed support and interest for some alternative strategies to be considered to provide additional bull hunting opportunities. These included antler point restrictions and/or a spike only season. Limited antlerless licenses would remain specified under this alternative to manage to DAU population objectives. Various antlerless hunts outside the regular seasons could still be used to address elk damage and distribution issues that will provide hunters with late and early season opportunities. Economic benefits for local businesses and CPW would be minimal due to increased limited number of licenses available. Landowners, guides, and outfitters would likely see positive impacts as increased license numbers would result in more hunters drawing licenses, however, fees they charge for hunting may be negatively affected as the quality of bulls in the DAU would be negatively affected. Hunter success and pressure would not change significantly under this management scenario.

Alternative 3 – Management for Over-the-Counter (OTC) Licenses

This management alternative includes OTC antlered/ES licenses for all seasons and methods of take. This alternative would require significant changes to the current totally specified management strategy. Limited antlerless licenses would remain specified under this alternative to manage to DAU population objectives. Various antlerless hunts outside the regular seasons would continue to be implemented to address elk damage and distribution issues as well as provides hunters with late and early season opportunities. Income for local businesses, landowners, guides and outfitters, and CPW would benefit from increased license revenues generated by the OTC license sales. Increased hunting pressure during limited archery, muzzleloader, and rifle seasons would likely lower success and lead to lower success rates.

PREFERRED OBJECTIVES AND ALTERNATIVES

CPW Recommendation to the Parks and Wildlife Commission

Population Objective: 700 - 1700

The CPW recommends managing this elk population in an objective range of 700 – 1700 elk. The current population estimate is in the mid to upper portion of this range. This recommendation is a blend of two of the alternatives that were presented to the public and attempts to balance competing public sentiments calling for a stable to increasing elk population and calls for a reduction in the elk population from current levels. Managing for a range of 700 – 1700 elk will allow for the flexibility to manage this elk herd at a level commensurate with varying habitat conditions.

Sex Ratio: >40 bulls:100 cows

The CPW recommendation is to manage the sex ratio to maintain >40 bulls:100 cows. During the past 5 years (2008 - 2012), the herd has averaged 73 bulls:100 cows with a range of 61 – 88 bulls:100 cows. Bull ratios can vary widely from year to year based on the number and composition of elk classified each year. Since bulls traditionally occupy the same winter ranges every year observers generally get a representative sample of bulls. However, distribution of cow-calf groups across the DAU varies greatly so if a representative sample of cow-calf groups is not obtained bull ratios are often inflated. Managing for >40 bulls:100 cows will allow continued production of trophy class bull elk from this DAU.

Management Strategy: Status Quo (Maintain Trophy Management)

The DAU management strategy recommendation by the CPW is status quo. Currently, E-1 is totally specified for all seasons and managed for quality bull elk hunting. Season structures within DAU E-1 include limited archery and muzzleloader seasons, an early rifle bull elk season, and 4 limited regular season antlerless hunts. In addition, late season antlerless hunts were established in 2008 as a management tool to reduce elk populations in the DAU. Hunter success in the DAU would remain relatively high under this strategy. Success has averaged 44% over the last 5 years. The overall DAU management recommendation is to maintain this unit as a quality bull elk hunting DAU with very limited bull licenses.

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Appendix A

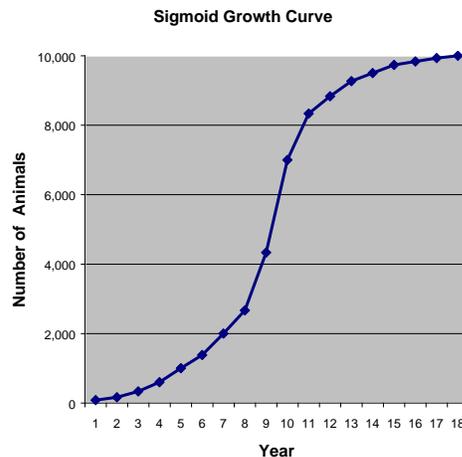
Population Dynamics and Managing for Maximum Sustained Yield

Numerous studies of animal populations, including such species as mice, rabbits and white-tailed deer, have shown that the populations grow in a mathematical relationship referred to as the "sigmoid growth curve" or "S" curve (right). There are three distinct phases to this cycle. The first phase occurs while the population level is still very low and is characterized by a slow growth rate and a high mortality rate. This occurs because the populations may have too few animals and the loss of even a few of them to predation or accidents can significantly affect the population.

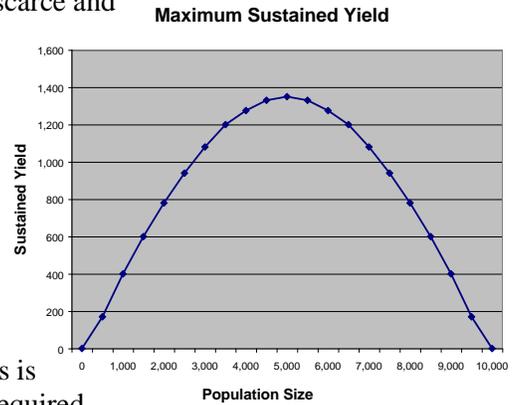
The second phase occurs when the population number is at a moderate level. This phase is characterized by a very high reproductive and survival rate. During this phase, food, cover, water and space (habitat) is not a limiting factor. Also, during this phase, animals such as white-tailed deer have been known to successfully breed at six months of age and produce a live fawn on their first birthday and older does have been known to produce 3-4 fawns that are very robust and healthy. Survival rates of all the deer (bucks, does and fawns) are at maximum rates during this phase.

The final or third phase occurs when the habitat becomes too crowded or habitat conditions become less favorable. During this phase the quantity and quality of food, water, cover and space become scarce due to the competition with other members of the population. This phase is characterized by a decrease in reproduction and survival. Also, during this phase white-tailed deer fawns can no longer find enough food to grow to achieve a critical minimum weight that allows them to reproduce; adult does will usually only produce 1-3 fawns; and survival of all deer (bucks, does and fawns) will decrease. During severe winters, large die-offs can occur due to the crowding and lack of food. The first to die during these situations are fawns, then bucks followed by the adult do. The severe winters thus affects the future buck to doe ratios by favoring more does and fewer bucks in the population. Also, since the quality of a buck's antlers is somewhat dependent upon the quantity and quality of his diet, the antlers are stunted during this phase. If the population continues to grow, it will eventually reach a point called "K" or the maximum carrying capacity. At this point, the population reaches an "equilibrium" with the habitat. The number of births each year equals the number of deaths, therefore, to maintain the population at this level would not allow for any "hunnable surplus." The animals in the population would be in relatively poor condition and when a severe winter or other catastrophic event occurs, a large die-off is inevitable. A recent example of such a population die-off occurred in the relatively unhunted Northern Yellowstone elk herd during the severe winter of 1988-89. This winter followed the forest fires of the summer of 1988 that raged in the National Park.

What does all this mean to the management of Colorado's big game herds? It means that if we attempt to manage for healthy big game herds, we should attempt to hold the populations at about the middle of the "sigmoid growth curve." Biologists call this "MSY" or "maximum sustained yield." At this level, which is exactly half the maximum population size or "K", in this example it would be 5,000 animals, the population should provide the maximum production, survival and available surplus animals for hunter harvest. Also, at this level, range condition should be good to excellent and range trend should be stable. Game damage problems should not be significant and economic return to the local and state economy should be at the maximum. This population level should produce a "win - win" situation to balance sportsmen and private landowner concerns.



A graph of a hypothetical deer population showing sustained yield (harvest) potential vs. population size is shown (right). Notice that as the population increases from 0 to 5,000 deer, the harvest also increases. However, when the population reaches 5,000 or "MSY", food, water and cover becomes scarce and the harvest potential decreases. Finally, when the population reaches the maximum carrying capacity or "K" (10,000 deer in this example), the harvest potential will be reduced to zero. Also, notice that it is possible to harvest exactly the same number of deer each year with 3,000 or 7,000 deer in the population. This phenomenon occurs since the population of 3,000 deer has a much higher survival and reproductive rate compared to the population of 7,000 deer. However, at the 3,000 deer level, there will be less game damage and resource degradation.



Actually managing deer and elk populations for MSY on a DAU basis is difficult if not impossible due to the amount of detailed information required and because of the complex and dynamic nature of the environment. In most cases we would not desire true MSY management even if possible because the number and quality of bulls and bucks is minimized. However, the concept of MSY is useful for understanding how reducing densities and pushing asymptomatic populations towards the inflection point can stimulate productivity and increase harvest yields. Knowing the exact point of MSY is not necessary if the goal is to conservatively reduce population size to increase yield. Long term harvest data can be used to gauge the effectiveness of reduced population size on harvest yield.

APPENDIX B

2007 Survey Results

The following is a summary of the 2007 questionnaire survey results used to assess public interest in elk management. The 2007 questionnaires were made available at public meetings and mailed out to both resident and non-resident hunters.

Survey Purpose and Intent

The purpose of this questionnaire was to assess public attitudes toward elk management in the Cold Springs area, specifically in Game Management Units (GMU) 2 and 201. The Colorado Parks and Wildlife (CPW) is responsible for developing an elk population management plan for this area.

In Colorado, big game populations are managed for specific geographic areas, called Data Analysis Units (DAU). The DAU plan analyzes information for two primary decisions: 1) how many animals should the DAU support, population objective, and 2) what is the herd's most appropriate male to female ratio, sex ratio. The DAU planning process examines the biological capabilities, public preferences, and the socio-political tolerances for wild ungulate population for a given herd unit through a public process. An appropriate balance of each is sought and reflected in the herd objectives which are set for 10 years. Annual hunting seasons are then designed with the intent of keeping the population at or near the selected herd objectives.

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

In the development of DAU plans, results of surveys such as this one are considered along with other forms of input the CPW receives from land management agencies and the public, via public meetings, letters, phone calls, and testimony before the Colorado Parks and Wildlife Commission. All public input is integrated with other significant elements in making the final selection of a preferred alternative for population and composition (male/female ratios) objectives for the elk herd in the area. The Colorado Parks and Wildlife Commission makes the final determination on the herd objectives which will then be in effect for 10 years.

Methods

The target population for this study consisted of residents of the area, private landowners, and individuals who hunted elk in 2006.

Questionnaires were designed to survey public attitudes towards elk in the Cold Springs DAU which includes GMUs 2 and 201. Hunters were asked to complete the questionnaires and return them, by pre-paid mail, to the CPW. Return postage was provided for each questionnaire.

Results

A total of 30 individuals returned completed questionnaires. Results are presented in two sections. "Survey Highlights" summarizes the important results of this survey, particularly as they apply to the DAU plan objectives. The "Summary of Open-ended Comments" categorizes the additional comments received and provides insight into the main issues that people thought were important for the CPW to consider.

The Appendix provides the percentage of valid responses for each question, and the questions are presented as they were asked in the original questionnaire.

ELK MANAGEMENT (*Population estimates at the time of the 2007 survey were 2500 – 3000 elk; bull ratio 46:100*)

- In this survey, an increase or decrease in the population was defined as slight, moderate, or great. A slight increase or decrease was defined as 1-25%, moderate 26-50%, and great over 50%. The majority of respondents to the survey expressed they would like to see no change to a slight increase in the E-1 elk herd. A total of 33% of the respondents expressed no change from the current population level, 30% would like to see a “slight increase”, and 24% would like to see a moderate to significant increase. Only 3 percent of the respondents would like to see a slight decrease from current population levels. Seven percent of the respondents had no opinion. Respondents had strong feelings about the change in the size of the elk population; the change in the population is “important” (23%) to “very important” (60%) to them.

DAU E-1 is currently managed for a sex ratio of 35 - 40 bulls per 100 cows. People were asked if they would like to see a change in the number of bull elk in DAU E-1. Eighty seven percent of the respondents indicated they would like to see no change or an increase in the bull ratios in E-1. Seven percent of respondents selected a decrease in bull ratios and 7% had no preference.

ELK MANAGEMENT

- 7) How would you like the elk population in GMU’s 2 or 201 to change, if at all?

- 0% Decrease greatly (over 50%)
- 0% Decrease moderately (26-50%)
- 3% Decrease slightly (1-25%)
- 33% No Change
- 30% Increase slightly (1-25%)
- 17% Increase moderately (26-50%)
- 7% Increase greatly (over 50%)
- 7% Don’t know

- 8) How important to you is the change in the size of the elk population that you indicated in Question 1 above?
(Circle One)

Not Important	Slightly Important	Important	Very Important	Don’t Know
0%	13%	23%	60%	3%

- 9) If you indicated that you would like a decrease in the elk population (in Question #1 above), what methods would you support or oppose to decrease elk numbers? (Circle one number for each item)

	Strongly Oppose	Oppose	No Opinion	Support	Strongly Support
Either sex licenses.....	20%	0%	20%	40%	20%
Additional cow tags.....	40%	0%	20%	40%	20%

- 10) How would you like the number of bull elk in GMU’s 2 and 201 change, if at all?

- 7% Decrease
- 47% No Change
- 40% Increase
- 7% Don’t know

Elk Hunting

- One hundred percent of respondents had hunted elk in Colorado for an average of 22.7 years. Of those, 79% had hunted elk in DAU E-1.
- The level of satisfaction with past elk hunting experiences was rated as 18% dissatisfied compared to 64% that were satisfied with their elk hunting experience.
- Sixty one percent of the respondents had hunted and harvested a bull in GMU 2 and 39% had hunted and harvested a bull from GMU 201. Of the hunters that had harvested bulls from these units 56% had their bulls officially scored with an average Boone and Crockett score of 341. Average scores for GMU 201 were 352 and the average score for GMU 2 bulls was 330.

ELK HUNTING

11) Have you ever hunted elk in Colorado?

100% Yes If yes, how many years? **Average 22.7 years**
0% No

12) Have you ever hunted elk in GMU's 2 or 201?

79% Yes
21% No

13) Overall, how satisfied were you with your elk hunting experience in GMU 2 or 201? (*Circle ONE*)

Very Dissatisfied	Slightly Dissatisfied	Neutral	Slightly Satisfied	Very Satisfied
11%	7%	18%	14%	50%

14) Have you ever harvested a bull elk in GMU 2 or 201? **Yes 61%** **No 39%**

 If so which GMU? 2 **61%** 201 **39%**

15) Did you have your bull officially scored? Yes **56%** No **44%**

 If so, what was the official score? **Average score 341**

2007 Summary of Open-ended Comments

At the end of the questionnaire, people were asked to provide additional comments about elk management in E-1. Numerous comments were received. These comments provide insight into the main issues relevant to hunters and landowners in DAU E-1. The comments were analyzed by categorizing them into like groups and reporting the number of comments in each group.

