FLEECER EMU (Hunting Districts 319 and 341)



Description: This 630-square-mile EMU is southwest of Butte and encompasses the Fleecer Mountains and a portion of the Anaconda-Pintlar Range. About 80% of the unit is in public ownership, with the majority of acreage managed by the USDA Forest Service (USFS). The USDI Bureau of Land Management (BLM) manages important winter range near Wise River and Fleecer Mountain, and scattered parcels in the Big Hole. The FWP-owned Fleecer and Mount Haggin Wildlife Management Areas (WMAs) are also located in this EMU. About 20% of occupied elk habitat is in private ownership and some of this land provides important winter range for elk.

Public Access: Most of the EMU is easily accessible to the public. Land ownership changes in lower Willow Creek (HD 341) has created challenges to public land access and closed some previously open private land. Four Block Management Areas are currently maintained in the EMU. Cooperative road management programs are in effect over most of the area. Approximately 70% of the land base provides recreation characterized as "moderate to high levels of motorized access"; about 20% provides minimum motorized access, and 10% lies within the Anaconda-Pintlar Wilderness.

Elk Populations: The number of elk counted in the EMU during post-season aerial trend surveys is about 2,000 (Figure 1) with about 1,500 elk in Hunting District 319 and 500 in Hunting District 341. Substantial population increases during the past 7 years are the result of mild weather conditions not conducive to harvest, restrictive hunting seasons, secure fall habitat, and movement of elk from the Pioneers and Highlands to the Fleecer winter range in early 1997. Prior to 1997, the Fleecer elk herd was slowly increasing towards the objective of 1,100 elk observed. We counted more than 1,700 elk on the Fleecer winter range in 1997 and have consistently counted 1,400-1,500 elk since then. Although most of the unit is in public ownership, some important winter range on Fleecer Mountain is privately owned and high elk numbers have created conflicts that must be addressed through elk population reductions.

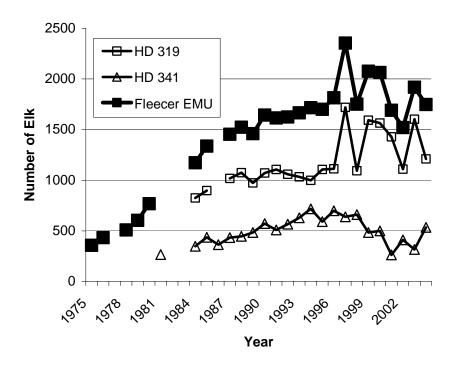


Figure 1. Number of elk counted during post-season aerial trend surveys in HD 319, HD 341, and Fleecer EMU Total, 1975-2004.

Recreation Provided: During 1999-2001, an annual average of 19,201 hunter days of recreation were provided to an average 2,694 hunters. These values represent an 8% increase in recreation days and an 11% increase in hunters from the 1991-1992 period. Seventy-three percent of EMU hunters and hunter days were in HD 319. Wildlife viewing opportunities occur throughout the EMU, in all seasons. Large numbers of wintering elk on the Fleecer WMA are easily observed from Interstate 15 and State Highway 43, near Divide.

Current Annual Elk Harvest: During 1999-2001, an annual average of 234 antlerless (164-322) and 181 antlered elk (120-271) were harvested in this EMU.

Accomplishments: Since implementation of the 1992 Elk Plan, FWP completed a conservation easement on the 1,600-acre Willow Glen Ranch. The easement allows hunting access, prohibits development, and prescribes livestock grazing. FWP also implemented and maintained several cooperative livestock grazing programs to ensure quality wildlife forage on FWP and private land. To address hunter access issues, FWP has maintained 4 Block Management areas in the EMU and coordinated travel management and other traditional land use concerns with the various state, federal, and private entities throughout the EMU.

Management Challenges: High numbers of elk on the Fleecer winter range are the greatest population management challenge. Elk numbers on the Fleecer face are currently 200-300 above the objective of 800 elk. Elk use public [BLM, USFS, FWP & Montana Department of Natural Resources and Conservation (DNRC)] and private land without regard to ownership and compete for forage intended for domestic livestock. FWP has tried to address high numbers of elk by increasing numbers of antlerless permits and issuing A-7 licenses valid to 15 December. This program has failed to reduce elk numbers and other options such as general season BTB/antlerless and antlerless hunting must be considered.

Damage to fences by elk is another concern. Grazing exchange agreements intended to create acceptance of some elk use on private land will continue with adjacent landowners. Other, indirect methods to create "elk friendly" fence crossings, provide clearly worded signs, and concise hunting permission instructions will ease the management burden that high elk numbers and associated hunting demand has created for private landowners in the Fleecer area.

Wolves are pioneering the Fleecer EMU and will likely establish packs that have the potential to rapidly increase. The degree of impact of wolves on elk populations is unknown at this time, but will be a consideration in future management decisions.

Population Monitoring: Annual trend surveys are conducted during winter by fixed-wing aircraft. Total numbers of elk observed, sex and age class, and location are recorded.

SUMMARY OF PUBLIC COMMENT

FWP was challenged by a neighboring landowner to address problems caused by high numbers of elk on the Fleecer winter range. Sportsmen expressed concern over road restrictions imposed on general season hunters, but not archery hunters. Interest in a vehicular retrieval program was also expressed. Extending the time of validity of antlerless permits following general seasons that do not produce adequate harvest was supported as a way to bring populations in line with objectives. Hunter crowding has intensified over the last decade and has frustrated many hunters

MANAGEMENT GOAL

Reduce elk populations to stated objectives, commensurate with available public and private habitat. Cooperate with land managers in the management of elk habitat to provide a healthy elk population and a diversity of elk hunting experiences.

HABITAT OBJECTIVES

- 1) Develop and maintain cooperative programs that encourage public and private land managers to maintain 352,000 acres of occupied elk habitat.
- 2) Promote maintenance of elk security so that elk harvest is distributed throughout the season, with no more than 30% of the bull harvest taken during the first week of the general season (3-year average).

HABITAT MANAGEMENT STRATEGIES

FWP will work with the USFS and BLM to:

- Improve elk security throughout the transition range used by the Fleecer elk herd, especially in the Fishtrap, Mudd Creek, Seymour, Twelvemile and Bear Gulch drainages, where elk security has been substantially reduced through logging.
- Identify areas where either road closures or openings are necessary to enhance elk security or facilitate harvest and recommend appropriate changes to the Southwest Montana Interagency Access and Travel Plan.
- Provide technical assistance and information in revisions and updating of grazing allotment management plans.
- Cooperate with the Beaverhead-Deerlodge National Forest and BLM to improve elk
 habitat through projects designed to improve vegetative diversity and maintain or
 increase carrying capacity on winter range. Emphasize the importance of sagebrushgrassland communities through the use of current Memorandum of Understandings.
 Reduce conifer establishment on important shrub and grassland habitats on Mount
 Haggin and Fleecer WMAs.
- Represent wildlife habitat needs and hunting recreation issues in National Fire Plan projects.

GAME DAMAGE STRATEGIES

Each game damage situation will be addressed based on its own specific circumstances. The following management strategies will help to alleviate game damage complaints by maintaining high quality elk habitat on private lands and enhancing landowner tolerance for elk:

- Maintain the current cooperative livestock grazing agreement with a landowner adjacent to the Fleecer WMA. This agreement is designed to reduce game damage conflicts, enhance landowner tolerance for wintering elk, and improve the condition of elk winter range.
- Maintain the current rest-rotation livestock-grazing program on the Mount Haggin WMA, which is designed to provide high quality year-round elk habitat.
- Employ herders, haystack fencing and cooperative fence repair/replacement projects to minimize elk damage and rangeland competition on private land. Utilize late or special game damage hunts where appropriate.

ACCESS STRATEGIES

FWP will:

- Identify opportunities for Block Management or other cooperative access programs with landowners
- Encourage and support federal and state agencies to secure access to public lands where appropriate.

POPULATION OBJECTIVES

- Maintain 1,475 (range, 1,250-1,700) elk observed during post-season aerial trend surveys. For HD 319, the maximum is 1,100 observed elk, with no more than 800 wintering on the Fleecer face. For HD 341, the maximum is 600 observed elk (an increase from 500 currently).
- 2) Maintain bull:100 cow ratios observed during post-season aerial surveys of at least 10:100.

POPULATION MANAGEMENT STRATEGIES

REGULATION PACKAGES

Six-week brow-tined bull/antlerless archery regulation; EXCEPT, see Restrictive Regulation for Antlered elk and Liberal Regulation 2.) for Antlerless elk.

Antlerless:

<u>The Standard Regulation is:</u> 1.) limited brow-tined bull/antlerless permits (300-350 in HD 319 and 175-225 in HD 341) valid hunting district wide for the 5-week general season OR; 2.) 1-2 weeks general season brow-tined bull/antlerless regulations [Limited A-9/B-12 antlerless licenses (B-tags) may also be recommended in combination with the above options].

The Standard Regulation will be recommended if: the number of elk observed during post-season aerial trend surveys is within a range of 1,250-1,700 elk [(810-1,100 elk) in HD 319 and (445-600 elk) in HD 341].

<u>The Liberal Regulation is:</u> 1.) 4-5 weeks general season brow-tined bull/antlerless regulations OR; 2.) 5-week general season antlerless ONLY. [Limited A-7 and/or A-9/B-12 antlerless licenses (B-tags) may also be recommended in combination with the above options]. Archery regulations will also be antlerless ONLY.

Liberal Regulation 1.) (above) will be recommended if: the number of elk observed during post-season aerial trend surveys is more than 1,700 elk (more than 1,100 in HD 319 and more than 600 elk in HD 341.

Liberal Regulation **2.) (above)** will be recommended if: after 2 consecutive years of application of Liberal Regulation 1.) (above) the number of elk observed during post-season aerial trend surveys remains more than 1,700 elk (more than 1,100 in HD 319 and more than 600 elk in HD 341.

<u>The Restrictive Regulation is:</u> limited (less than 350 in HD 319 and less than 175 in HD 341) brow-tined bull/antlerless permits valid for the 5-week general season.

The Restrictive Regulation will be recommended if: the number of elk observed during post-season aerial trend surveys is less than 1,250 elk (less than 810 elk in HD 319 and less than 445 elk in HD 341 for 2 consecutive years.

Antlered:

The Standard Regulation is: 5-week general season brow-tined bull regulation.

The Standard Regulation will be recommended if: the bull:100 cow ratio observed during post-season aerial trend surveys is at least 10:100.

<u>The Restrictive Regulation is:</u> **1.)** unlimited permits for brow-tined bulls by HD; OR **2.)** limited antlered bull permits. ARCHERS WILL ALSO BE REQUIRED TO APPLY FOR THE UNLIMITED AND LIMITED PERMITS.