DAU E-1 Cold Springs Elk Herd – Summary of Questionnaire Written Responses

Comments concerning elk population –

- When DAU was created CDOW committed to the Colorado State Land Board and Vermillion Ranch that no more than 500 elk would reside on Cold Springs Mountain and the adjacent area.
- Current inventory shows E-1 herd is 200% over objective, which we believe monitoring data shows is having a negative impact on vegetative habitat (i.e. overuse of browse species, aspen regeneration, etc.). We request a timely reduction of the elk herd previously agreed to and a tri-state study to determine the cumulative impacts of elk on the habitat and other species of concern as well as the sustainability of livestock grazing (see Moffat County Sage Grouse Conservation Plan, Moffat County Land Use Plan, and Little Snake BLM Resource Management Draft Plan). The appropriate herd size must be in concert with range conditions to minimize and mitigate adverse impacts to the other authorized uses of the lands.

While we recognize and support the benefits to hunters of the “trophy status” of these GMU units, this designation cannot supersede the responsibility of the CDOW to its other obligations to other wildlife species and the sustainability of the habitat in the area. In addition the size of the elk herd has not diminished during the drought and is negatively impacting our private land, leases, and permits.

- If the division lets the cow ranches push for more cow tags to decrease the herd size, they shouldn't be allowed to draw bull elk vouchers. They sell them at a premium price. Most outfitter can afford to buy these trophy tags and turn them to a potential client. Do you make more money off the cow ranches or the sportsman? If you decrease the cow elk numbers, you stand the chance of losing your best trophy elk units. No elk, no hunters, no money. Maybe the ranches need to move to a new area to run livestock. Be strong. Hunting is big business in western Colorado.
- There may seem to be a lot of elk to some people, I think the numbers seem in line with the countryside.
- I guide in 2 for bull and cow elk hunters. I believe with it taking up to 17 years to draw a bull tag there should be as many or more elk to choose from. I have helped the same outfitter since the early 80's and also spend a lot of time in the off season in area 2. It is funny to me that the ranchers who complain about there being too may elk in these areas capitalize greatly on the abundance of elk in these areas.
- The goal of these units is to keep an equal balance so as to not over graze the supportive vegetation and surrounding habitat which you are well aware of. A lot of this all depends on the weather conditions, which we can't control. Overall, you are doing an excellent job of herd management. I believe asking for public opinion is the best solution.

Comments concerning herd composition (bull ratios) –

- Horn damage to big bulls due to too many younger bulls competing with older bulls. Hunters are being denied quality horns due to too high sex ratios.
- Sex ratio too high. Regardless of herd size overly high sex ratios (55/100) are artificially limiting the number of licenses offered for hunters and landowners. Maintaining horn quality should be an objective, however, horn quality can be sustained while lowering the sex ratio and providing more licenses for a given herd size.
- High sex ratios are forcing bulls to leave the area and creating horn damage to trophy bulls there by denying hunters opportunity.
- My family and I have hunted in 201 many times and love the experience. I have seen a lot of screwed up antlers, such as two or three points on one side and six on the other. I believe if there was something like a "damage antler license" for these non-typical bulls, this could control the elk population by reducing the number of damaged bulls and their gene pool.

Comments concerning interstate elk movement –

- Colorado bulls being killed in Wyoming because of improper hunt season over lap.
- Change cow seasons to be concurrent with Wyoming to allow for increase in bull tags to Colorado hunters.

Comments concerning elk and livestock competition –

- You should not let landowners dictate what should happen on game management. This questionnaire should not be about elk management but about livestock management on our public ground.
- It is vitally important we preserve and enhance these areas to their full potential to the benefit of all interested parties. I feel we need to minimize the impact cattle have. It is interesting the ranchers there want to decrease the elk so they have more feed for their cattle. It is also interesting the elk get blamed for all of the damage. I'm sick of the public land ranchers complaining about the wildlife and specifically elk. They don't want elk on private land except during hunting season when they make a lot of money and they don't want elk on public lands when they graze their cattle and sheep. However, they don't complain when they sell a voucher for \$15,000. The areas should be managed for the maximum benefit of the public and not for two ranchers. Overgrazing of cattle is the reason Colorado elk go to Wyoming and Utah.
- Also with the dryness of the land can the terrain support more demands on limited water and grazing?
- Vermillion ranch has implemented intensive livestock management actions in the tri-state area to provide for appropriate rest and recovery and maintenance of the range land resource in the Cold Springs Mountain area.

Comments concerning hunting experiences –

- This is an awesome unit to hunt with big bull elk. I would recommend bull hunts for all season are held at different times than cow hunts as to not interfere. Waiting for 15+ years to draw a bull tag, you do not want someone else screwing up your hunt.
- The wealthy can go and pay for areas where they have plenty of elk and encounter very little hunting pressure from other hunters. I can't afford to hunt private land but I'll travel the distance to hunt here because it is quality through and through.
- The elk herd in unit 2 & 201 is the best in the state.
- I have never hunted in units 2 and 201. Last year I had a 3rd season cow tag and two ranchers offered trespass rights prior to season starting. When the season was two days away, I was unable to reach either rancher for ranch access. One rancher went to the Caribbean on vacation. I was extremely disappointed and I did not hunt one day - what a joke this program with ranchers is. This program should be discontinued with these two clowns. They only want the bull tags so that they could sell them and they were more than happy to lie about offering access to cow hunters.

Comments concerning general elk management –

- We don't need to turn these quality units into what we already have an abundance of elsewhere. Leave it like it is. An increase in the herd will mean an increase in hunters in the long run.
- I think unit 201 needs to be split in half. The west half gets all the hunting pressure and the east end gets very few hunters. Leave cold springs in the west area. Maybe unit 201 and put a line from Hwy 318 north to Wyoming so that bears ears is in the east unit. That would make managing the unit a lot easier.

Comments concerning license costs –

- One of the biggest concerns is the cost of hunting licenses. It's time to look at the ethics and sport of hunting and not the economics.

DAU E-1 Public Meeting August 23, 2007

Comments taken at Public Meeting:

A total of 32 people attended the public meeting. Representatives attending the meeting included hunters, landowners, ranchers, guides/outfitters, Craig Chamber of Commerce, Utah Division of Wildlife Resources, and CDOW. Discussions at the public meeting were primarily based on elk population management. Concerns voiced at this meeting were directed at potential management techniques that could be implemented to reduce elk numbers.

- What is the habitat assessment for elk in E-1 (CDOW should base herd management on this)?
- Topography and land ownership would make an increase in harvest of elk difficult. Need to drop elk population through late hunts (January) if that is the objective. Increasing bull tags is not a good option and will result in decreased quality of bulls.
- Population too high and is over the winter range carrying capacity. Also, should alter unit 2 and 10 GMU boundaries and increase bull tags to increase opportunity for hunters. Can we open Dinosaur National
- Monument to hunting to decrease the refuge effect?
- Management scale too myopic. Need to manage E-1 elk herd on a landscape-level scale, rather than a political-boundary scale. Requires collaboration with Wyoming and Utah.

2012 Survey Results

Efforts to obtain a more representative sample of hunters, landowners, and applicants were made by conducting an online survey. The following summary of the 2012 survey results assesses public interest in elk management in DAU E-1. The 2012 online survey polled resident and non-resident hunters. In addition, a local public meeting was held at Lodore Hall in Brown's Park to obtain local input.

Survey Purpose and Intent

The purpose of the survey was to assess public attitudes toward elk management in DAU E-1, specifically in Game Management Units (GMU) 2 and 201. The Colorado Parks and Wildlife (CPW) is responsible for developing an elk population management plan for this area.

In Colorado, big game populations are managed for specific geographic areas, called Data Analysis Units (DAU). The DAU plan analyzes information for two primary decisions: 1) how many animals should the DAU support, population objective, and 2) what is the herd's most appropriate male to female ratio, sex ratio. The DAU planning process examines the biological capabilities, public preferences, and the socio-political tolerances for wild ungulate population for a given herd unit through a public process. An appropriate balance of each is sought and reflected in the herd objectives which are set for 10 years. Annual hunting seasons are then designed with the intent of keeping the population at or near the selected herd objectives.

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

In the development of DAU plans, results of surveys such as this one are considered along with other forms of input the CPW receives from land management agencies and the public, via public meetings, letters, phone calls, and testimony before the Colorado Parks and Wildlife Commission. All public input is integrated with other significant elements in making the final selection of a preferred alternative for population and composition (male/female ratios) objectives for the elk herd in the area. The Colorado Parks and Wildlife Commission makes the final determination on the herd objectives which will then be in effect for 10 years.

Methods

The target population for this study consisted of resident and non-resident hunters, private landowners, and individuals who had applied for a license or preference points for GMUs 1, 2, or 201 since 2009.

Questionnaires were designed to survey public attitudes towards elk in the Cold Springs DAU which includes GMUs 2 and 201. Over 2,000 postcards were sent out to E-1 landowners and hunters who had applied for preference points or a license for GMUs 2 or 201 within the last 3 years. Hunters were directed to a website printed on the postcard and asked to complete an online questionnaire administered by survey monkey.

Results

A total of 386 individuals completed the online questionnaire. Results from the survey are presented in two sections below. "Survey Highlights" summarizes the important results of this survey, particularly as they apply to the DAU plan objectives. The "Summary of Open-ended Comments" categorizes the additional comments received and provides insight into the main issues that people thought were important for the CPW to consider.

The Appendix provides the percentage of valid responses for each question, and the questions are presented as they were asked in the original questionnaire.

2012 SURVEY HIGHLIGHTS

BACKGROUND INFORMATION

- 1) Are you a resident of Colorado?
49.5% Yes
50.5% No

- 2) Do you live in GMU's 2 or 201?
1% Yes
99% No

- 3) Do you own or lease property in GMU's 2 or 201?
3% Yes
97% No

- 4) During the last 12 months, have you participated in outdoor recreational activities other than hunting (e.g., camping, backpacking, snowmobiling, etc.) in GMU's 2 or 201?
24% Yes
76% No

- 5) Which group(s) best represent your interests in elk management in GMU's 2 or 201? *(Check all that apply)*
5% A) Rancher/Farmer
2% B) Business owner
4% C) Landowner
3% D) Guide/Outfitter
98% E) Hunter/Sportsperson
5% H) Environmental/Conservation
3% I) Other, please explain _____

ELK MANAGEMENT (*Population estimates at the time of the 2012 survey were 1200 – 2000 elk; bull ratio 66:100*)

- In this survey, an increase or decrease in the population was defined as slight or great. A slight increase or decrease was defined as 1-50% and great over 50%. The majority of respondents to the survey expressed they would like to see no change to a slight increase in the E-1 elk herd. A total of 31% of the respondents expressed no change from the current population level, 36% would like to see a “slight increase”, and 14% would like to see a significant increase. Only 2 percent of the respondents would like to see a slight decrease from current population levels. Seventeen percent of the respondents had no opinion. Respondents had strong feelings about the change in the size of the elk population; the change in the population is “important” (41%) to “very important” (28%) to them.
 DAU E-1 is currently managed for a sex ratio of 35 - 40 bulls per 100 cows. People were asked if they would like to see a change in the number of bull elk in DAU E-1. Eighty seven percent of the respondents indicated they would like to see no change or an increase in the bull ratios in E-1. Five percent of respondents selected a decrease in bull ratios and 7% had no preference.

ELK MANAGEMENT

- 6) Overall, how would you rate CPW elk management in GMUs 2 and 201?
18% Excellent
32% Above Average
17% Average
5% Below Average
3% Poor
25% Not Sure
- 7) How would you like the elk population in GMU’s 2 or 201 to change, if at all?
0% Decrease greatly (over 50%)
2% Decrease slightly (1-50%)
31% No Change
36% Increase slightly (1-50%)
14% Increase greatly (over 50%)
17% Don’t know
- 8) How important to you is the change in the size of the elk population that you indicated in Question 1 above?
(Circle One)
- | | | | | | |
|------------------|----------------------|------------|--------------------|----------------|------------|
| Very Unimportant | Somewhat Unimportant | Neutral | Somewhat Important | Very Important | Don’t Know |
| 0% | 13% | 17% | 41% | 28% | 10% |
- 9) If you indicated that you would like a decrease in the elk population (in Question #8 above), what methods would you support or oppose to decrease elk numbers? (Circle one number for each item)
- | | Strongly Oppose | Oppose | No Opinion | Support | Strongly Support | Not Sure |
|--------------------------|-----------------|-----------|------------|------------|------------------|------------|
| Either sex licenses..... | 10% | 0% | 10% | 22% | 35% | 23% |
| Additional cow tags..... | 7% | 8% | 10% | 18% | 28% | 30% |
- 10) How would you like the number of bull elk in GMU’s 2 and 201 change, if at all?
5% Decrease
30% No Change
57% Increase
8% Don’t know

Elk Hunting

- 91% of respondents had hunted elk in Colorado for an average of 19 years. Of those, 46% had hunted elk in DAU E-1.
- The level of satisfaction with past elk hunting experiences was rated as 15% dissatisfied compared to 80% that were satisfied with their elk hunting experience.
- 44% of the respondents had hunted and harvested a bull in GMU 2 or 201. 51% had harvested a bull in GMU 2 and 49% had harvested a bull in GMU 201. Of the hunters that had harvested bulls from these units 30% had their bulls officially scored with an average Boone and Crockett score of 331.

ELK HUNTING

11) Have you ever hunted elk in Colorado?

91% Yes If yes, how many years? Average 18.85 years
9% No

12) Have you ever hunted elk in GMU's 2 or 201?

46% Yes
54% No

13) Overall, how satisfied were you with your elk hunting experience in GMU 2 or 201?

Very Dissatisfied	Slightly Dissatisfied	Neutral	Slightly Satisfied	Very Satisfied
5%	10%	6%	34%	46%

14) Have you ever harvested a bull elk in GMU 2 or 201? **Yes 44%** **No 56%**

15) How would you rate the quality of the elk you harvested?

27% Excellent
54% Above Average
16% Average
3% Below Average
0% Poor
0% Not Sure

16) In which GMU did you harvest your bull elk?

51% GMU 2
49% GMU 201

17) Did you have your bull officially scored? **Yes 30%** **No 70%**

If so, what was the official score? Average score 331

2012 Summary of Open-ended Comments

Survey respondents had an opportunity to provide written comments. Two hundred fifty five individuals provided written comments. These comments were categorized into 14 different sub-headings base on the content of the comment. All comments received are listed below.

Comments concerning elk population –

- I have just had a cow permit for unit 1 no bulls yet . It's been about 10 years are so since i have hunted a cow there. Elk are down a little in that Unit I think.
- I should clarify, I often help others (mostly youth) hunt elk in Colorado. I rarely have a tag because I enjoy helping others as much. However, I would like to see Colorado in their Limited Entry/ Trophy grows the trophy bulls (increase age class to 8- 10 yrs). Two basic options- 1) reduce the overall number of bulls taken on the unit, to increase age class OR 2) Increase the elk herd size which would allow same number of bulls to be taken, but allow more bulls to age. Colorado seriously needs to consider enhancing their trophy/ limited entry area such as even adding additional areas. I know DOW has tried, but seems to go nowhere fast.
- REDUCE COW HARVEST IN AREA 002 AND KEEP THE REST THE SAME
- The number of cows and calves has decreased greatly the last 3-4 years and I would recommend a reduction in harvest of at least 50% for a couple of years. The bull population seems to be stable. However, they obviously will show a decline with the current trend of declining cow/calf numbers.
- Game department is doing a good job. The horrible winter devastated the herd.
- Excellent archery trophy unit. I had opportunities to take several bulls in the 350 plus class, but just ran out of time. This is a rare trophy unit and I would not change a thing.
- I think it is done very well and would not like to see any increase in herd size, but would also like to see the available licenses and mostly the bull or either license remain low so that an individual has a chance on his own to get a large bull if they wait their turn for a license.
- In my opinion, area 201 is one of the best elk hunting areas in the state and I hope it remains so. I think the area is well run now and I hope that there won't be any drastic changes.
- I would like to see a late season bull elk season.
- It would be nice to manage for quality of the bull elk, not as much to increase the total number of elk, just increase the quality of the horns.
- I would like to see a slight increase if possible in herd size so a slight increase in tags might be possible.
- Keep up good work.
- I think the management strategy for this area as it stands is working and need not be changed.
- The primary reason we hunt in unit 201 is because the outdoor experience is outstanding. There are so few hunters in such a large area in one of the most remote areas of Colorado. Some years we are successful and some years we are not. But we always feel that we have had an excellent chance of finding and maybe harvesting an elk. We began hunting deer in unit 201 about 35 years ago, and are missing the opportunity

to continue to hunt for deer there. But we still feel as if we are "coming home" when we make our camp and have the opportunity to hunt in the northwestern most corner of Colorado. My wish would be that the herd sizes remain about the same and that the quotas of tags are not increased.

- Increasing the herd size will equate to more permits.
- Increase the herd size should give me one more time to enjoy that area, I have 16 points built up to try and draw again.
- Manage units to preserve and enhance a sustainable and healthy elk population with opportunities to harvest trophy caliber bulls. Limit cow harvest to minimum necessary to protect habitat.
- I think you have a fine program now.
- This is one of the best known "quality" area's to hunt in your state. Use a plan that maintains healthy numbers of good quality bulls.
- I believe that currently there are adequate numbers of elk in the Cold Springs and Douglas Mountain area. I currently have 11 preference points for unit 2 and wish I had a better understanding of how permits are awarded.

Comments concerning herd composition (bull ratios) –

- I also am concerned in regards to the ratio of the cows vs the bulls. When my husband drew his tag in 2010, we set up 8 game cams and found that there were many bulls, however, when we started to search for the cows, the large cow herds from years before were gone. We could only find a few scattered herds of cows and noticed an increase and alarming amount of broken horns on the bulls that were forced to compete for them. PLEASE, for the time being, STOP the cow hunt and let the cows increase again to a good breeding population
- The cow to bull ratio seems way off. I see many bulls and only small numbers of cows.
- I hunted with a friend and there appeared to be more bulls than cows, a lot of the better bulls had busted off horns. Not sure if this is from fighting so hard for the available cows, i saw way more bulls than cows. not sure if the answer is to decrease bulls or increase cows, but it was certainly not enjoyable to see that many bulls with busted off horns
- I would like to see more older aged bulls. Six years and older.
- I would like to see better quality bulls in these units.
- The elk herd has been vastly changed and the bull to cow ratio is completely changed. The cow season should be stopped because there are now so few cows, the bulls are having to compete so hard that their horns are being broken and they are being increasingly stressed from the competition for so few cows.
- Cow elk are getting harder and harder to find in unit one. Bulls are everywhere.
- During the countless weeks I spend in gmu 2 during the year, both in/out of hunting seasons. I have witnessed the decline in true trophy bulls (over 320 inches) although there is no shortage of bulls in the area. Ten years ago there were many more cows in the area and more trophy bulls. During many trips I am in the area helping ranchers and wildlife watching we typically see over 65 bulls in a 5 day period and not one cow. Hunting during the deprivation hunt on the Worneke ranch (Douglas Mountain) the past couple years has been an opportunity to take some great pictures but no cows. So many bulls harassing a few

cows leads me to believe a few more bulls should be harvested from this area. I have to say gm 201 has some awesome bulls! Great job DOW. 20 years is a long time to wait for a tag but what a reward when you draw.

- Do not see many cows in either area.
- I've been on several elk hunts with friends and family, and spend as much time enjoying the country throughout the year, in all three units. The last few years we've noticed a decrease in the number of cow elk, especially in unit # 2. We've observed as many as 5 broken antlered bulls chasing two cows during the rut. This tells me that the cow elk population is being poorly managed. I've heard the same concerns from other sportsman and outfitters familiar with these units. Thank you for the opportunity to express my concerns.
- I am also an Outfitter and have hunted extensively in units 1,2, 10 and 201 for the last 24 years. I have a very intimate knowledge of these areas, populations, habitat, migration and hunter wildlife movement, livestock dynamics, herd sizes and quality of bulls and bucks. Unit 2 cow elk needs to be addressed, this population has been reduced so far that it is affecting the bull and overall elk numbers dramatically. Currently from our observations there is 3 bulls to every cow with a total population estimated at 300 animals. We conducted many surveys of hunters, landowners, other Outfitters and the results were the same - There is a total lack of cow elk and populations have been reduced so far that it might ruin what there is currently there for an elk population. The common consensus among sportsmen and a few landowners is to quit killing cow elk altogether! Unit 201 elk populations are stable but decreasing, with all of the cow elk seasons between units 1,2,and 201 this population has gone down significantly. add top this the number of elk that are killed in Wyoming and Utah, particularly the elk that go north out of Colorado into Wyoming and this heard sees a lot of bulls removed from it. Quality on the top end is a concern, there isnt many leftover bulls in the 350 range to carryover from year to year and average bull sizes in 2011 were around 310. There is a fairly good size population of poor genetics bulls that have some sort of point distortion and bad qualities, it would be a suggestion to have a CONTROLLED harvest of some of these genetically poor bulls in order to increase the good genetics. cow elk hunts in 201 need to be reduced, there is a lot of disturbance with deer hunters in the 2nd and 3rd seasons. Overall population estimates are around 700 animals. Unit 1 hunting is a joke, aside from the elk that move in and out of Dickinson's fields there are very few huntable elk in the unit. Once the elk move from the bottom they go into the monument, this was still less than 100 elk total from august through October. some of these elk are unit 2 and 201 elk that move across unit boundaries. There used to be a fairly good size population in this bottom land but now it has been significantly reduced. Elk hunting on top of the mountain is tough at best, during 10 days of hunting snow cover on top of the mountain only revealed 3 elk total, 2 bulls and 1 cow, there is not nearly the elk population on top as what everyone would believe there is. It is amazing to me that There are 185 cow elk licenses issued in unit 1, if it is the objective to eliminate elk from unit 1 keep it up your doing a great job. Unit 1 deer, unit 2 and 201 antelope are following this same path of extinction as well. Unit 201 deer are on the comeback, this is the only unit in northwest Colorado that has an increasing deer herd, good job, thank you for keeping the license levels low and improving overall quality of the deer herd. If this population is allowed to expand and produce it will have a great benefit to units 1 and 2 and also the Utah and Wyoming populations, please don't mess it up.
- Lots of rag horn and genetically inferior bulls. Would be nice to get those genes culled out of the heard. Great idea would be to give out one extra rag horn tag with the trophy bull tag or with a cow tag.
- I think that if you draw a cow elk in these areas, you should be able to harvest a spike bull. There are just too many bulls in these areas.
- THERE ARE BECOMING TOO MANY BULLS FOR THE NUMBER OF COWS.
- Have noticed a sharp decline in the cow numbers in the last two years. Last year still had chances at cow elk, but, saw over 200 bull elk. As this is a trophy bull area, would like to see fewer bulls per cow.

- Should increase the cows in GM1 no one saw any elk when I hunted there 2 seasons ago. (Bulls too).
- I would like to see the management plan adjusted so that more bulls could be taken each year with a bit smaller size. I know that is not the normal view of a "trophy" hunter, but these areas are pretty much a once in a lifetime draw and if more tags were issued more hunters would get a chance to hunt these areas.
- The only concerns I have with hunting in GMU 2 is the fact that the bull to cow ratio is very high and I believe this is directly due to the lack of bull tags that are issued in the unit. I understand the reasoning behind it and mostly support the logic, however I would like to have an opportunity to harvest a bull. I would like to suggest a limited draw for bull tags that are strictly for non-trophy bulls. Maybe limit the rack size to no more than a 5x5, still protecting the mature herd bulls while reducing the competition from the younger bull population.
- The quality of elk was really good, but we only saw a few bulls and no cows. There were hunters there with cow tags that were not seeing any elk.
- The bull to cow ratio appears to be a mess. Hunted deer in this unit two years ago and saw probably 5 cows and hundreds of bulls. Several cow elk hunters had not even seen a cow by mid season. Some of the bulls also appear to have poor genetics based on the abnormal antler growth that was observed. Management hunts would cull some of the bad genetics from the herd. The wild horse population also appears to need a reduction as they are competing with the wildlife for available forage.
- Douglas Mountain Area- The number and quality of bull elk in this area appeared to be excellent. The number of cow elk during the first season was limited.
- My observation during the 2003 hunt in area 2 was that there were a lot of bulls and a low bull-to-cow ratio, leading to intense competition between bulls for the cows. Many large bulls did not have cows. The appeal of a trophy hunt was diminished due the antler breakage of most bulls, long before my hunt commenced (I held an early October rifle tag).
- My buddy drew a buck tag for Unit 2 last season, I helped him scout and spent several days glassing for him during the season. We saw more elk than deer and every elk we saw was a bull.
- Keep the big bulls. Don't make any drastic changes from current management.
- Alternatively, there could be a stipulation like British Columbia has had in place for many years, that only mature bulls 6X6 or better could be harvested...this would result in enabling younger bulls to reach their full potential before being harvested & concomitantly ensure better genetics.
- I would like to see trophy quality improve and elk numbers increase
- Trophy quality of the bull elk in this herd is very important to me.
- Cut Antlerless Elk tags
- The Elk population should increase in Cows and decrease in Bulls. My brother and I have personally seen over 50 Bulls in one day! There are numerous days that you won't see 1 Cow. We believe this is having an effect on the Cows, because of the number of Bulls. We hunt on the Warneke Ranch that has Bulls on it all summer and into winter. Not one cow have we seen on this property in 10 Years. The surrounding BLM and the Border of Dinosaur National Monument have not produced many Cows Either. More bulls must be harvested out of this area. We have not seen the trophy Bulls on Douglas Mountain that were there 10 years ago. We spent some time in unit 201 this year and saw some magnificent bulls there. Nice job there, but

still did not see the cows that should be. Maybe a special season for 4 points or lower would help reduce some of these issues. I understand that shooting a smaller bull, that someday may be a trophy is not the best scenario. But to educate hunters to know which Rag Bulls to be taken is impossible. We enjoy seeing the Bulls everyday but when you have a Cow tag it can be frustrating. Maybe instead of the Cow deprivation hunt it could be a Bull deprivation hunt for a couple years.

- I believe it is difficult to manage proper numbers of elk, due to the refuge that can be found in the Monument lands. While I don't know how many elk should or should not be there, it was difficult to find a cow elk in the first season of 2009, when we hunted. Seems there are good bull numbers, which is nice to see. In talking with a ranch owner, we heard that cow numbers were thought to be down. However, we saw many on land that was not accessible. Monument land down by river, which, they stayed there un-bothered.
- The bull to cow ratio is higher, by far, than other areas throughout the Western US. It is almost more difficult to harvest a cow in the cow hunt seasons, as opposed to harvesting a bull in the early season.
- There are too many cow elk licenses offered in this DAU. This results in over hunting of the cow elk in this DAU and it also provides a mechanism for poaching to occur by allowing more hunters to enter the area with weapons and shoot bull elk without the proper license to harvest a bull. I realize that asking for a reduction in cow elk licenses in this DAU is more than likely not what the private landowners in this DAU want. However, I feel that the revenue that is realized by these landowners for their set aside landowner bull vouchers, more than compensates them for any depredation that they are experiencing from elk. The landowner vouchers in this DAU are the most expensive bull elk vouchers in the state, because of the quality of bull elk that are present.
- There are very few cow elk in these game management areas!!! The Quality of Bulls in these (Trophy) areas has dropped significantly over the years. There are way too many insuperior bulls running around breeding what very few cows are left in these units. Not to mention, you allow the rifle season to start right in the prime of breeding season. I think there could be a lot of changes made to these units to get them back on track to become the High Quality Trophy units they once were, starting with getting the cow elk population back up. Also with managing the bulls, by allowing the harvest of bulls that will never be shot in these areas. You don't put in for an area for 15-20 years to get a chance at going on a hunt and see 50 bulls you will never want to shoot and 5 that you do and never get a chance too. This gives the Colorado Parks and Wildlife a very bad reputation. These units should reflect the high quality and standard they were once were, but they aren't. When I got the chance to go on my hunt, I saw at the most 60 cows and 200 different bulls over a 5 day span. We never did see a group of cows over 10 animals. I also saw a lot of bulls with what we call "bad genes" running around, that i never did shoot. I feel like I wasted my time putting in for this tag. I can kill a bull like that in any unit that is open to the general hunt.
- The herds are large and can be thinned a bit. I'd like to see additional licenses issued for cow elk during the regular rifle seasons.

Comments concerning access –

- Access is very difficult and there is a small population that comes in and out of the monument and Utah but it is less than 100 animals.
- Access to some of the areas that we used to hunt are now private too. Fair pursuit has given way to big dollar hunts on lush, inviting living conditions and safety.
- I think the state should work towards more access thru private land, a land trespass permit to reimburse land owners.
- Land access is great in 201.

- Also they should put better signage up since you cross state land that can't be hunted on I believe. The land that the road crosses is very confusing as to what's open to hunting.
- Too much private lands that block access to millions of acres of BLM land.
- I would like to see access to public land increase.
- The year I drew my tag was also the first year that "Hunters Domain" was controlling access. I was unwilling to pay the trespass fee and did all my hunting on BLM land.
- I applied for 19 years to draw a tag in Unit 1. Unit 1 was not what I wanted. I wanted 2 or 201 but seemed as if I would never draw so I chose to hunt unit 1 and move on. No quality bulls were sighted. Haying operations scared the elk from the area I intended to hunt. Private land blocking access from the Utah side made the hunt difficult. Angry private landowners and Utah guides illegally blocked my entrance to Colorado Unit 1 by locking gates and posting public roads. I had to get the BLM people involved to gain access...losing valuable hunting days I had waited 20 years for the opportunity. The hunt _____ insert adjectives and expletives not fit for typing! I am a guide and outfitter in Alaska and in Kansas. I know of what I speak.
- I think it is important to work with the private land owners in the area to gain access for the public during the Dec. cow season. Some years there is limited access due to the weather.
- I would like to see better access to state owned property in GMU 201. I have hunted this area for over 25 years & access from the local landowners seem to always be an issue, mostly because it is a trophy bull area & the landowners are getting a lot of money selling their landowner tags & therefore restrict public hunter access whenever they can. This issue has gotten worse over the years.
- The hunting used to be great. Over the past 5 or 6 years, commercial guides have saturated the unit during the bull season so that they run almost all of the animals into the Monument. The herds are there (I see them in the pastures during the summer), but by the first cow rifle season, they are well into the Monument (where you can see them but cannot hunt them). If you truly want to manage the cows, you should either limit the bull hunting or open the Monument to cow hunting.
- I would like to see a spike bull hunt offered for a few years as I see a lot more spikes than I did a few years ago.
- Your private land hunt is a joke. The landowners lock their gates to us public hunter contrary to what they promise. I have written in before concerning this matter but there has been no action.