- 1.) Unlimited permits for brow-tined bulls by HD will be recommended if: the bull:100 cow ratio observed during post-season aerial trend surveys is less than 10:100 for 2 consecutive years. If a Restrictive regulation is implemented, and the post-season aerial classification reaches 15 bulls:100 cows or greater for 2 consecutive years, a standard season would again be recommended.
- **2.)** Limited permits for antlered bulls will be recommended if: the bull:100 cow ratio observed during the post-season aerial trend survey remains less than 10:100 after 2 consecutive years of application of unlimited permits.

PIONEER EMU (Hunting Districts 329, 331, and 332)



Description: This EMU is located west and north of Dillon and extends to the Big Hole valley. The EMU encompasses approximately 2,040 square miles, and is moderately steep with generally good security cover. Approximately 55% of the land base lies within lands administered by the USDA U.S. Forest Service (USFS) - Beaverhead National Forest. The USDI Bureau of Land Management (BLM) administers several large blocks of land, located mostly in the Rocky Hills and in the southern portion of the East Pioneers.

Public Access: There is reasonable access to public land in most of the unit, although the area generally has a low open road density. However, access to public lands is quite limited along the southeastern portions of the Big Hole Divide, where several non-resident landowners have restricted access. Significant roadless areas exist in portions of HDs 331 and 332. An important unsecured access through private land is located in Lost Creek in the East Pioneers, and is the focus of ongoing negotiations with the landowner.

Elk Populations: Numbers of elk observed on aerial trend flights have decreased substantially since 1992 (Figure 1). Liberalized hunting seasons, combined with low calf recruitment and some overwinter mortality during the winter of 1996-1997 resulted in a decrease in numbers of elk observed during post-season aerial surveys. Survey conditions were poor during 2004, however, and elk numbers may not have declined to the extent portrayed in Figure 1.

Recreation provided: The EMU provided an annual average 26,217 days of hunting recreation for 6,537 hunters during 1999-2001.

Wildlife viewing opportunities exist along the entire west face of the West Pioneers. Additionally, elk are observable from U.S. Highway 278, in Upper Horse Prairie, and on Bachelor Mountain.

Annual Elk Harvest: During 1999-2001, an average of 1,315 elk were harvested in this EMU annually. This included an annual average of 682 bulls and 633 antlerless elk.

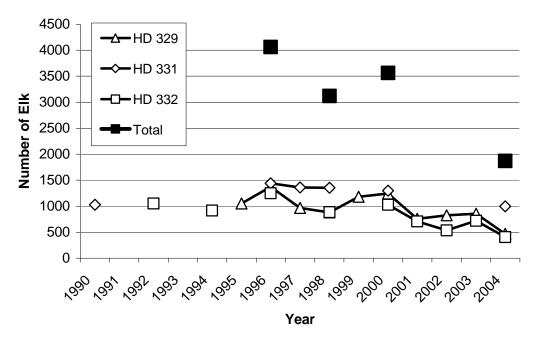


Figure 1. Number of elk counted during post-season aerial trend surveys of the Pioneer EMU, 1990-2004.

Accomplishments: The Hirschy Conservation Easement, also within the Sapphire EMU, was completed in January 1998, and protected 10,829 acres of important elk habitat.

Comment was provided to state and federal land management agencies on timber sales, grazing allotments, road management activities, and subdivision proposals in the area encompassing the EMU. Input also was provided relative to the Grasshopper fuels reduction project.

Desired reductions in elk numbers were achieved by changes in hunting regulations. Since 1992, elk numbers observed during post-season aerial surveys in HD 329 were reduced by 40% (from a high of 1,373 to 823). In HD 332, numbers of elk observed were reduced by approximately 44% (from a high of 1,251 to 705). In HD 331, where winter habitat is much less concentrated than the aforementioned HDs, elk numbers were reduced only slightly, from a high of 1,439 to 1,299 observed elk in 2000, the last year good survey conditions existed in this HD.

Management Challenges: Several nonresident landowners limit access to elk inhabiting Coyote Creek in the southeast portion of the hunting district. Although we have reduced elk numbers by over 40% during the last decade in HD 329, local game damage problems still exist because of this access situation, and will likely intensify.

Several traditional landowners in the area adjacent to Coyote Creek experience game damage some years. However, early and/or late hunts have not been successful in solving the problem,

because shortly after the initiation of the hunt, the elk move to areas where hunting is not allowed.

Additionally, several landowners in the lower Grasshopper Valley have restricted hunting to the point that elk are secure on their lands, and do not move to traditionally used public lands during the fall hunting season.

Approximately 75 elk cause summer crop damage on private land in the Lost Creek area. Also, during some years, local elk depredation occurs on private land in the Harriet Lou area as a result of a 'sanctuary' created by lands closed by a nonresident landowner.

Population Monitoring: Complete coverage surveys of elk winter range are conducted annually via fixed-wing aircraft for all hunting districts within the Pioneer EMU. In some years with very low snow pack and wide distribution of elk, results do not represent comparable trend counts, only classification data. In these years, even classification data may not accurately represent proportions of widely distributed bulls.

SUMMARY OF PUBLIC COMMENT

Hunter crowding has intensified in recent years in this EMU as a result of liberal hunting opportunities (any-bull seasons), numerous either-sex permits, A-7 licenses, and a number of special hunts. Crowding occurs during both the archery and general seasons. Significant concern is expressed among sportsmen and traditional landowners about loss of access, and the unavailability of elk on lands closed by nonresident landowners. Some game damage is occurring to some of these traditional landowners in these areas where elk are not available for harvest. Block management remains very popular among hunters, and strong support exists for the expansion of that program. A-7 licenses remain under-subscribed in hunting districts 331 and 332. However, strong support exists for A-7 licenses in hunting district 329, mainly as a result of excellent success there.

MANAGEMENT GOAL

Manage elk populations within biological and social tolerances, and cooperate with public and private land managers/landowners in the management of elk habitat with an emphasis on maximizing hunter opportunity to harvest all age classes of bulls in a backcountry setting.

HABITAT OBJECTIVES

- 1.) Develop cooperative programs that encourage public and private land managers to maintain over 951,000 acres of productive elk habitat.
- 2.) Work with land management agencies to maintain fall elk security areas so that elk harvest is distributed throughout the season, with no more than 30% of the harvest of bulls occurring during the first week of the season.

HABITAT MANAGEMENT STRATEGIES

FWP will:

- Evaluate and provide recommendations on proposed logging, burning, grazing, mining, housing and recreational developments with regard to their potential impacts to elk and their habitats. Concerns will focus on maintaining elk habitat security adjacent to fall/winter ranges, and along bull elk travel corridors.
- Provide technical assistance to appropriate state and federal agencies to evaluate the potential effects of the National Fire Plan on elk and their habitats.
- Provide technical assistance to all land management agencies regarding travel planning.
- Identify potential projects that will preserve open space and traditional agriculture through the use of conservation easements.
- Work with public and private entities to promote livestock grazing that benefits vegetation, soils and wildlife. Private landowner incentives should be considered to protect important wildlife habitats on private land.

GAME DAMAGE STRATEGIES

Each game damage situation will be addressed based on its own specific circumstances. FWP has a set of options including early and late hunts, stackyard protection, herding, directing hunters to specific areas where elk are causing problems, or kill permits. FWP game damage policy establishes the rules for eligibility to use these measures. Block management and A-9/B-12 licenses (B-tags) may also be utilized to increase elk harvest.

ACCESS STRATEGIES

FWP will:

- Continue working on the Lost Creek access. Also, continue to communicate with nonresident landowners to solve the 'sanctuary' situation.
- Identify and pursue new block management opportunities.

POPULATION OBJECTIVES

Population objectives were established at levels generally lower than many sportsmen desired, but higher than some landowners desired. The objective for numbers of elk therefore represents a landowner tolerance/sportsmen carrying capacity that considers both viewpoints. FWP recognizes that game damage may occur under some conditions even at low population levels.

- 1.) Maintain 2,700-3,200 elk observed during post-season aerial surveys in HDs 329, 331, and 332. This would include a maximum of 900 elk in HD 329, 1,400 elk in HD 331, and 900 elk in HD 332.
- 2.) Maintain a minimum of 10 bulls:100 cows observed in post-season aerial surveys.

POPULATION MANAGEMENT STRATEGIES

REGULATION PACKAGES

Six-week either-sex archery regulation EXCEPT, see Restrictive Regulation for Antlered elk and Liberal Regulation 2.) for Antlerless elk.

Antlerless:

<u>The Standard Regulation is:</u> 1.) limited either-sex permits for the 5-week general season OR; 2.) 1-2 weeks general season either-sex regulations. [Limited A-9/B-12 antlerless licenses (B-tags) may also be recommended in combination with the above options].

The Standard Regulation will be recommended if: the number of elk observed during post-season aerial trend surveys is within 2,700-3,200 elk in the EMU. This would include a maximum of 900 elk in HD 329, 1,400 elk in HD 331, and 900 elk in HD 332.

<u>The Liberal Regulation is:</u> 1.) 4-5 weeks general season either-sex regulations OR; 2.) 5-weeks general season antlerless ONLY. [Limited A-9/B-12 antlerless licenses (B-tags) may also be recommended in combination with the above options]. Archery regulations will also be antlerless ONLY.

Liberal Regulation 1.) (above) will be recommended if: the number of elk observed during post-season aerial trend surveys is more than 900 elk in HD 329, 1,400 elk in HD 331, and 900 elk in HD 332.

Liberal Regulation 2.) (above) will be recommended if: after 2 consecutive years of application of Liberal Regulation 1.) (above) the number of elk observed during post-season aerial trend surveys remains more than 900 elk in HD 329, 1,400 elk in HD 331, and 900 elk in HD 332.

<u>The Restrictive Regulation is:</u> limited either-sex or brow-tined bull/antlerless permits valid for the 5-week general season.

The Restrictive Regulation will be recommended if: the number of elk observed during post-season aerial trend surveys is less than 760 in HD 329, 1,180 in HD 331, and 760 in HD 332 for 2 consecutive years.

Antlered:

The Standard Regulation is: 5-week general season antlered bull regulation.

The Standard Regulation will be recommended if: the bull:100 cow ratio observed during post-season aerial trend surveys is at least 10:100.

<u>The Restrictive Regulation is:</u> **1.)** 5-week general season brow-tined bull regulation OR; **2.)** unlimited permits for antlered bulls by HD OR; **3.)** limited antlered bull permits. ARCHERS WILL ALSO BE REQUIRED TO APPLY FOR THE UNLIMITED AND LIMITED PERMITS.

- **1.)** A brow-tined bull regulation will be recommended if: the bull:100 cow ratio observed during post-season aerial trend surveys is less than 10:100 for 2 consecutive years. If a Restrictive regulation is implemented, and the post-season aerial classification reaches 15 bulls:100 cows or greater for 2 consecutive years, a standard season would again be recommended.
- 2.) Unlimited permits for antlered bulls by HD will be recommended if: after 2 consecutive years of application of a brow-tined bull regulation the bull:100 cow ratio observed during post-season aerial trend surveys remains less than 10:100. If the post-season aerial classification reaches 15 bulls:100 cows or greater for 2 consecutive years, a brow-tined bull regulation would be recommended.
- **3.)** Limited permits for antiered bulls will be recommended if: the bull:100 cow ratio observed during the post-season aerial trend survey remains less than 10:100 after 2 consecutive years of application of unlimited permits.