Comments concerning elk and livestock competition –

- We have also seen the grazing increase and when we were up there in 2010 we saw a rather interesting grazing pattern put into place that seemed to "herd" the elk into private hunting areas just before the main rifle season. They moved their cattle through Diamond and Middle Mountains from the east to the west and the elk seemed to move before the cattle and the private was never used for grazing by the private ranchers, but the public land seemed to have a huge quantity of cattle on it. I may be wrong but would be interested to see if it can be monitored for a few years to see if abuse is happening.
- Also, there seems to be an overgrazing problem from the 2 main cattle ranchers that have access to this unit. For instance, in our Craig paper, Saturday 4-14-2012, there is a write up on how this rancher in ten years went from 700 to 2600 cows, and I have seen it with my own eyes (where are the BLM range managers)

- Too many hunts, lookey loos, and cattle being turned in the hunting area at the time of the hunt.
- Less cattle usage would be good as well.
- Please do not let the larger ranching interests in the area negatively impact these elk units. The large fires that have occurred in these units, particularly in the rough country, has created ample forage for both elk and cattle. Much of the forage created is inaccessible to cattle grazing.

Comments concerning hunting experiences –

- I have hunted in unit 2 since the early 90's. I was fortunate to draw a bull tag in 1994 with 2 preference points during your muzzleloader season. At that time the herd was impressive. I settled on a 2 1/2 year old 4x5. Since that time the draw system in that unit has been impacted greatly and I expect I would not live long enough to ever draw a bull tag again. I have taken 3 cows after that time out of unit 2. It appears that the herd now spends most of their time in private ranches where we have seen up to 300 elk at one time. They refuse to leave their feed, water and habitat...can't blame them with the safety of private property. We actually took one year off as we were not drawn and last year I decided to hunt another state as we (my party) decided to just put in for a preference point on the Unit 2,3,11 cow hunt again. We hunted two years ago on the special rifle draw for units 2,3,11 for a couple of weeks, but only saw elk on private property.
- My hunt was a rifle elk tag and it was by far the worst hunt I've ever been on I wish I could get my points back. Opening morning there was a hunter under every tree and people floating down the river in boats. I spent the rest of the season on foot walking at least 25 miles and never saw an elk. There are no cows anywhere anymore. I've been hunting out there for at least ten years and I know how good it used to be but now that the DOW basically allows year round cow hunts out there the hunting gets worse every year. There are hardly any bulls and instead of all the nice 300 plus bulls that used to be there are little junk rag horns. I would love to get my points back and use them somewhere else other than your so called trophy unit I waited 13 years to draw and even hardly saw an elk.
- I have hunted unit 2 a couple of times over the years. Once in 1986 and once in 2009. I harvested bulls both times with a rifle. The first one was a big 4 point and the second one in 2009 was a big 6 point that scored 340. My 2009 tag was a landowner tag. In 2010 I spent my points and hunted unit 1 with a muzzle loader. I scouted a week and hunted a week. This is a very hard area to hunt. I hunted the BLM in the south and encountered a lot of cattle. I also camped in Utah and walked into the west side of the area for several days seeing some good bulls in Utah but not CO. At the end of the hunt I was hunting Browns Park National Wildlife Area and south. I saw several good bulls on private in the extreme NE corner of the area. Could have shot a couple of 300 - 320 bulls but was holding out for a 350 bull that was hanging around a private alfalfa field. All in all a very frustrating hunt. I would not hunt 1 again.
- I've small game hunted in the area while a friend elk hunted in 2008. It was a fantastic experience for all of us, even though my friend didn't get an elk.
- I think the boundary for GMU 1 should be moved. GMU 1 is small and the elk are concentrated in a small field. The elk swim the river into GMU 2. Very frustrating. Possibly extend boundary across the river. Only one access.
- The 2011 archery elk hunt in Unit 201 was the most enjoyable hunt that I have ever been on. I saw 5 and 6 point bulls every day along with many deer and antelope. I spent 21 days on my hunt and even seen two cougars and a bear. It took me over twenty years to draw this tag and it was worth the wait. The most negative thing about this hunt is the wait for a tag.
- My bull green scored at 347 (6X6) but I never had it officially scored. It was a great experience to be able

to hunt 201 even though it took 17 years to pull a tag. Seeing the abundance of bulls in the trophy class during a hunt was a great experience.

- I would rather accumulate points and have a better than average chance at a big bull than fight the "orange army" of hunters for a small bull. I respect greatly what Colorado has been able to do with their deer herd.
- I think the year was 1996. I enjoyed the hunt very much.
- I have hunted mule deer in 201 in the past and I was very impressed with quality of elk in the unit.
- Hunt of a lifetime. (And not only because it took me 20 years to draw a tag!) We saw many more bulls than cows. I'm not sure if that's a reflection of the overall herd or just the area we were hunting.
- 201 has the best and most pleasurable hunting of anywhere I have hunted whether with a rifle or camera. Don't mess with something that isn't broken.

Comments concerning general elk management –

- From my experience Colorado Parks and Wildlife has done an exceptional job of Elk management in Unit 2.
- For what my opinion is worth we need many more specified units in Colorado on the western slope especially, to take the pressure off the other premier units.
- I hope to hunt trophy bull elk in unit 2 or 201. If the management changes then we will be hunting average bulls like the rest of Colorado. Don't manage this area to try to please the 50 year old guy who thinks he should be able to kill a 370 bull elk off his 4 wheeler, and because he is behind in points it's not fair, and CWP owes him that elk. I know several people who have waited for a couple of decades to draw this tag and if it changes, it's like pulling the rug out from under then midstream. If i want to kill any bull elk there is ample opportunity to do that in many over the counter areas. Thank you for doing a Great job with these areas. I think it is great that there is a place that has that caliber of elk to chase. If the demand is that high to hunt trophy elk make a few more areas limited and I believe it would take the pressure off the Northwest corner. Colorado has the potential and genes to grow great elk they just do not live long enough to see that potential. Thank you.
- Have also harvested cow elk in 201. Elk in 1, 2, or 201 may really have "C" on one flank, "U" on another, and a "W" somewhere else too! If neighboring states have opposite or contrary herd management strategies there could be a huge conflict and loss of resource.
- Known as the best area in Colorado for trophy elk, I would like it to stay that way even if that means less permits. I would also like to see less hunting pressure on neighboring units.
- It would be nice to see Colorado, in general, manage a few other units for larger bulls as 1, 2, 201, and 10 are managed. These NW Colorado units are very hard to draw, largely because of the lack of trophy units in other parts of the State.
- I have never been hunting in these areas, but do know that through the was that Dow has managed these areas that the opportunity to harvest a true trophy caliber elk is good. When you have to wait for 18+ years to draw a tag, most don't just shoot any animal. Kudos's to DOW for keeping some areas as true trophy areas.

- Elk hunting in this area is extremely limited and is essentially a once in a lifetime event. Although the management plan is designed to create a greater population of trophy animals, and has largely succeeded in that endeavor, the hunting opportunities for the public are severely limited by the implementation of this management plan. I would like to see an approach that maintains the trophy management aspects on the current plan while working to gradually increase elk population and increase public hunting opportunities in these GMUs. The recent development of hybrid hunts is a step in the right direction but the overall impact to public hunting opportunity is minimal.
- I think the management of elk herds in 1, 2,201 is a testament to sound management. Also proof that we don't need more ranching for wildlife to accomplish quality elk hunting in Colorado.
- There is a phenomenal amount of elk in these units.
- Do not put too many limited entry tags out and ruin the hunting area like Utah has. Keep the quality/age of bull elk high.
- AS A NON RESIDENT I HOPE YOU CONTINUE TO MANAGE THESE UNITS FOR THERE TROPHY CAPABILITIES. I HAVE 18 PREF POINTS AND WOULD HATE TO LOSE MY OPPORTUNITY AFTER ALL THESE YEARS.THANK YOU AGAIN,
- The landowners of this area that I talked to seemed to think all of the elk were their animals. They drank their water and ate grass off of their fields, therefore the elk are the property of the landowners. I even had an instance where I was hunting on BLM land and the landowners drove the elk herd off the BLM land with their ATV before first hunting light so they could shoot the elk in their property where their tag was good but not on the BLM land. I later talked to them about this and they fully admitted their purpose to me and they stated it was within their rights. With this attitude I do not know if you can ever manage the elk herd effectively in Unit one.
- Always manage for quality not quantity the difference between the L and the N is very important in that statement.
- CPW is doing a great job managing elk in 201
- Just when area 1 is getting back to being a good bull hunting area, you issue the ridiculous pilot program tags, and then extend the cow hunting season into forever, putting too much pressure on the elk and driving them out of the area. I talked to the game warden that patrols area 1, and he convinced me to not waste my preference points, and apply somewhere else. Why don't you open the area north and west of Craig to limited trophy bull hunting? I know the guides/outfitters and motel owners would not support it, but we could have some of the best trophy elk hunting in the US if you would manage the herds near Craig like you do in 1,2 and 201.
- I agree with current management practices, would like to see the herd size increased, which in turn would allow more tags to be handed out. Other option would be to take 2 or 3 other units in the state to make them similar quality so drawing tags wouldn't take so many years to draw a Colorado premium unit.
- I really think that the Quality of the hunts are great. The antler size of the bulls is above average and the access is great. I hope that you don't change anything. I would also like to add that it is a great place to take my boys and show them some different elk country and some big bulls. We, as a family will travel out there to go camping in the summer, just to ride atv's and look at all the animals. We are always on the roads and don't abuse the privilege of being able to use this great public land.
- I haven't hunted myself, but accompanied my dad in unit 2 in 2007. I was impressed by the quality and the quantity of elk there. I think it's great that Colorado manages some units for

trophy potential as it is done here, I wish it was done in a few other units and Colorado would take those management techniques to other areas and balance the state on a quality vs quantity system.

- More mature animals need to be managed for
- I like the idea of units that are managed for quality elk herds. Sadly, in Colorado there are not enough of these units and point creep has made it more difficult to draw tags in quality units. I know that the cold spring and Douglas Mountain area are special. Keep up the good work. Jim Nickel
- CPW is doing a great job and without them, wouldn't have the game we have.
- Great units! big animals => hard terrain though but worth it.
- I have hunted deer in GMU 201 and seen many nice bull elk. This created my interest in hunting elk in GMU 201. I think the management of the elk herd size and the quality of bulls is excellent.
- I hope a few more "trophy" limited draw units for elk are in the long term plans.
- These units are awesome and I hope to draw this year and I feel the d.o.w. does a great job keep up the good work!
- Saw a lot of elk in 201 when I had a cow tag back in the '90s. Saw a number of mature branch-antlered bulls.
- Unit 1 is geographically isolated from units 2 and 201 and should be managed accordingly. Wildlife populations in unit1 are probably influenced more heavily by what happens in Utah than in Colorado. A moderate reduction in bull/cow ratios in units 2 and 201 might result in better antler quality (fewer broken antlers) in the bigger bulls; in addition to less time/energy spent chasing satellite bulls and more time slipping the high hard one to their respective harems!
- My bull has a "defect" where the right pedicel is forward closer to the eye than normal and the main beam hooks out over and in front of the eye. I have since learned that many of the bulls in the area have this same trait. Some locals told me this is because there are too many bulls in the area, but I don't know if that is myth or fact.
- I believe it is important to have some units managed for quality and to provide a more natural hunt. The (3) units mentioned should continue to be managed for quality not numbers.
- Keeping this area as Trophy elk hunting is worth the wait.
- The question is how do you maintain a high quality hunt in these units with a large demand from the public applying for licenses? 1. Improving the habitat to increase elk numbers would be one way. 2. Another idea, better education the public on other quality hunting areas like these. This may better balance the points needed and chances to draw a quality hunt 3. Here is an out of the box idea, make available cross species points combining to apply for one species application, ie, goats points 4 plus 3 deer points could be applied for 7 elk points. There is no single or simple solutions to managing the elk in this area, but whatever you do, do not reduce the quality of this area. These units are too important for some many different people to enjoy. I would be open to providing more input on ideas you collect or addition information you need. Best of luck Ron Dudley

- I want to see a quality bull hunt to remain in these units with high bull/cow ratio and plenty of mature bulls
- Interested in maintaining present type of herd structure with good bull/cow ratio with plenty of mature bulls
- This may not be of any interest for this survey, but I wanted to give a thought to Elk Management in Colorado. The 3-Management units in this survey take so long to draw it is very discouraging, but I understand the need in order to produce trophy game. I would like to see some other areas that would become limited draw areas to increase the quality of Elk, but with not as high of point requirement. That way there can be levels of quality units to choose from with a variety of wait times to draw. It would lessen the wait time for these three units if there were other quality units to choose from. The new units would be attractive because the quality of game would be in line with the lessened wait time.

Comments concerning license costs –

- Don't raise your prices again.

Comments concerning hunter crowding and poaching –

- It was also hard that the sage grouse season was allowed in those areas during the archery season. It took my husband 16 years to get his tag and he had to deal with a large population of hunters with shotguns while trying to find the elk who were running from them. It might be nice to stop those hunts in that special draw area too.
- A person waits to draw for 15 to 20 years and then a person finally draws and they have to contend with bird and cow hunters in the same season. The big bulls after the first few days head for private ground or the monument.
- All in all 201 is perhaps one of the best units in the state for cows, fewer tags means less hunting crowds. But it's an every other year draw now, and very difficult to draw as a group of 4 or 5.
- I have accompanied my Dad on a hunt in that area, and we found plenty of bull elk. But there were a lot of cow elk hunters; too many! Every time we found a herd and started bugling them, and getting close, rifle shots would ring out and cow hunters across a ridge were shooting at our herd. This happened more than once. It was so so so disappointing, that he finally drew the hunt of a lifetime, only to go home empty handed due to way too many cow hunters.
- I strongly object to people having cow licenses in the same season or time frame as someone with a bull license that took them 20 years to draw.
- The archery and muzzleloader seasons should not coincide that puts double the hunters in the units at the same time.
- Seasons too short, thus too much concentrated pressure on Elk and other hunters.
- Because of the remoteness of the Cold Springs / Douglas Mtn DAU and the presence of older age class bull elk, poaching of mature bull elk in this DAU is a recognizable problem. I would like to see additional funding spent on CPW patrolling in this DAU to protect Colorado's resources. Because of the geographic

location of this DAU, the bull elk in this DAU are experiencing poaching pressure from Colorado, Utah and Wyoming.