TENDOY EMU (Hunting Districts 300, 302, and 328)



Description: Located immediately southwest of Clark Canyon Reservoir, this 1,028-square-mile EMU extends from Interstate 15 to the Continental Divide along the Idaho border between Monida Pass and Lemhi Pass. Scattered timber cover, moderate road densities, and moderate to steep topography characterize most of the area. Elk use about 70% of this EMU at some time during the year. Of land used by elk, 56.6% is administered by the U. S. Forest Service – Beaverhead National Forest (USFS), 23.6% by USDI – Bureau of Land Management (BLM), 5.7% by Montana Department of Natural Resources and Conservation (DNRC), and 14.1% is private land.

Public Access: Public hunting access in the EMU is generally good, with several notable and significant exceptions. Recently, several nonresident landowners have closed large acreages of private land to public access, thus providing a "refuge" for elk.

Elk Populations: Elk population trend counts (Figure 1) indicate that elk numbers are within elk plan objectives, with the exception of HD 328, where the objective for elk counted is 700 elk and we observed 919 elk in 2003. However, about 500 of these elk have found a "sanctuary" on private land closed to hunting in Trail Creek and are not accessible to hunters to achieve the reduction in numbers targeted by any FWP harvest regulation. Trend counts were down considerably in 2004, however counting conditions were considered poor and the elk population likely did not decline to the extent portrayed in Figure 1.

Recreation Provided: This EMU provided an average of 15,515 days of hunter recreation for 3,200 elk hunters annually during 1999-2001. This is significantly higher than was recorded a decade ago, when a total of 8,500 days of hunter recreation was provided for 1,700 hunters. This increase in hunters and hunter days has not been able to affect a population reduction to objective level in HD 328 because of the private land "refuge" there.

Wintering elk can be observed from I-15 near Lima, State Highway 324, the Little Sheep Creek Road, and at various locations along the Medicine Lodge Scenic Byway.

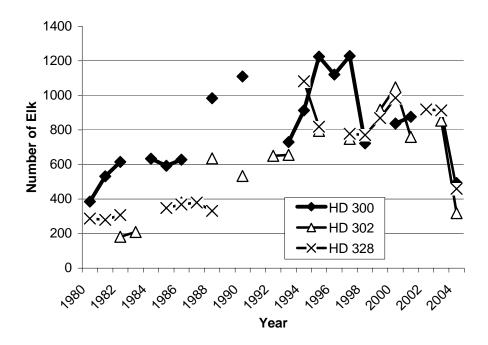


Figure 1. Number of elk counted during post-season aerial trend counts in HDs 300, 302, and 328, 1980-2004.

Current Annual Elk Harvest: During 1999-2001, an average 754 elk, including 388 antlered and 366 antlerless elk, were harvested in this EMU annually.

Accomplishments: A total of 6 Block Management Areas and one conservation easement were established in this EMU. A total of 62,000 acres are under Block Management contract, and 14,650 acres are included in the Dragging 'Y' Conservation Easement in the Tendoy and Pioneer EMUs.

Management Challenges: The primary management challenge is negotiating hunter access to elk inhabiting HD 328. Specifically, providing access to those elk finding "refuge" on private land in Trail Creek, where they are unavailable for management. Similarly, elk inhabiting private lands in the north end of the Lima Peaks are finding a de facto sanctuary there as well

A chronic depredation problem occurs in the southeast portion of HD 302, where elk cause crop damage in late summer/early fall during dry years. We have addressed this problem with a combination of herders and early and late seasons. These approaches have provided limited success.

Hunter crowding has increased during the last decade, with hunter numbers and hunter days nearly doubling during that period.

Population Monitoring: Complete coverage fixed-wing aerial surveys of elk winter range are conducted annually in the three HDs comprising this EMU. During open winters, when elk are not concentrated on traditional winter ranges, or when some elk remained in Idaho, survey data was too incomplete to provide population trend information in both HDs 300 and 328. In those years, flight data were only useful for sex/age classifications. The proportion of bulls also may not be accurately represented in these years.

SUMMARY OF PUBLIC COMMENT

Complaints about excessive numbers of hunters are one of the most common comments received for this EMU. Hunter shift into this EMU is a result of liberalized seasons, elk population density, the observability of elk in this open country, and increasingly restricted hunting seasons in other hunting districts and regions. Some hunters seem to be selecting for the particular hunting opportunities they find in this EMU, as evidenced by the significant increase in both hunters and hunters days over the past decade.

Another significant issue is the portion of the elk population in HD 328 (Trail Creek) that is spending the hunting season on property closed to hunting. Hunters express frustration about the loss of hunting opportunity and some neighboring landowners express frustration with the game damage that results from this situation.

MANAGEMENT GOAL

Manage elk populations within biological and social tolerances, and cooperate with land managers in the management of elk habitat with an emphasis on maximizing hunter opportunity while providing for the biological needs of elk.

HABITAT OBJECTIVE

Continue to participate in cooperative programs that encourage public and private land managers to maintain 504,000 acres of occupied elk habitat.

HABITAT MANAGEMENT STRATEGIES

FWP will:

- Evaluate proposed logging, grazing, mining, residential subdivisions, and recreational developments with regard to their potential impacts on elk and their habitat.
- Provide technical assistance to appropriate State and Federal Agencies that will help evaluate the potential effects of the National Fire Plan on elk and their habitats.
- Cooperate with all land management agencies to provide input into travel planning.
- Identify potential projects that will preserve open space and traditional agriculture through the use of conservation easements.

- Work with public and private entities to promote livestock grazing practices that benefit vegetation, soils, and wildlife. A variety of private landowner incentives should be considered to protect important wildlife habitats on private lands.
- Work with public land managers to maintain important security habitat in this low security environment.

GAME DAMAGE STRATEGIES

FWP will:

- Address chronic game damage in a portion of HD 302 by the use of A-9/B-12 antlerless licenses valid during the period from 15 August to 15 February.
- Maintain lines of communication with the private landowner or his manager on the "refuge" that exists in Trail Creek (HD 328), and also with the nonresident landowner in the Lima Peaks and Little Sheep Creek country. Through these conversations, try to gain access for hunters to achieve elk population reduction.

ACCESS STRATEGIES

FWP will:

- Continue to pursue potential solutions to the hunter access problem in Trail Creek of HD 328.
- Continue as a cooperator in the development of the Southwest Montana Interagency Access and Travel Plan.

POPULATION OBJECTIVES

- 1.) Maintain the number of elk observed during post-season aerial surveys between 1,800 2,300 elk in hunting districts 300, 302, and 328. This EMU objective includes 700-900 elk in HD 300, 550-700 elk in HD 302, and 550-700 elk in HD 328 (this number does not include the approximately 500 elk unavailable to hunters in the Trail Creek area in HD 328). If hunter access to significant numbers of these elk could be obtained, the objective would be to reduce that segment by about half.
- 2.) Maintain at least 10 bulls:100 cows in the total elk observed during post-season aerial surveys.

POPULATION MANAGEMENT STRATEGIES

REGULATION PACKAGES

Six-week either-sex archery regulation (HDs 300 & 328) or brow-tined bull/antlerless elk regulation (HD 302) EXCEPT, see Restrictive Regulation for Antlered elk and Liberal Regulation 2.) for Antlerless elk.

Antlerless:

<u>The Standard Regulation is:</u> 1.) limited either-sex (HDs 300 and 328) or brow-tined bull/antlerless (HD 302) permits for the 5-week general season OR; 2.) 1-2 weeks general season either-sex (HDs 300 and 328) or brow-tined bull/antlerless (HD 302) regulations. [Limited A-9/B-12 antlerless licenses (B-tags) may also be recommended in combination with the above options].

The Standard Regulation will be recommended if: the number of elk observed during postseason aerial trend surveys is within the HD objective range.

<u>The Liberal Regulation is:</u> **1.)** 4-5 weeks general season either-sex (HDs 300 and 328) or browtined bull/antlerless (HD 302) regulations OR; **2.)** 5-week general season antlerless ONLY regulation. [Limited A-9/B-12 antlerless licenses (B-tags) may also be recommended in combination with the above options]. Archery regulations will also be Antlerless ONLY.

Liberal Regulation 1.) (above) will be recommended if: the number of elk observed during post-season aerial trend surveys is above the maximum HD objectives.

Liberal Regulation **2.)** (above) will be recommended if: after 2 consecutive years of application of Liberal Regulation 1.) (above) the number of elk observed during post-season aerial trend surveys remains above the maximum HD objectives.

<u>The Restrictive Regulation is:</u> limited either-sex (HDs 300 and 328) or brow-tined bull/antlerless (HD 302) permits valid for the 5-week general season.

The Restrictive Regulation will be recommended if: the number of elk observed during post-season aerial trend surveys is below the minimum HD objectives for 2 consecutive years.

Antlered:

<u>The Standard Regulation is:</u> 5-week general season either-sex (HDs 300 and 328) or brow-tined bull/antlerless (HD 302) regulations.

The Standard Regulation will be recommended if: the bull:100 cow ratio observed during post-season aerial trend surveys is at least 10:100

<u>The Restrictive Regulation is:</u> **1.)** 5-week general season brow-tined bull regulation (HDs 300 and 328) OR; **2.)** unlimited permits for brow-tined bulls by HD OR; **3.)** limited antlered bull permits. ARCHERS WILL ALSO BE REQUIRED TO APPLY FOR THE UNLIMITED AND LIMITED PERMITS.

1.) A brow-tined bull regulation will be recommended if: the bull:100 cow ratio observed during post-season aerial trend surveys is less than 10:100 for 2 consecutive years. If a Restrictive

Regulation is implemented, and the post-season aerial classification reaches 15 bulls:100 cows or greater for 2 consecutive years, a Standard Regulation would again be recommended.

- 2.) Unlimited permits for brow-tined bulls by HD will be recommended if: after 2 consecutive years of application of brow-tined bull regulations the bull:100 cow ratio observed during post-season aerial trend surveys remains less than 10:100. If the post-season aerial classification reaches 15 bulls:100 cows or greater for 2 consecutive years, a brow-tined bull regulation would be recommended.
- **3.)** Limited permits for antlered bulls will be recommended if: the bull:100 cow ratio observed during the post-season aerial trend survey remains less than 10:100 after 2 consecutive years of application of unlimited permits.

GRAVELLY EMU(Hunting Districts 322, 323, 324, 325, 326, 327 and 330)



Description: This 3,044-square-mile EMU [2,181 square miles (75%) are occupied by elk] encompasses the Gravelly, Greenhorn, Snowcrest, Centennial, and Blacktail mountain ranges of southwest Montana and includes 7 hunting districts (HDs). With the exception of the Snowcrest and Centennial Mountains, which are steep and rugged, the unit consists primarily of gentle, rolling terrain, even at high elevations. The USDA –Forest Service (USFS) Beaverhead-Deerlodge National Forest, administers about 24% of the EMU, about 20% is administered by the USDI – Bureau of Land Management (BLM), 13% by the Montana Department of Natural Resources and Conservation (DNRC), and about 37% is private land. The area of elk distribution includes 33.5% USFS land, 23.1% BLM land, 12.7% DNRC land, and 26.3% private land. However, weighted by numbers and time spent, about 71% of locations of radio-collared elk throughout the year were on USFS lands (Hamlin and Ross 2002). Three FWP-administered Wildlife Management Areas (WMAs) are located in this EMU (Blacktail, Wall Creek and Robb-Ledford WMAs) and about 45% of winter locations of radio-collared elk were on the WMAs and 37% on USFS land (Hamlin and Ross 2002).

Public Access: Most of the EMU is easily accessed by road. The Wall Creek, upper Elk River, and west half of the Snowcrest Range Area Closures are the primary areas without road access that provide elk security. Public hunting access is good in most of the unit except for portions of the west side of the Snowcrest and Greenhorn ranges, northeast side of the Gravelly Mountains, and the Blacktail Mountains.

Elk Populations: Elk populations increased in this EMU following FWP acquisition of elk winter ranges in the 1960s and 1970s. The acquisition of the Robb-Ledford WMA in 1988 has also fostered a continued population increase. In recent years, the number of elk counted during post-season aerial trend surveys has been 8,000-8,500 (Figure 1). This total (Figure 1) does not include HD 322, where 430 elk were counted during 2004. Thus for the entire EMU, about 9,000 elk were counted post-season 2004. Post-season bull:100 cow ratios have ranged from 11-18 bulls:100 cows recently.

Recreation Provided: The EMU provided an annual average of 60,836 days of hunting recreation to about 11,825 hunters during 1999-2001. Wintering elk can often be seen on the Wall Creek WMA, from U.S. Highway 287 just south of Indian Creek, and the public often drives the Blacktail road to observe elk on the Blacktail WMA, southeast of Dillon. Wintering elk can also be observed from the Ruby River road.

Current Annual Elk Harvest: An annual average of 2,537 elk (990 antlered and 1,543 antlerless) were harvested during 1999-2001 in this EMU. With a brow-tined bull regulation, the bull harvest has been almost entirely 2- year-old or older bulls. Bulls with 6 points on at least 1 antler averaged 15% of total bull harvest during 1999-2001.

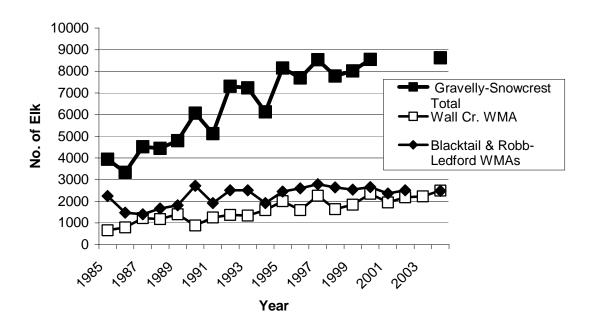


Figure 1. Number of elk observed during post-season aerial trend surveys in the Gravelly-Snowcrest Mountains, 1985-2004 (Total does not include 430 elk in HD 322).

Accomplishments: FWP has worked with land management agencies to review and evaluate potential impacts of timber sales and burn projects in sagebrush and aspen habitat on elk, elk habitat, and elk management. FWP has also worked with land management agencies and private landowners to review and evaluate potential impacts on elk, elk habitat, and elk management of new and existing livestock Allotment Management Plans. FWP has maintained rest-rotation grazing systems on the Wall Creek and Robb-Ledford WMAs in an attempt to improve vegetation condition, increase elk winter forage quality and quantity, and increase the tolerance for elk on the private lands of participating landowners. FWP has maintained one and

established 6 additional Block Management Areas that assist with maintenance of elk habitat and hunter harvest on private lands. FWP completed a 12-year field research study of elk ecology and management in the Gravelly-Snowcrest Mountains and the final report with results and management recommendations was completed in April 2002 (Hamlin and Ross 2002).

Management Challenges: A common challenge for all hunting districts in this EMU is reducing hunter crowding while maintaining hunter opportunity. Hunter crowding is occurring during both the archery and general seasons. As regulations have become more restrictive in adjoining EMUs and Regions, hunter participation in this EMU has increased, while declining in other Regions.

Another common management challenge has been that bulls are heavily harvested in this highly accessible, low-security (cover limited) EMU but adequate antlerless harvests have not been achieved.

ATV use in this EMU is high and there are considerable social conflicts associated with that use. Many hunters complain about ATV use of closed roads and closed areas.

<u>HD 322</u> - Population management in this district has become much more difficult in the last ten years. One landowner has restricted access in Trout, Spring, and McHessor Creeks for more than 15 years. More recently, another landowner has also restricted access in McHessor Creek and several landowners have restricted access on the north end of the Ruby Mountains. This, along with recent mild weather conditions during the hunting seasons, has severely hindered achievement of adequate antlerless harvests. Limited access for hunters has also contributed to game damage on these same lands, as well as lands of neighboring landowners.

<u>HDs 323 and 324</u> – FWP has not been able to achieve adequate harvests of antlerless elk to meet population goals, especially within HD 323. This has contributed to some increased problems with landowner tolerance of elk numbers on adjacent private lands, especially on a ranch adjoining the Wall Creek WMA. Fortunately, much of the winter range in HDs 323 and 324 are public lands so that game damage is not a large-scale problem. However, the reduced harvests resulting in increased elk numbers during winter may put elk numbers at or above capacity of the public winter ranges for an average, and certainly severe winter.

<u>HD 325</u> – Achievement of adequate antlerless harvests to meet population goals is also a problem in this HD. Additionally, access for hunters to both private and public lands has become more restrictive in recent years. This limited access contributes to growing difficulty in managing the elk population. The primary landowner, Matador Ranch, has been as generous with access as anyone in the state, but growing elk numbers, game damage, concerns with the spreading of weeds, and increased hunter numbers are increasing their frustration. It is imperative that these trends be reversed to maintain the cooperation of this ranch. An additional problem with managing elk numbers on winter

range in the south portion of this district is the fact most of these elk spend the fall in Idaho where antlerless harvest is minimal. This contributes to insufficient antlerless harvest and the increasing elk numbers on Montana winter range.

<u>HD 326</u> - A few landowners on the west side of this district have restricted access, contributing to the difficulty in obtaining sufficient antlerless harvest. This has contributed to some increased problems with landowner tolerance of elk numbers on adjacent private lands as well as some game damage concerns.

<u>HD 327</u> – There has been some increase in limiting hunter access by a few landowners.

<u>HD 330</u> - Several landowners have restricted access along the west slope of the Greenhorns and there is very little access across private land to public lands. Although there have not been recent game damage complaints on the west slope of the Greenhorns, the limited access contributes to growing difficulty in managing the elk populations that winter there. On the east slope of the Gravelly-Greenhorn complex, the major winter range and surrounding area as well as several other ownerships to the north are not accessible to hunters. This has contributed to game damage on these lands as well as those of neighboring landowners.

Population Monitoring: Annual mid-winter fixed-wing aerial surveys of winter ranges are conducted and total elk numbers and numbers and ages of bulls are recorded. During late winter, sex and age classifications that include calf:100 cow ratios are conducted from the ground on various winter ranges.

SUMMARY OF PUBLIC COMMENT

Public comments have indicated general support for maintaining or increasing the elk population and reducing hunter numbers. Some have expressed preference for maintaining elk populations at current levels. The majority of hunters have been satisfied with existing opportunities; only minor interest has been expressed in increasing numbers of older bulls harvested. There is strong support for improving elk security. However, there are limited opportunities to improve elk security because of limited timber cover and public desire to maintain current levels of road access.

MANAGEMENT GOAL

Manage for a stable elk population with a maximum sustained harvest of 2-year-old or older bulls, minimize illegal mortality, and cooperate with land managers in the management of elk habitat to maintain a healthy elk population.

HABITAT OBJECTIVES

1) Maintain or improve range condition on elk summer ranges, key calving areas, and winter ranges.

- 2) Maintain security conditions for elk during fall (adequate timber cover and limited road access) so that elk harvest is distributed throughout the hunting season with no more than 45-50% of harvested bulls are taken during the first week of the general season.
- 3) Manage FWP WMAs to maintain or improve vegetation condition.

HABITAT MANAGEMENT STRATEGIES

FWP will cooperate with public and private land managers to pursue the following habitat management strategies:

- Provide technical assistance in the evaluation of proposed timber sales and road building, with particular emphasis adjacent to key elk winter ranges where such development has the greatest potential to negatively impact survival of bull elk. If new road construction in such areas is considered, FWP will recommend that they be designed so they do not bisect important elk travel routes (e.g. between security areas and feeding areas) and accommodate closure by obstruction.
- Identify key blocks of elk security cover for which the Management Area (MA) designation in the Beaverhead-Deerlodge Forest Plan may result in land management actions that will reduce elk security. Areas currently of concern to FWP include French Gulch, Pole Patch, Clover Meadows, Dry Fork of Ruby Creek, Ruby Creek, Horse Creek, and Granite Mountain.
- Work with land management agencies to accomplish an inventory of areas where past logging activities have resulted in areas of low security for elk and encourage establishment and maintenance of higher elk security cover in these areas.
- Provide technical assistance in the review and evaluation of existing livestock allotment management plans (AMPs). Encourage establishment and retention of managed grazing systems for livestock that address the needs of soil, vegetation, and elk.
- Provide technical assistance in evaluations of proposed burn projects for sagebrush, aspen, and Douglas fir communities on public or private lands. Where applicable, FWP will emphasize the value of such communities for elk calving, summer, or winter range.
- In response to the National Fire Plan, FWP will promote the application of the Sagebrush MOU between the Beaverhead-Deerlodge National Forest and FWP Region Three. FWP will encourage the maintenance of conifer establishment where forested habitat cover is limited. In addition, FWP will encourage maintaining or increasing cover in fall security and thermal cover areas, as well as travel corridors and adjacent to winter range.
- Encourage maintenance of sagebrush communities on public lands to maintain vegetation diversity, soil cover, elk forage quality and quantity, important elk winter range and important cover in elk calving areas.
- FWP will explore development of incentives to private landowners who agree to conserve key sagebrush areas and allow a reasonable level of public elk hunting.
- Through use of conservation easements, leases, land trades and/or fee title acquisition, encourage owners of elk winter range to maintain those lands in an agricultural base rather than developing or subdividing their property.
- Encourage retention of Douglas fir (or other conifer) establishment on public rangelands in this EMU where security cover for elk is minimal.

• Utilize rest-rotation livestock grazing, where appropriate, to improve winter elk forage quality and quantity on WMAs. Cooperative rest-rotation grazing systems may include private lands adjacent to WMAs.