- We went to photograph some bulls the night after I had harvested a cow in the same valley. We saw a hunter come into the valley and set up so we stayed on the ridge back from the game trail. We were able to watch the hunter harvest a magnificent bull that walked within 40 yards of us. The hunter had no idea that we were there until we walked down to congratulate him. He said that they had watched the herd the night before from up on top and had heard a shot when I had harvested my cow, but had not seen us. That is the closest thing I have seen to hunter interference in the six years I have been in unit 201 for the Sept. hunts.
- Drew a muzzle loader tag in 2010. Weather was unseasonably warm. Scouted 12 weeks in a row prior to season, found several 340 and above bulls. Once season started the cow hunters swarmed the area. Saw VERY FEW cows the entire season. So you have cow hunters chasing the same elk that took me 13 years to get a tag for???? I hunted every day of the season, hard. Never had a shot at an above average "trophy" bull. Took what I thought was a "management" bull on the last evening. For the effort that I put into the hunt, I was disappointed in the results, but had a great hunt. Another important point I would like to bring up is I saw several (30 plus) obviously mature 5x5 bull elk. I mean herd bulls that were only 5 points. There is nothing wrong with a dandy 5 point but we all know everyone that hunts a trophy unit is looking for that giant 6x6, and therefore they leave the big 5's and kill the 6 points. Whats left to breed your cows?? Spreading the 5 point gene. What would be wrong with a later DOW managed 5 point cull hunt? The lack of cows also concerns me.

Comments concerning antler shed hunting –

- We used to be able to shed hunt and have relative success later in the spring and now it is hard to even see an elk, let alone find a shed as Wyo and Utah have begun to regulate their own shed seasons, causing those shed hunters to move over to our state much earlier and in essence "clean" us out before their season has begun. I am concerned as to whether by their increased activity, they don't actually force the few herds we have into their states by the overwhelming activity in the corner of ours. We haven't wanted a shed season, however, if this is going to continue, please make a season, and charge the out of state people for a high priced tag so at least there will be some income into the state for the loss that is happening now, and by doing that, the animals can have a little peace to boot. When we see elk, we don't chase after them in hopes of a horn drop, but I am not so sure of others.
- The latest one, right now, which don't get me wrong, I do it and love to do it too, but the shed hunting issue has gotten way out of hand. Wyo has a shed season, Utah is talking about one, and between the 2 states regulating their shed hunts, it has cause the people from there to come to Colo and overrun our state way early. They chase the animals all over with foot traffic, snow machines, atv's etc. until they are able to return to their own states when their seasons open. We should regulate our state as they do so that the animals can have peace in the spring .
- We also need to reduce the disturbance form antler hunters and have a May 1 opening date to coincide with Utah and Wyoming to keep the animals from getting stressed and disturbed during the late winter and spring.
- I think shed antler hunting should be on some sort of draw system in these units and only allowed in the late spring.
- If you would put a fee on out of state horn hunter you would hopefully see an increase on less damage to our land and animals! Limited dates and fees would also help with your funds that you so greatly need! Other states do it why haven't we done everything we (Colorado) can to help put the animals and landowners. Check points would help out also.

Comments concerning preference points/hunter opportunity –

- Currently hold 21 Elk preference points, would have drawn the tag for a Bull Elk if Colorado Parks and Wildlife had not changed the non-resident allocation of tags from equal against residents based on preference points twice to its current level of 20% maximum to nonresidents.
- I have applied for the unit 201 for the past 15 years, and if I do not get accepted soon, I will be too old to hunt elk in that area. If I do not draw soon, I will not be paying for application fees toward Colorado Parks and Wildlife, and I'd like my previous application fees back if I will never get this tag while I'm still alive.
- I would like to see that you quit changing the rules for non residents who are trying to draw. I tried to draw for the ranching for wildlife areas and had accumulated several points. Then the rules were changed excluding non residents. The quotas for NR's are down to 20% for 201. Additional changes will increase the chance that I will die before I ever draw. Just make your rule changes apply to all new applicants just starting to accumulate points. I see this as a once in a lifetime opportunity only if you live long enough. My 22 points will hopefully get me there.
- I think it takes way too long to draw a resident big game license in these areas, it has been 18 years or so since I last drew a license for unit 2 bull elk, I live in Moffat County and think local residents should have a preference.
- Increase the tag allowance for non-resident hunters. Ranching for wildlife should allow public access when a tag is drawn and landowners should be helpful in accommodating the harvest of an animal. The system is set up to make the landowner money from the animals. Landowners in these areas now charge up to \$25,000 to hunt elk and \$ 5000 just to trespass. The majority of the land is privately owned. This needs to be changed/reviewed.
- I believe there needs to be areas that have incredible elk hunting. These areas have it . It would be great if there were more animals and the same class of trophy elk hunting to allow more licenses
- Now, I will probably not be able to hunt big game in Areas 1, 201, or 2 ever again because the preference points needed keep growing faster than I can accumulate points for elk, deer, and pronghorn. My father, who is 77 years old, will likely never hunt there again, even though he is currently in great health. Once again, we used to hunt there regularly (probably with over-the-counter licenses) prior to 1993 and DOW turning it into a "trophy" area. There were trophies there before DOW changed it into a "trophy" area. I hunt for the meat, for the camaraderie with my father, because I really enjoy hunting and being in the outdoors, and because I really like that area, NOT FOR TROPHIES. Trophy hunting has ruined the area and probably has denied me big game hunting access there for the rest of my life (I'm 53 y.o.a.).
- From everything I read these units have been well managed for the production of trophy bull elk, and I believe the bull/cow ratios are promising in terms of successful trophy hunts. I have been applying to hunt (or obtain a preference point) for 22 years. My concern is not as much about management of the herd as it is about the difficulty in drawing a tag to hunt in these units. I am completely opposed to the new hybrid draw, and wrote letters to that effect to the DOW commissioners when it first came out a couple of years ago. It is totally unfair to those of us who have been applying to hunt for so many years to issue tags to some hunters with as few as five points.
- My main concern is the difficulty of drawing bull tags in these units. I have 15 preference points and doubt I'll ever draw the way the needed number of points keeps going up. I don't have an answer, though; understanding that permits in such quality units are in great demand and to make more tags available would reduce this quality.

- I believe you should put units 1,2 and 201 in the same unit when it comes to harvesting cow elk. The elk move back and forth all through these units.
- Please no cow elk hunting during the draw bull elk hunt! Change the lotto draw to the top 25% of one's putting in for many years.
- It took 14 years for me to draw in this Unit I hope it doesn't take me and my wife that long to draw again, great country great experience.
- The management is not the issue. The issue is now that I am a nonresident with 18 points, I virtually have no chance to draw any of these units in the foreseeable future because of the draw system in place.
- I think it takes too long to draw for this area. I would like to see more opportunity to hunt, but maybe shorter periods so more people can participate.
- The only suggestion I would make would be to allow a higher chance of drawing a tag for this location or to use the same management philosophy in other locations within Colorado so this experience can be extended to a much broader number of hunters.
- Since I'm a non-resident I wish you would up the non-resident quota every other year taking a permit or two from residents then giving them back to the resident applicants the next year. Not changing overall quota but allowing more chances for non-residents who have been diligent at putting in for so many years. Seems like the number is always getting higher and not stabilizing say around 18 to 20 years. It would help avid sportsmen plan and see light at the end of the tunnel.
- Can't seem to draw. Agree with the way it is going.
- Much toooooooo long to draw a tag. Seems you may be more interested in the big bucks (\$\$\$\$\$) of out of state TROPHY hunters than we residents who LOVE to hunt and LOVE our state but do not have the big bucks for Ranching for Wildlife and the Trophy areas of this survey.
- I would like to see the Hybrid Draw go away because it took licenses away from hard to draw areas that some of us have been putting in for 19 years. Maybe have CPW try another year where they split your points again and put in for an area and use only the points needed for that area like they did a few years ago. Then you could go to a couple different areas for maybe two years.
- It takes a long time to get drawn for bull elk. That's okay because it is a quality hunt. However, I don't like the "Hybrid Draw" for unit 201. In my opinion the Hybrid is great for those who get drawn but it makes my wait that much longer. It took me 17 years for my first hunt in 201. However, the wait this time will be much longer, especially for a non-resident.
- The opportunity to draw a bull elk tag in the units is disappointing, as every year the required number of preference points goes up, so you can never make up any ground on the drawing. Now preference points are required to draw cow tags in 201. Tags seem to be somewhat limited and the herds move between Wyoming, Utah and Colorado.
- More tags for cows, and a random drawing for Bulls, instead of 30 years of preference points. I'll be dead before I ever draw one of those coveted tags.
- Preference points are a problem. Private land licenses should be used on private land only. Non-residents should get half of the licenses, should be a fair shot.

- I think that in state people should have a greater opportunity to draw a tag, but 20+ years for an out of state permit is rather lengthy. I will probably be too old, by the time I draw to make the trip.
- If you hunt a cow for 10 to 12 years in the same unit it would be nice to get a bull license at the same time as your group number. It would be like preference points.
- I am non-resident and have never been able to draw any special draw tags that I have been putting in for many years. I continually put in for the areas in Northwest Colorado because of the trophy quality.
- I think it is great that it is difficult to draw a tag in any of these units. This is essential to keeping the elk in this area so desirable. Given this, I would still like to add that I would not like to see the preference point quota get any greater than it already is; waiting 18+ years to hunt this area is a very long time.
- Would like to see more archery tags!
- I don't want to see the management of these units change after so many hunters have put most of their life into getting the chance to hunt these units ONCE...it would be a crime to change the rules yet again on hunters as Colorado has done a number of times...and make sure you understand that that pisses the hunters off...mostly non-resident...
- I would like to see more opportunity to Archery hunt in these units.
- The addition of the "hybrid" tag was good so that at least there is a chance at pulling the tag despite the point creep. Not sure I like the 5 point minimum though as my children have not chance of drawing having just started hunting. CO has plenty of "opportunity" hunts many of which can be drawn for few or no points so no need to add more and change the few quality areas that are there. Helped a friend harvest a cow on the muzzle hunt in unit 10 last year and it was an awesome experience for him as a first time hunter. I'm sure he's hooked and that another hunter has been added to the ranks.
- I have been putting in for 201 for 15 years, would just like to hunt there soon so I can start hunting other units.
- I think we could increase the total number of bull tags by a 1 or 2 tags in each of the weapons without any detriment to herd quality or trophy size of bulls but overall in my opinion the current quotas are very good for trophy/herd quality and quantity.
- I would like to have an opportunity to hunt in these 'trophy' type areas for bull and buck without having to wait 15+ years for preference points. The competitive nature of these tags are turning them into once in a lifetime hunts for many of us that have a few years on us.
- It would be nice to see a couple tags issued in the random draw for these units. Colorado is the only state out there where you have no chance to draw a tag unless you have max bonus points. I realize this is great for those with max but I think you should look into issuing tags in the random draw. I hope to have the opportunity to hunt these units for archery bull elk once in my lifetime. I have 15 points and I am not sure I will ever be able to draw the tag.
- I have applied for 19 years and still waiting. I pray for points banking again. It allowed my friends and I to hunt two years in a row and utilize all of our deer points. Win win.
- I have 17 points for elk and my brother has 17 points, my father has 19 points and I don't want to see hunters who have a smaller amount of points should not be allowed to hunt before us!

- I'm a non-resident elk hunter who has hunted many years in Colorado and I did apply to hunt 201 last year and with years of saving pref points did not draw. I will not try this year but will apply one more time for the 2013 season. I have lost confidence in the pref point system because of the CPW moving the goal posts for us. I think there is something wrong in a program that if you save points for 20yrs you still can't draw. Hopefully if you make more changes you won't cut our odds of drawing even further.
- I've never been able to draw a permit in these units and probably never will. Always takes more than I can accumulate. Go back to the system you used for only one year where only the points are taken to draw for the area for which you have applied.
- I currently have 21 points and will put in for a draw again this year for Unit 2. You seem determined to keep reducing my chances of hunting in a trophy area. Just about the time I had enough points to draw a ranching for wildlife tag you limited it to residents only. Now recently, as I get closer to drawing in Unit 2, you have further limited the percent of out of state licenses, and even worse have now started to allow hunters with even lower number of points to draw into the unit. If you are trying to deter out of state hunters, you are doing a good job.
- Do not increase the tags, keep this area limited draw for a quality hunt. We hunted 201 in 1990 and it was great to be able to hunt without other hunters bothering you. We have 21 PP now and hope to hunt here again before we are too old to enjoy the hunt. It would be more fair to give the tags equally between residents and non-residents so everyone has the same chance.
- I hope you don't change the preference point system. People have been putting in for years in hopes of hunting one of these premier units.
- The reason I have not hunted in this area is I have not drawn a tag yet but understand it will take some time to obtain one of the coveted Bull tags for the area I wish to hunt. I like the idea of having quality hunting areas and am willing to wait for the opportunity to hunt a specific area with quality opportunity.
- This suggestion is for us hunters that have supported Elk hunting in Co. for many years and continue to do so, Many of us hold preference points for elk in Co. with little chance of drawing these units because every year it takes more points to get drawn..I think Co. should at least allow hunters like myself with more than 12 preference points for elk the opportunity to purchase another A list tag in the form of OTC archery either sex and still be able to purchase an OTC rifle tag in a later season providing they don't fill the OTC archery tag..Hunters with this privilege would be responsible for checking in there archery kill either by phone or to the nearest DOW office..This is a way that Co. could reward those of us with 12 or more pref. points that have been saving for years ! PLEASE take this into consideration.
- I have been saving preference points for elk to hunt 201 since the 90's. I am no closer to drawing now that I was then. I just hope to someday draw a bull tag before I die.
- The only thing I don't care for is the fact that I can't get a bull tag in unit 2. I've been hunting for 7 years and I'm looking at 22 points to get a tag there now. By the time I have 22 points I'll need 35 points. There's no way ill live that long.
- I am disappointed in the Non-Resident opportunities in these areas. II 20 NR PP and due to my age will never have an opportunity to hunt these units with a firearm. The change several years ago on the distribution of tags as it relates to res vice non res killed that opportunity. Very disappointed. I would like to see the tag allocation for these units increased. During my time in the unit I think the unit could deal with 20 more bulls harvested.

- I am saving my points to hunt in this and other areas where I believe the bull ratio is higher than average. The state needs to preserve as many units to over the counter as possible. My biggest concern is losing more and more over the counter hunting areas, so I hope this isn't the purpose of the survey.
- 18 point to draw is too long. CDOW should consider an alternative for those that have been acquiring points.
- CDOW should consider allowing point to be used in other areas without using all in one draw similar to what was done 1 year in the past. That would allow hunters to opt out without losing everything and give an better chance to those that stay in.
- I have been applying for a limited bull license in this area for 21 years. Due to reduced license numbers and the reduced number allotted to non residents which I believe is less than 10% for non residents I'm not sure I will every have the opportunity to hunt those areas.
- Impossible to draw a license.
- I would like to draw a tag in a management district like this, but being a non resident, I know that will not happen.
- Please do not change the preference point system on me at this point.
- Very disappointed in the point draw system, as I now have 20 points and cannot hunt Unit 201, and will be 81 years old. Naturally, I think the system needs revised to allow a better chance for serious hunters, perhaps those who have applied and not drawn over 10 years. Also, more consideration for those over a certain age, perhaps 70-75 years.
- As a Non-Resident with less than max preference points I applaud the CPW for putting into place a system now that where I could possibly draw a tag in one of these units with less than max. points. Without this change, my chance of ever having enough points to draw a tag in one of these units was 0%. Thank you.
- I would like to see more bull elk hunting opportunities for bull elk in these units for archery hunters. Hunter success in these hunts is lower than other hunting methods and I believe this could allow for more opportunities using archery equipment.
- I enjoy looking at the hunt statistics and use the data to plan my next year's tag application process. I wish the harvest stats would become available at least a few weeks before the draw deadline. I want to know the # bulls taken for the number of bull tags issued for the different units (i.e. % success). Also, I look at the hunting pressure (# of cow and bull hunters in the field) and by method of hunting that may affect my hunt. Plus it would be nice to have access to the some of the unpublished hunt statistics such as antler size or point count (i.e.6x6) and approximate locations of the kill. This would benefit me as a Non-resident to help plan out my hunt strategy since I cannot visit the area to scout. I am real disappointed in the reduction of tags available for Non-Resident hunters. I've been putting in for 21 years and still haven't drawn a tag. I have had to give up archery in exchange for muzzle loading due mostly to age and physical changes from the passage of time. I hope I don't die before I draw. And youth applicants should be given more opportunity because they will never draw as a youth at the draw rate I see now. If I could have drawn in a reasonable time, I would have visited your state more often to hunt cows or other units. Putting in for GMU 2 limits my other options because I have too much time and money invested in the GMU 2 draw to go for anything else. I'm not going to waste/burn the tag for a lower quality hunt at this point in the game.
- I hunt deer in Colorado on a regular basis. I would really like to hunt elk. I currently have 17 points. You offer so few units with quality bulls. I have shot a lot of elk out of the west and just have a hard time with Colorado's average quality elk. You have the largest elk herd in the nation. You have the best habitat. I

would greatly appreciate the opportunity for myself and my sons of hunting quality elk in Colorado. I know that you have had resistance from many residents who just want the opportunity to hunt, but the fact that I have put in for 17 years without drawing and may still be another 5-6 years should tell you that there is a lot of interest and demand for quality hunting. A few more opportunities like 2, 201 would be greatly appreciated.

- I have been putting in for GMU201 for 18 plus years & I'm 64 years old, I'm afraid I will not live long enough to go. When I started I had a better chance then I do now. I liked the way CO had pref. pts. not bonus pts. like other states. With only 10% NR. tags they come back with the Hybrid tag which is wrong for people like me who has been waiting or turn to hunt CO. TROPHY unit. The Hybrid tag cut my chances 50% so somebody with as little as 5 pts.& with no patience has a chance to secure a pt. that could have went to the hunter with the most pts. IT IS WRONG. I also feel 10% NR is wrong, I think it should be 70% RES & 30% NR on Fed ground I help to support. I own Trophy White Deer Property in IL. & NR has same chance to draw as RES.
- As a non resident who has trying to get a license to hunt that area for 20 years, it is very frustrating to have my chances to draw taken away the past 10 years, from Wildlife ranching to 20% draw. If I wasn't so far into the process, I would start going to another state. Take the draw % back to 60/40 like it should be. My hunting partners who have been to 201 were very satisfied with the # of large bulls they saw, but I know I will never make it to 201 as things stand, so I will try for #2 instead.
- I have been applying for this area for over 20 years to have the opportunity to harvest a real trophy bull Elk in Colorado on my first elk hunt ever. I am now 43 years old. When I began applying I was told that this was one of the best places in your state to have this opportunity of a life time. Every year the requirements become longer, and longer for the Non- resident hunter. I am hoping that this maybe the year that my dream hunts comes true.
- But I also would like the opportunity to hunt these units more than once. The way the points are creeping some people will never be able to hunt any of these units. I also think it would be nice to offer an archery elk tag for a non-resident for unit 1, at least one would be nice. Overall I think management in these units is good, at least there are animals to enjoy in these units unlike the over killing in some states and units.
- I have been applying for an Elk tag in area 201 for 19 years, I have 19 points when will I be picked for that Elk tag.
- I don't envy you in having to make a change. I'm thinking I should draw this year with 20 so I'll be out of the mix. If I had 15 to 18 points I'd hit the ceiling on a change. Good luck, waiting 20 years for an elk hunt is well, something should be done. I'm hoping it's not on my watch. At 64 I'm getting to old.
- How about increasing the number of non-resident tags... we might get 1 before we die trying or get to old to climb the mountains. make changes in the bonus pt. program? Most hunters are in limbo not maxed in pts. to draw a tag but too many to waste on so so units after trying for 15 to 20 years building pts. most of my group stared in our late 30's early 40's only to find out we may have to wait 15 to 25 yrs to get a tag or those ahead of us die off.
- I am retired military. In 1984 and '85, I hunted elk while stationed at Fort Carson, CO. I loved it. Now I am a nonresident with 9 preference points and will probably never get to hunt elk in Game units 1,2 nor 201. I have put in for one of these units for 9 years. I am no longer spending my \$\$ money in CO. I will pay a guide and hunt in Wyoming next year. Nonresidents can come to Alaska and hunt. Even in the draw areas they have an equal chance at drawing something. The preference point system makes it where a nonresident will never have the 18 plus PP needed in these units. That is very sad, especially for our youth. Something needs changing.

- Would like to see it not take so long to draw a tag for both deer and elk.
- The number of points required for a non-resident is many, but I'll keep trying.
- I would like to hunt a trophy animal.
- I would like to see more nonresident tags given out. I have put in for 17 years and I'm not any closer to getting one than when I started.
- Will take 20+ years to finally draw the tag CO needs more units managed for quality
- I have been putting in for a bull tag since I was 12yrs old in 201 when I started putting in it was 10 points to draw and now it is 18 points to draw I don't know if I will ever get to draw there since there is only a hand full of tags that are drawn. I am 30yrs old now and still haven't drawn a bull tag yet will I ever have enough points to draw?
- I have been applying for 201 since 1993.....skipped last year and basically thinking about giving up applying due to unrealistic chances of getting drawn and increases in non-resident fees. I have no great hopes of going there again. It is more economical and easier to hunt one of the many ranches raising/holding elk around the US, Canada or other countries.
- Unfortunately, I have been a victim of "point creep" in every year past...it always takes 1 more point than I have to draw. Obviously, we're not getting any younger. Or perhaps there could be a provision or exception made for Senior citizens holding more than 20 years worth of points, to be drawn preferentially, before they have to go in a wheelchair!!
- As a NR I would like a chance to draw a tag with my 20 points.
- I disagree with the hybrid point system that was adopted last year. I feel it's an unfair advantage to someone with very few points.
- I've been trying to get a bull permit in 201 for 18 years. I frankly suspect I will die or become unable to hunt before that happens. I wonder if the permit system needs to be changed to the one used for Bighorn Sheep, but then I will have waited 18 years for nothing I guess.
- As a nonresident I realize that there is an excellent chance that I will not have the opportunity to hunt in this unit again. Having accumulated 16 preference points I don't like the thought of giving them all up and going to another unit. It would seem like a nice possibility for a hunter to decide to hunt in another unit, but only lose the number of preference points it took to draw for that unit and be able to keep the remaining preference points.
- I currently have 14 preference points and have talked to hunters who have hunted that area. I believe I'm getting close to drawing for an archery tag. So I for one, would not want a lot of changes made.
- I have hunted elk for 34 seasons and have 20 elk p. points. I think the way you have ran the p. point system was a good way. I am not real happy with the new way you are starting the draw this year. I had decided to take my points to the grave rather than give up and take a lesser hunt. Hunting on my own and being out of state, this unit was my best choice for a true trophy hunt. Being a land owner myself I know that increasing the elk numbers is not a good option for the land or animals. The old system worked and I put in my time and money to get to the top just to be bumped because some people voiced they would not be able to draw in a lifetime if they start now. I wish I had the answer but I don't. I have a daughter that has hunted with me and took an elk but if she started now she would never live long enough to draw so I told her no sense in applying. In closing, I did like the old way you had the use of points where you could use a portion of

your points plus one for a less quality hunt but it is no longer used. STAY STRONG FOR THE CAUSE AND GOD BLESS

- I may not live long enough to actually draw a tag in one of these units, but that's not really management of the elk.
- Sad to see that the opportunity to hunt there does not exist. After the area went to draw only I have not been able to return. So with 18 preference points I changed to an area where I may draw before I am too old to hunt anymore.
- When I started saving points I needed 8 now I have 16 and need 18 don't know if I'll ever get in I think people like me that buy a license every year and spend money in your state should have a better chance of getting a elk tag.
- This unit is getting almost impossible to draw in. Colorado should switch to a lottery only draw like Arizona. At least then there is always a chance.
- With Colorado's preference point system everyone has a chance eventually? I have been applying for points to hunt elk in 201 for 18 years hopefully there will be no significant changes in the management plan so that I someday may be able to enjoy a hunt of a lifetime also.
- I apply in these areas because they are the only areas in Colorado that is managed somewhat for trophy quality, although quality in 10 is going downhill. Colorado needs to manage more areas for trophy bulls. Charge more for these areas if needed. But stop taking away my hunting opportunities in the trophy areas. You already prevent me for applying in the Ranching for Wildlife areas after I had already been applying for years and then you limited the number of resident tags the prime areas. Obviously there are a lot of hunters, resident and non-resident interested in trophy bull elk, look at the number of people with 12 plus preference points.
- I applied a couple of years ago in hopes of a Unit 1 tag. I don't believe I will live long enough to draw one since you changed the rules on me several years ago. I believe I should have been grandfathered into the same class with residents since there was no distinction when I started into the preference point game. In light of the unlikelihood of ever drawing the northwest units...a friend and I spent our 17 preference points on the new early season in unit 76. I shot a nice 6x6 and we are no longer having to purchase preference points.
- Currently, I have 14 preference points for elk and have all intentions of hunting a bull in a premiere unit, specifically 201. When I started applying for pref. points, it took 12 points to draw a rifle license in GMU 201 (in 1998). It is frustrating that every year there is a higher number of pref. points needed to draw this license, but I will continue to apply. My new strategy is to try muzzleloader hunting there, rather than waiting for a rifle license. I hope I have an opportunity to hunt in 201 sooner than later. I also hope the quality of bulls there are worth the wait! Thank you for all you do, this is a good way to survey hunters.
- I have 16 preference points and am waiting to draw for 201. I am currently 58 years old and wonder if I will be healthy enough to hunt elk by the time I reach the 21 points it currently requires. With understanding that the elk migrate through this area, it is hard to comment on the management of these herds. When visiting these areas, they appear to have plenty of grass and forbs. Maybe this occurs in wet years only. I am retired State Parks and look forward to hunting in this area. Best of luck in your endeavor to manage one of the best hunting areas in Colorado. My thanks to you. Glenn Honaman
- I would love an opportunity to hunt it. Been going for it for quite a while, but haven't been able to. Maybe something that could be acceptable is giving out just a few more muzzleloader licenses each year?

- I believe that the herd could be better managed by hunters if the DOW lowered the amount of preference points needed to harvest elk in these units. It is absurd that at least 19 years of preference points are needed to hunt elk anywhere in Colorado unless you are a non resident. The discrimination is very biased to the hunters who are residents of the state of Colorado and they should have more opportunity to hunt elk in these units especially 201, The average hunter COULD draw this tag only once, if ANY in his or her lifetime.
- By increasing the elk numbers in these areas there would be increase opportunities for more hunters in these units. With there being some many points required to get a license to hunt these units some people may never get an opportunity to hunt ever with a lot of prevents points.
- Please give a tag, I have put in for 20 years. My dad died with 17 points, now they're gone
- I started putting in for these areas 15 years ago. At that time it took about ten points to get a tag. Now, with the cut in nonresident percentage and the removal of nonresident ability to draw ranching for wildlife I will probably not live long enough to draw a tag. I will keep trying and hope to strike it lucky but I don't hold much hope to ever hunt there so I don't really care what DOW does now.
- Colorado is going to have to address its preference point system that in its current design, one cannot realistically expect to live long enough to draw a quality unit! I have all but given up. I suppose it is landowner coupons or hunt another state.
- I have participated with a family member that drew a tag in this area, and was pleased with the quality of Elk in the area. I like the idea of the lottery that was introduced a few years ago, because the time it takes to draw a tag in these units is very discouraging, but the lottery at least gives you something to hope for until you do finally get drawn.
- I hope it is my turn to draw before I reach 70.
- I will never be able to hunt these units because there required points go up about one point per year, and I doubt that I'll be able to walk if I ever drew the license. On those grounds perhaps you should issue a few more bull tags to help us make this hunt a reality.
- I applaud the creation of the "hybrid" draw in area 1. It gives applicants without maximum points a chance, albeit small, to draw a tag. Please continue this program.
- Cannot ever draw an elk tag in these units to hunt them period!
- Takes too long to draw. Not sure about the populations because I have not drawn this unit nor scouted it. Please create more specified units in western Colorado to help spread out applicants--maybe that won't help?
- Need to increase slightly the number of bull tags.
- Give those hunters a chance who have taken a number of cows out of the unit to get a bonus bull elk tag.
2. Allow a chance for a special bull elk hunt in dinosaur national park.
- I have harvested 2 cows in 201 in muzzleloader season and hunted unit 1 muzzleloader cow last year. I don't understand why the number of muzzle loading cow tags issued for 201 was reduced from 9 to five the last few years. There are 160 cow tags spread out over the rifle seasons in that unit. Why so few in Sept? I have 3 pp and still may not draw a muzzle loading 201 cow tag this year. I also harvested a muzzle loading buck in unit 201. I have been in unit 201 during that hunt the last 6 years and NEVER had another hunter

interfere with a hunt. In fact, I have only run into another hunter actually in the woods hunting (not driving on the roads or in camp) on one occasion.