GAME DAMAGE STRATEGIES

FWP will:

- Work with private landowners in the Sweetwater Hills and on the east side of the Gravelly Mountains to achieve levels of hunter access that will help achieve harvests that will maintain elk numbers at levels within landowner tolerance.
- Maintain rest-rotation livestock grazing systems on the Wall Creek and Robb/Ledford WMAs to improve winter elk forage quality and quantity on all lands included in the system, reduce elk use of adjacent lands, and improve participating landowner tolerance for wintering elk.

ACCESS STRATEGIES:

FWP will.

- Identify and pursue opportunities for block management agreements or other cooperative landowner programs, primarily on the west side of the Snowcrest and Greenhorn ranges, the east side of the Gravelly Mountains, and in the Blacktail Mountains. FWP will also support and encourage efforts by federal and state land management agencies to secure access to public lands in these areas.
- Cooperate with the USFS and BLM in evaluating the use of ORVs in specific areas. Assess the impacts of such activities on elk vulnerability and bull survival, and formulate necessary management actions.

POPULATION OBJECTIVES

- 1.) Maintain the number of elk observed during post-season aerial trend surveys within 15% of 7,000 elk (5,950-8,050).
- 2.) Maintain at least 10 bulls:100 cows or 7% bulls observed in the post-season aerial trend surveys.

POPULATION MANAGEMENT STRATEGIES

REGULATION PACKAGES

Six-week brow-tined bull/antlerless archery regulation EXCEPT, see Restrictive Regulation for antlered elk and Liberal Regulation 2.) for antlerless elk.

Antlerless:

<u>The Standard Regulation is:</u> 1.) limited brow-tined bull/antlerless permits [limited A-9/B-12 (B-tags) licenses may also be issued] OR; 2.) 1-2 weeks general season brow-tined bull/antlerless regulation [limited A-9/B-12 (B-tags) licenses may also be issued].

The Standard Regulation will be recommended if: the number of elk observed during post-season aerial trend surveys is within 15% (5,950-8,050) of the objective.

<u>The Liberal Regulation is:</u> **1.)** 4-5 weeks general season brow-tined bull/antlerless regulation OR; **2.)** 5-week general season antlerless ONLY regulation. Archery regulations will also be antlerless ONLY.

Liberal Regulation 1.) (above) will be recommended if: the number of elk observed during post-season aerial trend surveys is 20% or more above objective (more than 8,050 elk).

Liberal Regulation 2.) (above) will be recommended if: after 2 consecutive years of application of Liberal Regulation 1.) (above) the number of elk observed during post-season aerial trend surveys remains 20% or more above objective (more than 8,050 elk).

The Restrictive Regulation is: limited brow-tined bull/antlerless permits.

The Restrictive Regulation will be recommended if: the number of elk observed during post-season aerial trend surveys is more than 20% below the objective (less than 5,950 elk) for 2 consecutive years.

Antlered:

The Standard Regulation is: 5-week general season brow-tined bull regulation.

The Standard Regulation will be recommended if: the bull:100 cow ratio observed during post-season aerial trend surveys is at least 10 bulls:100 cows or bulls are at least 7% of the total population count.

<u>The Restrictive Regulation is</u>: **1.)** unlimited permits for brow-tined bulls by HD OR; **2.)** limited permits for antlered bulls. ARCHERS WILL ALSO BE REQUIRED TO APPLY FOR THE UNLIMITED AND LIMITED PERMITS.

- 1.) unlimited permits for brow-tined bulls by HD will be recommended if: the bull:100 cow ratio observed during post-season aerial trend surveys is less than 10 bulls:100 cows or bulls are less than 7% of the total population count for 2 consecutive years.
- **2.)** limited permits for antiered bulls will be recommended if: the bull:100 cow ratio observed during post-season aerial trend surveys remains less than 10 bulls:100 cows or bulls are less than

7% of the to	otal population	count after	2 consecutive	years o	consecutive	years of	f application	of
unlimited pe	ermits.							

TOBACCO ROOT EMU (Hunting Districts 320 and 333)



Description: The Tobacco Root Mountains are a small isolated mountain range that lies between the Madison, Jefferson and Ruby Rivers, south of Whitehall. This 955-square-mile EMU [727-square-miles (76%) occupied by elk] features a considerable amount of timbered habitat in steep and rugged terrain. The USDA-Forest Service Beaverhead-Deerlodge National Forest (USFS) administers 28% of the land in the EMU, the USDI-Bureau of Land Management (BLM) administers 8%, the Montana Department of Natural Resources and Conservation (DNRC) administers 5%, and 58% of the EMU is private land. Most elk winter range (69%) in the Tobacco Root EMU is on private lands managed for livestock and hay production.

Public Access: Due to its rugged terrain and high alpine peaks, the central portion of the unit has limited road access. Most of the periphery of the unit is easily accessible except for the east side, where landowner restrictions limit public access.

Elk Populations: Timber cover and rugged terrain provide good elk security. The elk population, winters almost exclusively on private lands and has been managed at levels below carrying capacity of elk habitats to avoid exceeding landowner tolerance for numbers of wintering elk. Recently, the number of elk observed during post-season aerial trend counts has ranged between 900 and 1,350 (Figure 1) and bull:100 cow ratios have ranged from 8-21:100.

Recreation Provided: The EMU provided an annual average 14,086 days of hunting recreation for 2,365 hunters during 1999-2001. Wintering elk can be viewed in the mornings and evenings just north of the Valley Garden Golf Course at Ennis.

Current Annual Elk Harvest: An annual average 425 elk (183 antlered and 243 antlerless) were harvested during 1999-2001. With a brow-tined bull regulation, the bull harvest has been composed of almost entirely 2-1/2-year-old or older bulls. Bulls with 6 points on at least 1 antler averaged 20% of total bull harvest during 1999-2001.

Accomplishments: FWP has worked with land management agencies to review and evaluate potential impacts of timber sales and burn projects in sagebrush and aspen habitat on elk, elk habitat, and elk management. FWP has also worked with land management agencies and private

landowners to review and evaluate potential impacts of new and existing livestock Allotment Management Plans on elk, elk habitat, and elk management.

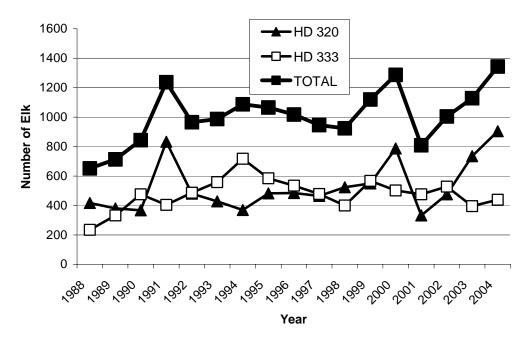


Figure 1. Number of elk observed during post-season aerial trend surveys in the Tobacco Root EMU, 1988-2004.

Management Challenges: A common challenge for both hunting districts in this EMU is reducing hunter crowding while maintaining annual hunter opportunity. Hunter crowding is occurring during both the archery and general seasons. As regulations have become more restrictive in adjoining EMUs and Regions, hunter participation in this EMU has increased, while declining in other Regions.

<u>HD 320</u> - Population management in this district is difficult because hunter access is severely limited by private landowners in the southeast corner where the primary winter range for about half the elk in the district is located. This has made achievement of adequate antlerless harvest difficult. Limited access for hunters has also contributed to game damage on these same lands as well as lands of neighboring landowners.

<u>HD 333</u> –Access for general public hunters is probably more limited in this hunting district than any other in either the Gravelly or Tobacco Root EMUs. Thus, ability to manage the elk population is minimal.

Population Monitoring: Aerial fixed-wing flights are conducted on elk winter ranges in the Tobacco Root EMU during mid-winter. Number of elk observed and sex and age ratios are recorded.

SUMMARY OF PUBLIC COMMENT

Limited public comment over the last several years has indicated general satisfaction with the current recreational character of the unit. Only minor interest has been expressed in increasing numbers of older bulls harvested. The majority of hunters have been satisfied with existing opportunities. There is strong interest among hunters for increased access to harvest elk. Interest has been expressed in reducing hunter numbers. Game damage has occasionally been an issue of concern. There is strong support for maintaining or improving elk security as well as maintaining existing levels of road access.

MANAGEMENT GOAL

Manage for a stable elk population with a maximum sustained harvest of 2-1/2-year-old or older bulls, minimize illegal mortality, and cooperate with land managers in the management of elk habitat to maintain a healthy elk population.

HABITAT OBJECTIVES

- 1.) Maintain or improve range condition on elk summer ranges, key elk calving areas, and sagebrush winter ranges.
- 2.) Maintain or improve security conditions for elk during fall (adequate timber cover and limited road access) so that elk harvest is distributed throughout the hunting season, with no more than 35-40% of the bull harvest taken during the first week of the general season.

HABITAT MANAGEMENT STRATEGIES

FWP will cooperate with public and private land managers to pursue the following habitat management strategies:

- Provide technical assistance in the evaluation of proposed timber sales and road building, with particular emphasis adjacent to key elk winter ranges where such development has the greatest potential to negatively impact survival of bull elk. If new road construction in such areas is considered, FWP will recommend that they be designed so they do not bisect important elk travel routes (e.g. between security areas and feeding areas) and accommodate closure by obstruction.
- Identify key blocks of elk security cover for which the Management Area (MA) designation in the Beaverhead-Deerlodge Forest Plan may result in land management actions that will reduce elk security.
- Work with land management agencies to accomplish an inventory of areas where past logging activities have resulted in areas of low security for elk and encourage establishment and maintenance of higher elk security cover in these areas.
- Provide technical assistance in the review and evaluation of existing livestock allotment management plans (AMPs). Encourage establishment and retention of managed grazing systems for livestock that address the needs of soil, vegetation, and elk.
- Provide technical assistance in evaluations of proposed burn projects for sagebrush,

- aspen, and Douglas fir communities on public or private lands. Where applicable, FWP will emphasize the value of such communities for elk calving, summer or winter range.
- In response to the National Fire Plan, FWP will promote the application of the Sagebrush MOU between the Beaverhead-Deerlodge National Forest and FWP Region Three. FWP will encourage the maintenance of conifer establishment where forested habitat cover is limited. In addition, FWP will encourage maintaining or increasing cover in fall security and thermal cover areas, as well as travel corridors and adjacent to winter range.
- Encourage maintenance of sagebrush communities on public lands to maintain vegetation diversity, soil cover, elk forage quality and quantity, important elk winter range and important cover in elk calving areas.
- FWP will explore the possibility of developing incentives to private landowners who agree to conserve key sagebrush areas and allow a reasonable level of public elk hunting.
- Through use of conservation easements, leases, land trades and/or fee title acquisition, encourage owners of elk winter range to maintain those lands in an agricultural base rather than developing or subdividing their property.
- Encourage retention of Douglas fir (or other conifer) establishment on public rangelands in this EMU where security cover for elk is minimal.