Comments concerning landowner licenses –

- I also believe that too many licenses are reserved for private landowners and their agents. Remember the rancher who killed off nearly all of the sage off Cold Springs Mtn. prior to 1993? He is profiting from denying the rest of us the hunting opportunities Area 201 used to offer, just like he denied us the formerly good sage grouse hunting up there. And if I'm not mistaken, pronghorn hunting on Cold Springs Mtn. declined after the sage poisoning.
- Feel it important that something be done to make it possible for someone other than one rancher receiving and controlling the majority of the Bull Elk permits in GMU 201.
- I was born and raised in Colorado and so were my parents. My opinion is that increase a few more permits to hunters and not the land owners. If you want to manage the herd give out more cow permits. I strongly object to ranching for wildlife. All this does is make the BIG land owners richer off of hunting and the outfitters. You should be thinking of the hunters.
- I think the ranching for wildlife has ruined the best deer and elk hunting in the state. It is all about who has the most money, which is in practice in the whole state.
- My concern is for how landowners/outfitters apply for private land only tags as their 2nd 3rd and 4th choices because they are permitted to apply for public land first choice knowing they can always get a leftover tag for private land only for these areas.
- If landowner tags are given to land owners then they ONLY should hunt on their land !!
- It is fairly inconsequential to most "resident" Colorado elk hunters how you manage this herd and those in many other elk units with high or moderate draw demand. If the elk all dropped over dead tomorrow in those units, so what. I can always hunt the overcrowded easy tag units. I have attended your advisory meetings whose voting reps seem to be weighted by outfitters, land owners, politicians, etc.....Why are you wasting my \$ on a survey of this nature? Yup, I'm complaining about the way hunting tags are distributed through the draw to the disadvantage of the non- land-owning resident hunter. Surveys like yours are simply fluff. They are meaningless. There are many other policy issues which need attention and change!
- Hunted Pilot Program which falls after regular season. No elk available on the private land in the program after being hunted by land owner and those paying hunters with permission to be there. Smaller bull taken on BLM on last day on opposite side of unit 1. East side. My view is why even bother with Pilot Program. That year of the 5 who drew tags only 3 filled as far I know.

Comments concerning habitat issues –

- Back in 1993, I harvested a Bull in Area 201. Back then, we could get elk, deer, and pronghorn tags regularly. I have harvested each in Area 201. I remember hunting up there prior to 1993 and seeing vast herds of elk on Cold Springs Mtn. Back then, we also hunted sage grouse in Area 201. First, the rancher who owns and/or leases land up on Cold Springs Mtn. poisoned the sage with 2,4-D and the overspray killed vast areas of sage on public lands. What was done by DOW? Nothing as far as I know. The result was the loss of good sage grouse hunting.

- Herd growth only if the habitat supports it. It is nice to have some "big bull" areas on CO even if the odds of drawing them are very slim.
- In regards to the habitat, water has been sufficient the last couple of years to produce a very lush environment for both wild and domestic animals. No evidence of overgrazing was apparent to this hunter
- Need better habitat use data for tri-state elk herd.

Comments concerning ATV use –

- The herd movement of the elk population has changed greatly in the past 5 years, and I don't know why this is. Maybe the weather patterns, hunting pressure in outside units, or other pressures from within, such as ranching and farming operations, or the increased use of ATVs of hunters I've seen using them to actively hunt and chase elk. The latter of all of these I am greatly concerned with as I've seen less 'hunting' on foot, and more and more hunters driving around on the ATVs to find elk. The noise can be heard from a long distance away, and I've had elk spook on me during several stalks that heard one or more ATVs and then moved away to other areas. To be honest, the use of ATVs is probably my biggest concern because of what I've seen in person regarding the use and misuse of the ATVs. If it would be at all possible to ban the damn things, or limit their use during hunting season, I would be all for it. I'm not against them, per se, it's just that more people seem to abuse them as a tool of hunting, and are too lazy to get off their butts and actually hike around a little bit, stalk quietly, and get a better shot. I haven't seen a lot of 'one-shot kills' in recent years as I have in the past, as I've talked with hunters in other camps, and their stories reflect my concerns: They drive around on the ATVs until they see some elk, chase them in some way, bale off of the ATV, dig their gun out, and start shooting. 4-5 shots into a single elk makes for some wasted meat, and one lazy-assed hunter who can't shoot to save their life. They're more content with 'throwing a lot of lead' at whatever they're trying to kill, and they're happy with it. Sad times the ATV has ushered in, in my humble opinion.

Comments concerning resident vs non-resident license allocation –

- This has always been considered an excellent area for good quality elk. The outfitter that I hunt with made a recommendation twenty years ago and I am still attempting to draw a license in this area. I believe that my problem is the allocation between residents and non residents and not the number of elk in these areas.
- Need to increase the number of bull tags so that nonresident elk hunters (like me, age 64 & older) with 21 years of points can finally draw, before we're too old to go.
- There is too many out of state hunters in the draw, I have 15 preference points and by the time I draw I will probably not physically be able to hunt. I'm sure this is falling on deaf ears as usual.

E-1 DAU Public Meeting Notes Brown's Park, Colorado

The following were notes taken and e-mails received from the public comment at the E-1 DAU planning meeting in Brown's Park at the Lodore School Hall July 12, 2012.

- GMU 1 – low numbers of cows – would like to see a 25 – 50% reduction in cow licenses to increase cow elk numbers. (landowner, sportsmen)
- GMU 2 – low numbers of cows – would like to see reduction in cow licenses but still lots of bulls (landowner, sportsmen)
- Would like to see a lower population objective range - 500 – 1000 in E-1. Since the Division was more than 100% over objective in the late '90s and early 2000's during the drought years we need to hold the elk population at a lower level now to compensate for the degradation to the range that occurred then. Landowner stated we have grazing data showing that it was not a livestock issue but a habitat resource impact issue caused by wildlife. (landowner)
- Elk populations need to be managed at lower level due to concerns for sage grouse. (landowner)
- Supportive of late seasons cow elk hunts as population management tool. (landowner)
- The issue of hunting in Dinosaur National Monument needs to be addressed as elk refuge in the Monument where hunters do not have access to them. (landowner)
- Bull to cow ratio too high in GMU 1. (sportsmen)
- Consider an exception for RFW in GMU 1. Landowner eligibility needs to be based on percentage of land owned in the DAU as opposed to minimum acreage requirement. (landowner)
- Bull to cow ratios too high in GMU 2 and 201. Lots of bachelor groups of bulls during the rut. These groups of mature bulls are off fighting while younger bulls are sneaking in and doing all of the breeding. (landowner)
- Often see one bull with very few cows compared to a few years ago when one bull would have larger herds of cows. (sportsmen, landowners)
- Need to address preference point issues in these Units. Suggested that we have an "elder hunter bull hunt" every 4 years. Every 4th year hunters with the highest number of preference points that are 70 years old or older get preference to draw a license. This should help with the preference point creep issue by taking the older hunters out of the preference point pool. (landowner).
- Need to limit the number of Governor tags that can be used year after year in these GMUs. Hunters with these licenses should not be allowed to hunt in the same GMUs on consecutive years. (landowner, sportsmen).
- Consider some type of antler point restriction hunt to reduce bull ratios and minimize antler breakage. (landowner, sportsmen)
- Division should be commended for reducing the elk population over the past few years. It's a noticeable change on the ground. (landowner)

E-mail Comments –

- On the separation of 2 and 201 as management units, the dynamics, habitat and populations are very different as well as the size of the areas as we all know. It is my belief that the population estimates for unit 2 are way lower. Our estimates are only between 350-400 total elk. There has also been very low calf survival in unit 2 factors such as predation, winter kill, poaching, wounding loss - bullets, arrows, antlers, disease, malnutrition, fences, etc. We only saw about a 15% calf crop and survival in 2011. So my point is that instead of lumping the total population of elk into 1 DAU, separate them to show the population of unit 2 at 350-400 and 201 population to be 650-700. I would be a lot more conservative on the license allocation in unit 2 than 201.
- Remove some of the mid grade bulls for the older guys. This would be a very bold move and a way to improve relationships and bull numbers of the less than desirable elk quality and one that I would be very interested in participating in and not for monetary benefits but for overall herd quality. 2 and 201 have been the state's premier areas and are advertised as such by the CPW, with over 66,000 people who apply for elk preference points alone who haven't declared a unit and the 6-7000 who do apply for units, says volumes for what the demand is for quality elk and as we heard last night even the ranching community recognizes the trophy quality, so I believe it would be in all of our best interests to improve the overall herd quality. The bigger part of this whole equation as far as quality demand is to have more units statewide with an increased quality they don't have to be a 201 quality, but an overall increase in bull size and age with cow elk management to control numbers. This would relieve some pressure on 2 and 201 and make the points creep factor decrease as well spread out the demand for quality.
- The unit 1 elk management has to have some serious changes, as you heard last night, there is a severe reduction in cow elk and elk opportunities overall, I didn't want to put you guys on the spot but with the fact of 182-177 cow elk tags that have been issued for unit 1 for the last several years this has had a major impact on that overall herd, it is still my belief that this herd is hurting and not near the population estimate. Just like the east edge of unit 2 and 201 where the elk move in and out of, the population changes and fluctuates but is not a representation of the resident herd.
- The monument herds are also not as big as everyone believes but the fact that they refuge and winter in DNM are accurate and I still believe by changing the east and north boundary of unit 1 will help some unit refuging and help with elk distribution.
- Colorado is a fence out state for cattle, should the same consideration be made for elk and agriculture crops where feasible?

E-mail written Comments – 30 Day Comment Period February 15 – March 15, 2013

- I know the comment period for these units is ending soon. I am wondering what other ways can these units be utilized for hunting without hurting the trophy size etc. I would like to see us look at a few options to increase opportunity in the units for both elk and deer. Things I would like to see considered...

A management hunt for bucks and bulls. Similar hunts are being conducted in top units in Utah. These hunts would allow for hunters to shoot animals under certain requirements. For example, a 3 point or smaller on deer. A 5 point or smaller on elk. The number of tags could be pretty limited and actually could run in different seasons when compared to the all ready existing seasons. This would allow for a few more hunters to draw the units and could actually help trophy quality by thinning out a few mature animals who do not have the best genetics or maybe past their prime.

In addition, I have long been wanting a late season (rut) archery deer hunt. I know we have this opportunity on the eastern plains, but between the travel and the private ownership it is hard to make work. I would like to see a late season (like Nov. 15th to the 30th) archery only mule deer hunt. Again a very limited hunt with a handful of tags, but not enough to significantly change populations.

Beyond those special considerations, I tend to agree with population goals. I do think a few more bulls could be harvested in both units, deer are struggling a bit, but the already limited number of tags should be OK to sustain.

Also any time we can decrease horse populations in 2 is a good thing... I know it is not your department, but we should always be pushing for that, weed control, predator control, etc. to help our herds.

- I have hunted unit 2 about 5 or 6 years ago, and have joined some friends and family on other hunts in unit 2. To me it seems that there are two very distinct hunts contained within that one unit; Douglas Mountain being the most hunted and known and the Bears Ears district being the other. While I am very sure that these animals move throughout the area and into other units including 1, 201 and 10 and even 3 and 11 the quality and density of animals in each of the two areas has shifted somewhat in recent years. I also believe that hunter numbers on the Douglas Mountain area could be better managed if the area was divided. The logical division would be along highway 318.

Additionally during my archery hunt there was cow hunt going on at the same time. I am not sure if this is still the case. When you wait that long for a premium tag you don't want to be disturbed by other hunters, especially those with muzzle loaders or rifles on a cow hunt. On my hunt I had scouted extensively, however once that cow season began the elk were pushed around much more rendering some of that time scouting useless. My suggestion is to have a dedicated season for each hunt with no overlap of archery to muzzle loading or to rifle hunters.

- Having helped hunters 3 out of the last 4 years I have a couple ideas for you. 1. Split the unit. North and south of 318. 2. Somehow get some better bulls. Lots of 260/320 bulls. I see better bulls in OTC units.
- From the options listed for the Elk management I would first recommend an increase in the population. The CPW has been very successful in reducing the elk herd in Colorado to the point where hunting experiences are getting diminished. there is also an obvious problem with the Preference Point system and hard to draw units, of which 2, 201 are the worse.

I would absolutely recommend managing for the highest elk herd possible, 2000-3000 thus allowing more bull tags to be issued.

From the management side I would highly recommend the bull:cow ratio target 23-27 bulls to cow. I would like to see the units stay limited draw for bull however there needs to be more tags issued. In the current system the state has of OTC units and Limited draw units there needs to be a more limited areas to move through Preference Points faster. By changing the objective in 2, 201 you can move through the PP plug (I would recommend increasing the hybrid draw tags too).

In an ideal situation I would like to see the state move to a totally Limited Draw for antlered:Bull tags like they have done for Deer. I feel that this would improve the trophy quality for the bulls and hunt experience for crowded areas. There can also be a lot of opportunity hunting and population control through the Antlerless tags.

- We continue to hear how elk are damaging the resource and over competing with livestock, and depending on your perspective on which side of the issue you are on could have some merits, however observations of elk and cattle on this same pasture shows no distinct differences of behaviors or eating/grazing patterns, if anything elk have less impact on widespread ranges than cattle because of their dispersion nature. The

other interesting note is the cattle in these pastures will graze hillsides and rock ledges, aspen patches where only elk are thought to graze, there is no way to distinguish elk activity vs. cattle activity in these situations as they utilize the same habitat and eat the same things.

There is absolutely no way that when given the fact that there are 5 times the number of cattle as there are elk, that elk do all of the damage to the range!

In talking with (landowner) his idea of damage and mine are obviously different as he states that the bitter brush mountain mahogany and service berry are all ate down to nothing, i don't know how much time you spend there and do ground observations on these claims but i don't see it and certainly disagree with him. There is some grazing evidence on these plants and shrubs that hasn't been documented in the past that is contributed to the growing moose population, they seem to like and thrive on these bushes and may be causing some of the concern towards elk, however there is still a healthy abundance of all of these plant species.

I would especially like to see livestock numbers trends in the grazing allotments, how much have they increased or decreased since elk became part of the equation, how many elk and deer were here before they were wiped out, obviously at one time there was very little concern about the interaction between cattle and elk, as we all know that is not the case now according to livestock interests. When did this change and what were the numbers of livestock on the range at that time? I would have liked to see the BLM data for your report before the final comment period to see if there was anything in there that was of particular interest and pertinent information. The bottom line with elk and cattle is there needs to be a balance and what the exact numbers are will probably always be a point of contention but i don't see the habitat problems that elk are getting the blame for, its as much of a my cows need more grass issue than anything i think. Given the fact that the spring and summer of 2011 saw more moisture and grass than we have had in along time and created an abundance and the fact that 2012 spring and summer was the driest on record but still had available forage for all of the cattle and big game that is there now leads me to know that there is still room for expansion. The ranching community deserves a big thank you some compensation for some of the work they do for wildlife and cattle, without them a lot of this would not be possible. That was also my request in the Landowner voucher meetings that the ranchers in these draw areas be given vouchers to offset the losses they have to private lands that also support wildlife on public lands. As you know sportsmen also play a big role in financing these areas for their use with the leases to state, private and conservation easements.

State Land - 26,509 acres @ \$1.60/acre - \$42,414

CPW hunting lease with Vermillion Ranch - 4155 acres@ \$1.54/acre - \$6399

CPW hunting lease with Raftopolous Brothers - 1571 acres @ \$1.54/acre - \$2424

Raftopolous Brothers Conservation easement - \$1.75 million

Water abundance and water quality is probably the bigger issue, cattle are terrible on riparian areas and water resources congregating on water holes and eating everything in sight and crapping up a terrible mess, but that is also their nature, whereas elk, even in high concentration numbers for short periods of time hardly leave any sign that they were even there. Willows are particularly vulnerable to cattle in enclosed or even open pastures especially in high concentrations whereas cattle will linger and stay in these areas for weeks at a time. Not that elk won't do some damage given the same circumstances, however elk in these units don't continually stay in these areas as they are always moving and being disturbed by something, even their own nature. As always there needs to be more work done in these areas to create more water storage, especially given the size of this DAU.

The other element that is left out and continues to be left out of all of these processes and studies is predation and amount of predation issues. I certainly hope you have factored this in the equation but i want to give you my thoughts on this and even use some of your own data from the lion dau in these areas.

If i read this lion dau right on page 7 in the population chart it reads your belief on the modeling shows a low of 81 lions in these areas and a high of 186. While actual numbers are impossible to determine as is the difficulty of estimating an exact elk populations here i want to bring up a point that leans towards having a high elk population as a standard.

Lets just say for simplicity sake that there are 50 adult lions in these overlapping Dau's, now understanding the fact that lions eat an average of 1 deer or elk per week per lion there would need to be 2600 animals given to the lion population alone just to maintain that number for basic survival. That's not even counting the fact that they kill extra or want a hot meal instead of a cold one or the other factors that would require them to both eat and kill more. Well if that is true and the numbers are correct for each of the estimated big game species in these Dau's then we would need to have over 10,000 animals just to maintain a population of game animals. Then with all of the other mortality figures added into this equation we would certainly need a higher animal concentration just to maintain what is being taken out naturally. This data even excludes other predators including man. Now i may be missing something and i know we will have future discussions on this subject especially concerning mule deer populations in the other game management areas in the northwest but if your figures are correct then somewhere we will need to have adjustments to these populations. I have been watching a area in unit 201 where a particular group of lions were which we killed 3 out of the 4 that were there and during the summer and fall August, September and October we documented 16 calf elk and 2 doe deer in a very small 4 square mile area. This is just what we found and am sure there is way more that we didn't find. I have noticed quite a bit of calf mortality here over the years and lower calf survival in these populations as a whole. With an increase in calf mortality and movement and dispersal of elk in and especially out of these areas lends further to my thoughts of having the highest manageable elk populations as possible for the available habitat, which i believe is available.

I have also reviewed your data and stats on the harvest rates and the unit 2, 201 and especially the unit 1 data is predictable and extremely pathetic. As a fellow wildlife manager and sportsman i am very discouraged that this population has gotten to this point and i also blame the politics of these areas for doing so. Its easy to kill critters and take them down to nothing but to take care of, nurture and improve a population takes effort and management and to see these areas diminish this way when they were talked up and continue to be talked up as the premier areas of Colorado where thousands of people across the united states hope to come and hunt someday is discouraging at best.

On a side note i wish you guys would have given better notice of this process especially of the final review on the CPW website - Front page, since these are the most sought after elk areas in the state, and in the meetings that you held with the county commissioners and the land use board.

- I am in favor of alternative 1 – status quo. I would favor population objective range of 1500 – 2000 elk. I'd suggest a process of evaluating elk/greater sage grouse relationship over the next 1 – 3 years but not hold up the plan for that work to be done.

A statement in the plan for significant impact on sage grouse or due to drought be included in the plan and change of elk population objectives if new data indicates the need.

Colorado Parks and Wildlife
Darby Finley
PIO Box 1181
Meeker, CO 81641

RE: E-1 DAU Draft Elk Management Plan

Darby,

Here are my comments related to the E-DAU Draft Elk Management Plan.

You did a very thorough job writing the plan and it contained a lot of useful information.

I am in favor of keeping Unit 2/201 as a limited entry draw for a high quality elk hunting experience and not changing the elk herd management objective drastically from the current objective of 950 animals.

I am in support management of the elk herd in a range of 500-1500 animals, which seems to be the historic number of elk in the DAU. Alternative 1 seems to be working fairly well to product a quality experience and quality animals.

I am in support of maintaining bull/cow ratios of approximately 40/100 using limited entry permits only for the entire DAU.

I am not in favor of managing the unit with OTC licenses.

I am in favor within the next 5 years to increase the bull tags issued for each limited entry season by one or two to bring down the bull/cow ration and consider a possible spike only season in December to reduce the bull/cow ratio slightly. It also appears the cow elk population in the DAU, (mostly in Unit 2) is on a declining trend and less cow licenses may need to be issued to bring the bull/cow ratios to your 40/100 management objective. It will be interesting to see the results of the telemetry study you are currently working on to track the movement of elk in the DAU.

Managing the elk herd in the DAU is a challenging task. Some other comments regarding other issues within the DAU that may be broadly relevant include:

- Landowner voucher tags should only be valid on landowner property, not public lands.
- Coordinate with BLM on a range monitoring project to assess the carrying capacity of the winter range. The BLM may have to reduce allotted cow/calf ratios to permittee if the data indicates overuse.
- Coordinate hunting seasons with Wyoming and Utah to keep the elk moving around and that sanctuaries are not created.
- Establish a shed hunting season in the DAU.

Sincerely,



Cary Green
PO Box 4387
Eagle, CO 81631

APPENDIX C



United States Department of the Interior



BUREAU OF LAND MANAGEMENT
Little Snake Field Office
455 Emerson Street
Craig, Colorado 81625-1129
<http://www.co.blm.gov/ltra/index.htm>

In Reply Refer To:
6630 (CON010)

March 14, 2013

Colorado Parks and Wildlife
Attn: Darby Finley
P.O. Box 1181
Meeker, Colorado 81641

Dear Darby,

Thank you for the opportunity to review the draft Elk Management Plan for the E-1 Data Analysis Unit (DAU). The Bureau of Land Management (BLM) appreciates your efforts in the management of the wildlife resource and strongly supports our ongoing partnership in maintaining the balance and sustainability of wildlife and their habitat. As you know, BLM manages for a variety of resources within the DAU including livestock grazing, oil and gas development, wild horses, and off-highway vehicle recreation in addition to supporting commercial guiding and outfitting for elk hunting through special recreation permits. Given all of these uses, BLM continues to be supportive of your goals to manage the DAU as a trophy, quality-hunt elk unit.

BLM is supportive of your stated primary goal to begin managing the elk population within a range rather than to a static target number. This is similar to BLM's approach to management of the Sand Wash wild horse herd and allows for a more realistic, adaptive approach to managing populations of wild ungulates. BLM is also supportive of your short-term goal to manage for the lower end of the selected range in light of diminished forage production due to ongoing drought conditions. Livestock operators on public lands within the area have reduced stocking rates in response to drought and recognizing unfavorable climactic patterns in the management of elk is just as imperative to long term habitat sustainability. In your draft plan, you give three population objectives/ranges. We would encourage you select the lowest of the three, management of a population range between 1000 and 1500 elk. Actual livestock use for the last few years coupled with our utilization data have shown that elk numbers in this range would be sustainable, particularly given the dietary overlap between cattle and elk.

We look forward to continuing to work with you in the management of public resources throughout northwest Colorado. In pursuit of this effort, we will continue to share resource data and will make available any relevant information that you need. We would also like to

strengthen our ties in creating cooperative efforts in the monitoring and collecting of habitat data in the coming years. If you have any questions, please don't hesitate to call me at (970) 826-5000.

Sincerely,

A handwritten signature in blue ink, appearing to read "Wendy Reynolds". The signature is fluid and cursive, with the first name "Wendy" and last name "Reynolds" clearly distinguishable.

Wendy Reynolds,
Field Manager

APPENDIX D

STATE OF COLORADO

Governor
John W. Hickenlooper

Department of Natural Resources
Mike King, Executive Director

Northwest District Office
555 Breeze Street, Suite 110
Craig, CO 81625
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March 18, 2013

Darby Finley
Terrestrial Biologist
Colorado Parks and Wildlife
Meeker, CO 81641

Dear Darby,

I appreciate the opportunity to comment on the DAU Elk numbers on Cold Springs herd unit (DAU) E-1. From my experience, observation and lessee feedback, we would support and encourage a management target of 500 to 1500 head through increase/reduction/maintenance of elk numbers over the next ten years of your plan. These herd reductions should ideally remain at the lower end of the target numbers for a few years, to allow ranges to recover, especially considering that we are again, as in 2007-2009, going through a drought. Another issue is once herd has been reduced, how can it be maintained without being behind the curve, meaning once we recognize drought can CPW react before the next grazing season?

I recognize that the distribution pattern is always an issue, but they need to be managed to alleviate greater impacts on certain areas reducing impacts to other wildlife, livestock users and range vegetation that supports these users. Ranges sometimes take a long time to recover if abused, regardless of what species abuse (or combination of abusers).

My experience where females (cows or does) are harvested, that the young often don't know where to migrate, thereby creating a resident herd that doesn't migrate. This could affect the 3 state migration pattern or even the Bears Ears herd (that move back and forth in some years) and if so how much affect? I believe you answered this on the phone, that it does.

Also I didn't see any analysis of impact to sage grouse or grouse management needs impacting elk, especially since it is such an issue at this time. Another issue which impacts elk habitat that I didn't see mentioned is the wild horse herd in the Vermillion area. Both should be addressed or at least acknowledged as issues.

The Cold Springs area appears to be more unique in that elk move around within the three states of Colorado, Wyoming and Utah making it much more difficult to manage or even set numbers without some kind of reciprocal agreements with the other two states. This being a premiere hunting area further complicates management of this DAU. Reduction or elimination of the herd of elk that go into the Vermillion, as discussed on the phone, would help bring the current numbers down for this DAU and would reduce the impact to a less abundant vegetation regime that exists within the Vermillion Basin.

Again I appreciate the opportunity to comment on your 2013 DAU objectives.

Lane Osborn
Northwest District Manager

COMMISSIONERS: Buck Blessing, Michele A. Bloom, Richard L. Downey, Thomas R. Hoyt, Sandra A. Leinsdorf

APPENDIX E



Dear Darby Finley,

The members of the Northwest Colorado Habitat Partnership Program (NWCO HPP) would like to thank you for taking the time to present the DAU E-1 management plan at our meeting on 03/27/2013 this time with an additional management strategy of 500-1500 elk included. Taking into account the biological issues and the thoughts and concerns of the stakeholders involved, the NWCO HPP committee agreed that a post hunt population objective of 1000-2000 elk and a bull to cow ratio of 35-40 bulls to 100 cows would be the best management practices for the DAU. Our support for management alternative two is the same as our previous recommendation given on 02/12/2013 with the following additional recommendations:

1. The DAU should continue to be managed as a trophy unit and as such a high quality hunting experience should be maintained.
2. The committee agreed that an action plan that addresses drought concerns be incorporated into the DAU E-1 management plan.

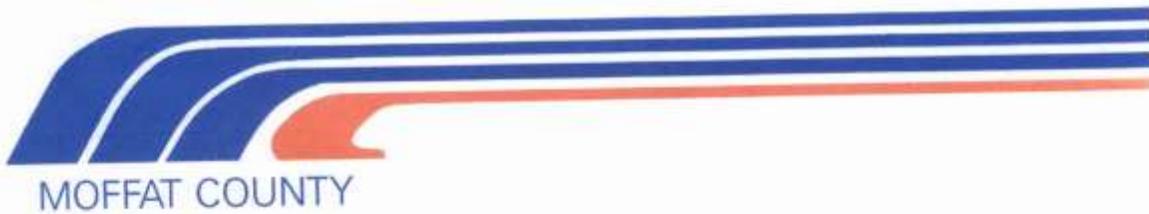
The committee's recommendations are based on the current modeling data available and agree that the DAU E-1 plan should continue to incorporate the most up to date forms of population modeling and the estimates derived there from. The committee thanks you for your dedication to wildlife management and big game conflict resolution in northwest Colorado.

Sincerely,

Evan Jones

Committee Members: Chad Green, Evan Jones, Erik Taylor, Gary Visintainer, Mark Lowrey, Ray Owens, and Scott Brennisse. Administrative Assistant: Cassie Swaro

APPENDIX F



March 14, 2013

Darby Finley
Colorado Parks and Wildlife
Meeker Service Center
PO Box 1181
Meeker CO 81641

Darby Finley,

The Moffat County Commissioners would like to express our sincere appreciation for Bill DeVergie and Darby Finley making a presentation to our board on March 5, 2013 regarding the Data Analysis Unit (DAU) plan for Units 2 and 201. Further these two went above the call of duty and re-arranged their schedule to attend the Moffat County Land Use Board meeting March 11, 2013 where they presented the DAU plan to the County Land Use Board. We found the Land Use Board meeting beneficial in that it resulted in a motion, which the County Commissioners ratified on March 12, 2013, offering the following input.

1. The Moffat County Commissioners are aware that select sites within Units 2 and 201 are not meeting the Bureau of Land Management's Range Health Standards. Moffat County requests the Colorado Parks and Wildlife (CPAW) review any sites where wildlife have been identified as a causal factor for Range Health Standards not being met and address them within the DAU plan.
2. The range of alternatives identifying possible elk population objectives is not broad enough for impact analysis. All three population objectives proposed by Colorado Parks and Wildlife increase elk numbers. An adequate range of alternatives would consider an alternative that would also lower elk populations from current levels. Colorado Parks and Wildlife must analyze an alternative which includes a range of 500-1500 to account for future droughts and offsetting the fact that CPAW has managed elk populations at double the 1994 objective throughout the majority of the last 20 years. Analyzing a 500-1500 population objective will provide for increased range health conditions and drought tolerance while still maintaining a quality bull elk hunting. CPAW statistics demonstrate that it is feasible to maintain favorable bull:cow ratios throughout variations in population numbers, thus revealing a quality bull elk hunt is likely to sustain itself even if population objectives are lowered to 500-1500.
3. Moffat County requests Colorado Parks and Wildlife analyze the impact to Greater Sage Grouse habitat for each range of population objectives considered in the DAU plan. We believe this is a 'must' in today's local, state, and federal natural resource planning documents and the potential 'listing decision' regarding Greater Sage Grouse by the US Fish and Wildlife Service.

Commissioners

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John S. Kinkaid
District 1

Charles G. Grobe
District 2

Tom Mathers
District 3

4. Units 2 and 201 should continue to be managed as a trophy area with priority of maintaining a quality hunting experience.
5. Moffat County Commissioners request that CPAW develop an action plan within its DAU plan for a drought scenario.

Thank you for considering our input, and if we can provide additional clarification about our comments, please contact Jeff Comstock at 970.826.3400 or any of the Moffat County Commissioners at the below listed contact.

Respectfully,



Charles G. Grobe, Chairman
Moffat County Commissioner

Commissioners

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APPENDIX G