GAME DAMAGE STRATEGIES

FWP will.

- Continue to attempt to achieve antlerless harvests that will maintain the elk population within the constraints of landowner tolerance for elk on privately-owned winter ranges.
- Provide technical assistance to USFS and BLM land managers that will help develop and/or maintain domestic livestock grazing management strategies on public lands on or adjacent to elk winter ranges. The intent of this strategy is to reduce winter elk use on private lands by encouraging elk to use public lands.

ACCESS STRATEGIES

FWP will:

- Identify opportunities for block management projects or other cooperative landowner programs, primarily on the north and east sides of the unit.
- Support and encourage efforts by federal and state agencies to secure access to public lands in these areas.
- Cooperate with the USFS and BLM in evaluating use of off-road vehicles (ORVs) in specific areas; assess impacts of such activities on elk vulnerability and bull survival, and formulate necessary management actions.

POPULATION OBJECTIVES

- 1.) Maintain the number of elk observed during post-season aerial trend surveys within 20% of 1,000 elk (800-1,200).
- 2.) Maintain at least 10 bulls:100 cows or 7% bulls observed in the post-season aerial trend surveys.

POPULATION MANAGEMENT STRATEGIES

REGULATION PACKAGES

Six-week brow-tined bull/antlerless archery regulation EXCEPT, see Restrictive Regulation for Antlered elk and Liberal Regulation 2.) for Antlerless elk.

Antlerless:

<u>The Standard Regulation is:</u> 1.) limited brow-tined bull/antlerless permits AND, limited numbers of A-9/B-12 (B-tags) licenses may also be issued OR; 2.) 1-2 week general season brow-tined bull/antlerless regulation AND, limited numbers of A-9/B-12 (B-tags) licenses may also be issued.

The Standard Regulation will be recommended if: the number of elk observed during post-season aerial trend surveys is within 20% of the objective (800-1,200 elk).

<u>The Liberal Regulation is:</u> **1.)** 4-5 week general season brow-tined bull/antlerless regulation AND, limited numbers of A-9/B-12 (B-tags) licenses may also be issued OR; **2.)** 5-week general season antlerless ONLY regulation AND, limited numbers of A-9/B-12 (B-tags) licenses may also be issued. Archery regulations will also be Antlerless ONLY.

Liberal Regulation 1.) (above) will be recommended if: the number of elk observed during post-season aerial trend surveys is 20% or more above objective (more than 1,200 elk).

Liberal Regulation **2.)** (above) will be recommended if: after 2 consecutive years of application of Liberal Regulation 1.) (above) the number of elk observed during post-season aerial trend surveys remains 20% or more above objective (more than 1,200 elk).

The Restrictive Regulation is: limited brow-tined bull/antlerless permits.

The Restrictive Regulation will be recommended if: the number of elk observed during post-season aerial trend surveys is more than 20% below the objective (less than 800 elk) for 2 consecutive years.

Antlered:

The Standard Regulation is: 5-week general season brow-tined bull regulation.

The Standard Regulation will be recommended if: the bull:100 cow ratio observed during post-season aerial trend surveys is at least 10 bulls:100 cows or bulls are at least 7% of the total population count.

<u>The Restrictive Regulation is</u>: **1.)** unlimited permits for brow-tined bulls by HD OR; **2.)** limited permits for antlered bulls by HD. ARCHERS WILL ALSO BE REQUIRED TO APPLY FOR THE UNLIMITED AND LIMITED PERMITS.

- 1.) unlimited permits for brow-tined bulls by HD will be recommended if: the bull:100 cow ratio observed during post-season aerial trend surveys is less than 10 bulls:100 cows or bulls are less than 7% of the total population count for 2 consecutive years.
- **2.)** limited permits for antiered bulls will be recommended if: the bull:100 cow ratio observed during post-season aerial trend surveys remains less than 10 bulls:100 cows or bulls are less than 7% of the total population count after 2 consecutive years consecutive years of application of unlimited permits.

HIGHLAND EMU (Hunting Districts 340, 350, and 370)



Description: Located in the Butte-Boulder-Dillon vicinity, this 1,385-square-mile EMU encompasses the Highland, Boulder, and Bull Mountains. About a third of the EMU is in private ownership and two-thirds is in public ownership. The USDA Forest Service Beaverhead-Deerlodge National Forest (USFS) and USDI Bureau of Land Management (BLM) are the principal public land managers. Most of the private lands are in agricultural production.

Public Access: Most of the unit is easily accessible. However, public access to portions of the east side of the Highlands (Fish Creek–Big Ridge) is limited. FWP has maintained eight Block Management Areas in the EMU. Approximately 80% of the EMU provides hunting recreation characterized as "moderate to high levels of motorized access" and 20% provides backcountry recreational experiences.

Elk Populations: The number of elk counted in post-season aerial surveys increased to about 1,600 in the late 1990s (Figure 1). Numbers of elk counted declined to about 1,300 elk in 2000 because of a combination of favorable elk hunting conditions and liberal numbers of antlerless permits. Emigration to the Fleecer EMU also contributed to declines in elk counted in the Highland Mountains portion of this EMU. Valid trend counts were not accomplished during 2004. Portions of the unit are characterized by very low elk security, resulting in low numbers of antlered bulls surviving the hunting season. Elk winter on private lands in portions of the unit, where we have directed antlerless elk harvest in recent years.

Recreation Provided: The Highland EMU provided an average of about 23,300 days of hunting recreation annually for about 3,450 hunters during 1999-2001. These values represent an increase of 37% in hunter days and 5% in hunter numbers since 1992. Wildlife viewing occurs throughout the unit during all seasons of the year.

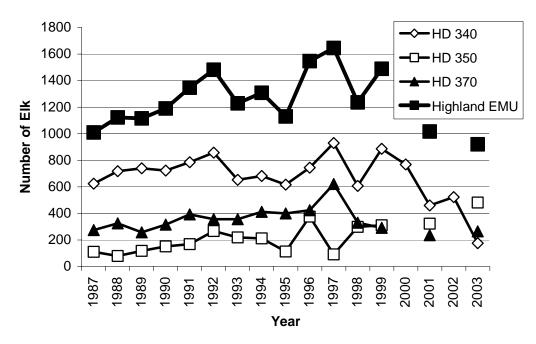


Figure 1. Number of elk counted during post-season aerial trend surveys in HDs 340, 350, 370, and the total Highland EMU, 1987-2003.

Current Annual Elk Harvest: During 1999-2001, an average 475 (365-686) elk were harvested annually in the EMU. Of these, 228 (161-346) were antlerless and 247 (197-340) were antlered. HD 340 accounted for about 60% of antlerless and antlered harvest in the EMU during the period.

Accomplishments: Since the implementation of the 1992 Elk Plan, FWP completed a conservation easement on the 7,106-acre Keogh Ranch in 1996. The easement provides hunting access, habitat protection, and restricts development. FWP also maintained increasing numbers of Block Management areas that provide a quality hunting opportunity and address the management needs of landowners. FWP provided technical assistance to help coordinate travel management and other traditional land uses with the various state, federal and private entities throughout the EMU.

Management Challenges: Travel management on public lands and access to public lands are the two greatest management challenges in the EMU. BLM and USFS lands in the vicinity of Whitehall are a destination for ATV enthusiasts and travel planning is necessary to meet the needs of wildlife in this area, particularly on USFS land. There is little access to Federal and other public lands on the east side of the Highlands. Existing access to BLM land on McCartney Mountain has been legally challenged in recent years.

Wolves are pioneering the Highland EMU and will likely establish packs that have the potential to rapidly increase. The degree of impact wolves have on elk populations is unknown at this time, but will be a consideration in future management decisions.

Population Monitoring: Annual trend surveys are conducted during winter by fixed-wing aircraft. Total numbers of elk observed, sex and age class, and location are recorded.

SUMMARY OF PUBLIC COMMENT

Public comment varies with the diverse landscapes in the Highland EMU. Widespread ATV use in the Whitetail-Pipestone areas of Hunting Districts 340 and 350 has created conflicts with other traditional land uses, including wildlife. In other areas, where seasonal road closures or private lands limit access, the public would like to see increased vehicular access to facilitate elk harvest and retrieval of downed game. Closed, restricted, or outfitted private lands that attract elk and act as a refuge during the hunting season frustrate the public. Hunter crowding has intensified over the last decade but not as severely as in other, adjacent Elk Management Units.

MANAGEMENT GOAL

Manage the elk population at current levels and cooperate with land managers in the management of elk habitat with emphasis on maintaining a diversity of elk hunting experiences.

HABITAT OBJECTIVES

- 1) Develop cooperative programs that encourage public and private land managers to maintain 500,000 acres of occupied elk habitat.
- 2) Promote maintenance of elk security so that elk harvest is distributed throughout the hunting season, with no more than 30% of the bull harvest taken during the first week of the general season (3-year average).

HABITAT MANAGEMENT STRATEGIES

FWP will:

- Provide technical assistance to USFS personnel to help improve elk security throughout the unit, with special attention to HD 340 where timber harvest has substantially reduced elk security.
- Use the interagency access and travel planning process to identify areas where additional road and trail management is needed.
- Provide technical assistance to USFS and BLM on projects that will improve habitat and maintain or improve vegetation diversity. We will emphasize maintenance of Mountain Mahogany and sagebrush-grassland communities.
- Represent wildlife habitat needs and hunting recreation issues in National Fire Plan projects.

GAME DAMAGE STRATEGIES

Each game damage situation will be addressed based on its own circumstances. FWP will work with landowners to maintain a level of public hunting access necessary to maintain the elk population at objective level, employing block management agreements where appropriate.

ACCESS STRATEGIES

FWP will:

- Identify areas where additional public access is necessary to attain an adequate elk harvest
- Continue as a cooperator in maintenance of the Southwest Montana Interagency Access and Travel Plan.
- Cooperate with the Beaverhead-Deerlodge National Forest and BLM to develop an access plan to identify and prioritize access needs for Federal lands.
- Work with private landowners to maintain as much public hunting opportunity as possible on private lands.
- Address landowner issues by continuing to work with the Headwaters Resource Conservation and Development (RC&D) Big Game Committee.

POPULATION OBJECTIVES

- 1) Maintain the number of elk observed during post-season aerial surveys within 20% of 1,600 elk (1,280 1,920).
- 2) Maintain bull:100 cow ratios observed during post-season aerial surveys of at least 10:100

POPULATION MANAGEMENT STRATEGIES

REGULATION PACKAGES

Six-week brow-tined bull/antlerless archery regulation EXCEPT, see Restrictive Regulation for Antlered elk and Liberal Regulation 2.) for Antlerless elk.

Antlerless:

<u>The Standard Regulation is:</u> 1.) limited brow-tined bull/antlerless permits valid for the 5-week general season OR; 2.) 1-2 week general season brow-tined bull/antlerless regulation. [Limited A-9/B-12 antlerless licenses (B-tags) may also be recommended in combination with the above options].

The Standard Regulation will be recommended if: the number of elk observed during post-season aerial surveys is within 20% of 1,600 elk (1,280-1,920 elk).

<u>The Liberal Regulation is:</u> **1.)** 4-5 week general season brow-tined bull/antlerless regulation OR; **2.)** 5-week general season antlerless ONLY regulation. [Limited A-9/B-12 antlerless licenses (B-tags) may also be recommended in combination with the above options]. Archery regulations will also be Antlerless ONLY.

Liberal Regulation 1.) (above) will be recommended if: the number of elk observed during post-season aerial trend surveys is more than 20% above 1,600 elk (more than 1,920 elk).

Liberal Regulation 2.) (above) will be recommended if: after 2 consecutive years of application of Liberal Regulation 1.) (above) the number of elk observed during post-season aerial trend surveys remains more than 20% above 1,600 elk (more than 1,920 elk).

<u>The Restrictive Regulation is:</u> limited brow-tined bull/antlerless permits valid for the 5-week general season.

The Restrictive Regulation will be recommended if: the number of elk observed during post-season aerial trend surveys is more than 20% below 1,600 elk (less than 1,280 elk) for 2 consecutive years.

Antlered:

The Standard Regulation is: 5-week general season brow-tined bull regulation.

The Standard Regulation will be recommended if: the bull:100 cow ratio observed during post-season aerial trend surveys is at least 10:100.

<u>The Restrictive Regulation is:</u> **1.)** unlimited permits for brow-tined bulls by HD OR; **2.)** limited antlered bull permits. ARCHERS WILL ALSO BE REQUIRED TO APPLY FOR THE UNLIMITED AND LIMITED PERMITS.

- 1.) Unlimited permits for brow-tined bulls by HD will be recommended if: the bull:100 cow ratio observed during post-season aerial trend surveys is less than 10:100 for 2 consecutive years. If a Restrictive regulation is implemented, and the post-season aerial classification reaches 15 bulls:100 cows or greater for 2 consecutive years, a standard season would again be recommended.
- **2.)** Limited permits for antlered bulls will be recommended if: the bull:100 cow ratio observed during the post-season aerial trend survey remains less than 10:100 after 2 consecutive years of application of unlimited permits.

ELKHORN EMU (Hunting District 380)



Description: The Elkhorn Elk Management Unit (EMU) contains approximately 1,241 square miles with 59% privately owned and 41% managed by various public land management agencies. The EMU encompasses the Elkhorn Mountains, which is a relatively small and isolated mountain range of about 391 square miles located about 16 miles southeast of Helena. Approximately 603 square miles of the EMU (49%) are occupied by elk during some portion of the year. Thirty-eight percent of the area occupied by elk is private land and 62% is public lands. There are approximately 235 square miles of elk winter range in this unit; 45% is private land and 55% public lands. Based on past telemetry data and recent observations, approximately 70% of the total elk population spend winter on public lands. About 250 square miles of this productive mosaic of mountain grasslands, forests and alpine vistas are managed by the USDA-Forest Service (USFS) - Helena (HNF) and Beaverhead-Deerlodge National Forests (BDNF). The portion of the range in Forest Service ownership, by virtue of special Forest Plan direction, are managed as the only Wildlife Management Unit in the National Forest System. According to the 1986 Helena National Forest Forest Plan, mangement goals for elk winter range on Forest lands include "Optimize elk winter range" and "Provide for other resources as long as their uses are compatible with maintaining elk winter range".

Additionally, 145 square miles of foothills, predominated by grassland/shrubland vegetation, are managed by the USDI-Bureau of Land Management (BLM). These adjacent BLM lands are managed under the Headwaters Resource Management Plan (RMP) which provides for multiple use management. Some of the major uses on BLM lands include a utility corridor occupied by the Colstrip 500-KV line, the National Guard training range, and the Graymont lime mine near Townsend.

Public Access: The Elkhorn EMU provides a good diversity of hunting experiences, including motorized hunting on the periphery and walk-in hunting in the interior. There is ample road access to the majority of the unit. Access to public land is relatively good and in addition, there were a total of 20 Block Management Areas in the Elkhorn EMU in 2003. The combination of good access to both public and private lands makes it possible to effectively manage elk numbers through hunter harvest. Travel Plan revision on USFS and BLM lands was implemented in 1995 with the primary objectives being the protection of the soil, water, and vegetation and

enhancement of elk security where it was low. Existing, and some new, winter range closures, and game retrieval areas were incorporated into this revision.

Elk Populations: The number of elk counted in the Elkhorn EMU has been relatively stable since the initial Elk Plan was published in 1992 and for the most part, has fluctuated around 2,000 elk observed on the winter ranges (Figure 1). Approximately 90% of the elk utilize public lands (USFS and BLM) during the summer and fall and 70% winter on public land (primarily USFS), making the Elkhorn population one of the largest to winter on land managed by the USFS.

Bulls, which made up less than 1 % of the post-season population in the mid 1980's, now comprise about 10% of the post-season population. Since implementation of the "Spike" season in 1987, more older bulls have both been harvested and survive hunting season. Bulls of all ages, up to 14-years-old, have been harvested. The average age of bulls harvested by permit holders has been $5\frac{1}{2} - 6\frac{1}{2}$ years old for the past several years and this represents the age and size of bull that permit holders expect to harvest. Generally, bulls of this age are mature animals with antler configuration of at least 6 points on each antler. Spikes (yearling bulls) comprised an average 77% of the total bull harvest during 1999-2002.

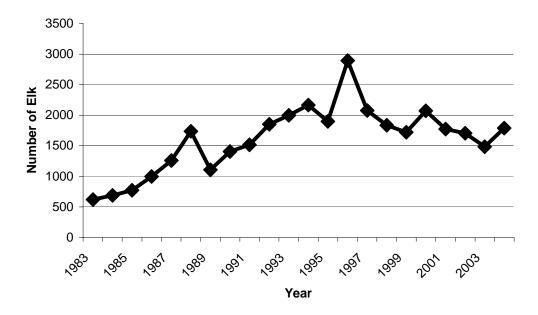


Figure 1. Total number of elk observed during post-season aerial trend surveys in the Elkhorn EMU, 1983-2004.

Recreation Provided: During 1999-2001, the EMU provided an annual average of 23,380 days of hunting recreation to an average of 3,574 hunters. Since the mid 1980s, hunter numbers in the Elkhorn EMU increased at a rate 4 times greater than the statewide average. The proximity of the Elkhorn Mountains to population centers, combined with good access by virtue of public ownership of much of the mountain range, and the popularity of the "Spike" season, has made the area popular for hunting and wildlife viewing during all seasons of the year. Popular areas

for wildlife viewing include Tizer Basin, Casey Meadows, the Elkhorn and Crow Peak areas and the winter ranges in lower Crow Creek.

Current Annual Elk Harvest: During 1999-2001, annual averages of 302 antlerless and 263 antlered elk were harvested.

Accomplishments: Because about 70% of the big game winter range is on public land in the Elkhorn EMU, unique opportunities for management exist. As a part of the Forest Plan direction for the Elkhorns, a partnership with Montana Department of Fish, Wildlife and Parks (FWP) was established to provide cooperation in the management and monitoring of wildlife in the Elkhorns. A FWP wildlife biologist position, with responsibilities only in the Elkhorns, was established in 1982. Through this position, intensive research and monitoring of elk was completed. During this study, more than 300 elk, including both sexes were fitted with radio collars and more than 10,000 relocations of these animals helped define herd segments, seasonal movement patterns of those segments, and patterns and causes of mortality.

In 1992, a Memorandum of Understanding (MOU) was developed between the 3 primary managing agencies in the Elkhorns, the USFS, BLM, and FWP. Shortly thereafter, the agencies completed the Elkhorns Landscape Analysis. This analysis established the historic and existing conditions of the soil, water, vegetation, and wildlife resources in the Elkhorn Mountains. The desired conditions for all the resources were then integrated and compared with existing conditions to establish general, mountain-range wide management direction. Projects completed include: a comprehensive Elkhorn Travel Plan, reintroduction of bighorn sheep, the revision of allotment management plans, vegetation treatments that reflect the landscape analyses in much of the mountain range, rehabilitation of historic mine sites, a mountain range wide "fire plan", bighorn sheep habitat enhancements, westslope cutthroat trout restoration, a comprehensive recreation and travel map, and signing and interpretive projects.

In 1998, FWP acquired a Conservation Easement on the 1,600 acre Hahn Ranch in Kimber Gulch along the east slope of the Elkhorns. This important property is adjacent to USFS and BLM managed lands and is important seasonal range for a variety of animals including elk.

Management of the Elkhorns historically has been, and continues to be controversial. Primary issues continue to be the relationship between wildlife and management activities such as vegetation treatments, travel management, mining, grazing, timber harvest, and recreational uses. The number of elk and their management also is an on-going controversial issue. In early 2002, to address some of these controversial issues the agencies, along with other sponsoring partners, formed a Working Group comprised of individuals from a variety of interests. This diverse group attended several facilitated meetings that primarily addressed conflicts with elk and livestock management. The product of these meetings was a list of recommendations from the Working Group to the sponsoring agencies on how to address this issue including, information needs, habitat management strategies, and educational efforts.

Management Challenges: Limited public access to the Spokane hills and the Antelope Creek area in the northeast portion the unit makes it difficult to manage elk in these areas, and some private lands act as refuges to elk during the hunting season. Similarly, private land in the

Dutchman Creek area on the west side of the unit has sporadic-to-little hunter access and again, this makes it difficult to manage elk numbers through hunter harvest.

Housing development and subsequent human activities have occurred and continues around much of the mountain range and has had major impacts on elk winter range on the north portion, Spokane Hills portion, and the southwest portion near Boulder. These developments can also provide refuges for elk during the hunting season.

Population Monitoring: To monitor the elk population, aerial surveys are conducted annually using fixed-winged aircraft. Surveys are conducted in late winter and an attempt is made to conduct them under optimal conditions, i.e., fresh snow cover, cold temperatures, light wind, and when ground observations indicate elk are concentrated on winter ranges. The entire area occupied by elk during winter is flown, including public and private lands. Elk are counted and classified by age and sex and in most years an attempt is made to classify the proportion of the population that is calves by surveys from the ground.

SUMMARY OF PUBLIC COMMENT

Public comments in relation to the elk population and its management in this EMU indicate a high level of support for the current season structure including the permit system on the older bulls. Both hunters and non-hunters enjoyed seeing older bulls in the elk population. Some members of the Elkhorn's Working Group felt that flexibility in managing elk numbers was important and that using forage availability on an annual basis may be an appropriate trigger mechanism

MANAGEMENT GOAL

Manage for a healthy and productive elk population with a diverse age structure at current numbers (see Elk Populations, above). Cooperate with public land management agencies and private individuals in the management of elk habitats, and maintain good opportunity for elk hunters to harvest elk.

HABITAT OBJECTIVES

- 1) Develop cooperative programs that encourage public and private land managers to maintain approximately 240,000 acres of occupied elk habitat (based on telemetry data) for the benefit of elk, other wildlife species, and other agency mandated uses.
- 2) Encourage improvement of habitat conditions on publicly owned winter ranges (primarily USFS) so that vegetation conditions on these winter ranges provide adequate forage for elk and other wildlife during the winter period.
- 3) Encourage maintenance and improvement of habitat conditions on public lands (USFS and BLM) so that elk continue to utilize these lands during summer and fall rather than moving onto private lands.

HABITAT MANAGEMENT STRATEGIES

- FWP has worked in cooperation with the USFS and BLM in developing a Landscape Analysis for all public land in this EMU. This analysis has determined the existing condition of soil, water and vegetation and developed specific projects to improve, maintain or enhance these resources. Additionally, the agencies, along with the Rocky Mountain Elk Foundation as a partner, are pursuing land exchanges, acquisitions, and conservation easements to acquire or protect important wildlife habitat. Allotment management plans have been revised where needed to enhance vegetation on these sites for wintering elk. Some vegetation manipulation through prescribed burning has also been implemented to make these winter ranges more attractive to wintering elk.
- A major effort has been under way the past couple of years by the agencies to control noxious weeds. This will continue and is expanding to include adjacent private lands. Much of this effort has been directed at areas on elk winter range.
- FWP has implemented harvest strategies designed to target elk that habitually move to irrigated croplands during late summer and early fall. Our objective is to reduce these problem elk to a more tolerable number.
- A number of recommendations, in relation to habitat, made by the Elkhorn Working Group are being evaluated by the agencies and may be implemented in the near future. Some of these involve vegetation monitoring, which would help direct future management direction and decisions.

GAME DAMAGE STRATEGIES

Hazing, herding, providing stackyard materials, and early and late hunts have been and will continue to be used as needed in this EMU in the future. Where problems are chronic, harvest strategies will be implemented to reduce elk numbers in areas of chronic depredation. Improved habitat management on public lands may help to reduce the use of private lands during some portions of the year. Beginning in 2002, a series of A-7 antlerless licenses were issued which were valid from 1 September to the beginning of the general season on private land, valid in the entire district during the general season, and again valid through 15 December on private land. The purpose of these permits is to target elk that move into the valley to utilize hay crops during late summer and early fall. Antlerless permits issued are specified valid for the north or south portion of the district to direct harvest on specific herd segments and these permits have facilitated a reduction of elk in those areas.

ACCESS STRATEGIES

FWP has actively pursued new Block Management Areas (BMAs) on private land. In 2002, there were 18 BMAs totaling 97,342 acres in Hunting District 380. These 18 areas provided a total of 7,362 hunter days of recreation during 2002. During 2003, there were a total of 20 BMAs in the Elkhorn EMU with access provided to approximately 105,000 acres of key private lands throughout the mountain range. This access is important in implementing both population management and game damage strategies.

POPULATION OBJECTIVES

- 1) Maintain the number of elk observed during post-season aerial surveys within 15% of 2,000 observed elk (1,700-2,300).
- 2) Maintain a bull:100 cow ratio observed during post-season aerial surveys of at least 15 bulls:100 cows OR, if bull:100 cow ratios are not obtained, maintain a minimum of 10% of the population comprised of antlered bulls.
- 3) Maintain the average age of bulls harvested on either-sex permits between 5 ½ and 6 ½ years-of-age.

POPULATION MANAGEMENT STRATEGIES

Strategies to manage elk numbers have evolved over time as the elk population expanded during the 1970s through the 1990s. Initially, the population was managed through issuing a limited number of antlerless permits and the bull segment was hunted under an antlered-bull regulation. Bulls in the Elkhorn EMU were so heavily harvested on an annual basis that winter classifications conducted in 1985 indicated only about 1 bull:100 cows, and these surviving bulls were almost all yearling bulls. These conditions continued until 1987 when bulls were placed under a "Spike" regulation where hunters with a valid elk license could harvest a spike bull (unbranched antlers or a branch of less than 4 inches). Older bulls with branched antlers could be harvested only if a hunter received one of a limited number of special permits available through a drawing. Because some yearling bulls have small, branched antlers with more than a four-inch branch, these bulls are unavailable to the general license holder and are recruited into the older bull segment the following year. This regulation has been successful at producing an older bull segment and also in increasing the total number of bulls in the population. Typically, bulls comprise about 10 % of the post-season population, with about half of the bulls being brow-tined bulls. Bulls as old as 14 years have been harvested on the permits and the average age of bulls harvested on the permits has been $5\frac{1}{2}$ to $6\frac{1}{2}$ years old.

The population objective of 2,000 (\pm 15%) observed elk is essentially the same as the population objective in the 1992 version of the Elk Plan. This objective was derived by considering both the ability of public lands to provide forage for the majority of the wintering elk population and landowner tolerance for the remaining elk that winter on private lands. Population management strategies in the past have been, and will be in the future, directed at maintaining elk numbers consistent with landowner tolerance as well as maintaining the number of elk wintering on public lands within forage allocations established in allotment management plans.

Drought since the later part of the 1990s has caused some elk to move into agricultural cropland in late summer and early fall. To address this problem, A-7 antlerless elk licenses have been issued, which are valid on private land beginning 1 September. These same permits are valid in the entire district during the general season and again on private land after the general season until 15 December. Additionally, antlerless permits have been issued in the south and north portion of the district where herd reduction was desired. Because of the high average success rate (around 50%) on these permits in the past, these series of permits, along with good hunter access to public and private land, have made it possible to manage elk numbers effectively. By adjusting the

number of permits on an annual basis, sufficient harvest of elk on private and public lands can be obtained to either reduce or increase the population to meet objectives. Different season packages on the antlerless segment reflect slight variations of these permit types. The population objective of $2,000 \ (\pm 15\%)$ observed elk allows the flexibility of managing towards the low end (1,700) of the objective during periods of drought when forage availability may be affected.

REGULATION PACKAGES

Six-week spike bull/antlerless archery regulation.

Antlerless:

<u>The Standard Regulation is:</u> limited antlerless permits valid for 3 different areas during the general season; the north portion, south portion, and the entire district AND, limited A-7 antlerless licenses valid outside national forest boundaries beginning 1 September and valid in the entire district during the general season.

The Standard Regulation will be recommended if: the number of total elk counted during post-season aerial surveys is within 15% (1,700-2,300) of the objective (2,000).

<u>The Liberal Regulation is:</u> increased antlerless permits valid for 3 different areas during the general season; the north portion, south portion, and the entire district AND, limited A-7 antlerless licenses valid outside national forest boundaries beginning 1 September, valid in the entire district during the general season AND, valid outside national forest boundaries again from the closing of the general season through 15 December.

The Liberal Regulation will be recommended if: the number of total elk counted during post-season aerial surveys is more than 15% above the objective (more than 2,300 elk).

<u>The Restrictive Regulation is:</u> limited antlerless permits valid in the entire district during the general season AND, limited A-7 licenses valid outside national forest boundaries beginning 1 September and valid in the entire district during the general season.

The Restrictive Regulation will be recommended if: the number of total elk counted during post-season aerial surveys is more than 15% below the objective (less than 1,700 elk) for 2 consecutive years.

Antlered:

The general hunting regulation for HD 380 will remain a Spike Bull regulation (with limited permits for either-sex elk) to provide diversity in the bull age structure as well as diversity of hunting opportunity in Montana. This hunting district is one of only 2 spike/either-sex permit hunting districts among the 159 hunting districts in the state. Spike Bulls are: "any elk having antlers which do not branch, or if branched, the branch is less than four inches long measured from the main antler."

<u>The Standard Regulation is:</u> 5-week general season Spike Bull regulation with 75-100 either-sex permits valid during the 5-week general season.

The Standard Regulation will be recommended if: total numbers of elk observed during post-season aerial surveys are between 1,700-2,000 elk AND; calf:100 cow ratios are at least 25 calves:100 cows AND; post-season bull:100 cow ratios are at least 10 bulls:100 cows AND; the average age of bulls harvested on either-sex permits is at least 5.5-years-old.

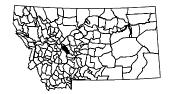
<u>The Liberal Regulation is:</u> 5-week general season Spike Bull regulation with 100-125 either- sex permits valid during the 5-week general season.

The Liberal Regulation will be recommended if: total numbers of elk observed during post-season aerial surveys are at least 2,000 elk AND; calf:100 cow ratios are at least 40 calves:100 cows AND; the bull:100 cow ratio is not less than 15 bulls:100 cows for 2 consecutive years AND; the average age of harvested bulls on either-sex permits is more than 5.5 years old.

<u>The Restrictive Regulation is:</u> 3-week general season Spike Bull regulation with 50-75 eithersex permits valid for a 5-week period.

The Restrictive Regulation will be recommended if: total numbers of elk observed during post-season aerial surveys are less than 1,700 for 2 consecutive years AND; calf:100 cow ratios are below 25 calves:100 cows for 2 consecutive years OR; the bull:100 cow ratio is less than 10 bulls:100 cows for 2 consecutive years OR; average age of brow-tined bulls harvested by holders of either-sex permits is less than 5.5 years for 2 consecutive years.

WEST BIG BELT EMU (Hunting District 392)



Description: This 444-square-mile Elk Management Unit (EMU) is located along the west slope of the Big Belt Mountains near the towns of Helena and Townsend. Approximately 74% of the elk habitat is on public lands (USFS and BLM). There are about 135,000 acres of elk winter range in this EMU and about 73% of the winter range is in public ownership. In the 1992 Elk Plan, the Big Belt EMU included Hunting District (HD) 392 (HD 892 at that time) and HD 446, which is on the east Side of the Big Belt Mountains. We made HD 392 a separate EMU in this Elk Plan because there are major differences in the 2 hunting districts including, extensive use of private land by elk in HD 446, considerably different hunting regulations, and less public land, especially public land winter range in HD 446. This change was made with the realization that there is some overlap of elk from the 2 districts and this fact will be considered in developing regulation packages as well as habitat objectives, particularly on public lands.

In 1994 the Helena National Forest (HNF) developed a Landscape Analysis for the Big Belt Mountains describing the past, current and desired condition of the landscape. Since then a major forest fire occurred in the year 2000, originating in the Cave Gulch drainage and burning approximately 30,000 acres. This fire has had major impacts on elk habitat including the initial loss of winter range and major reduction in security. Because of the impacts of the fire, habitat management related projects, including prescribed fire and travel plan revision projects were temporarily delayed.

Public Access: Road and trail access is good in most of the EMU. However, areas of the EMU, primarily in the southern portion of the unit from Whites Gulch to Duck Creek, are closed to the general public as a result of leased or outfitted hunting. Currently there is only one Block Management Area (BMA) in this District.

Elk Populations: Numbers of elk observed have been relatively stable for the past 10 years with about 1,200 elk observed on winter ranges during 2001-2004 (Figure 1).

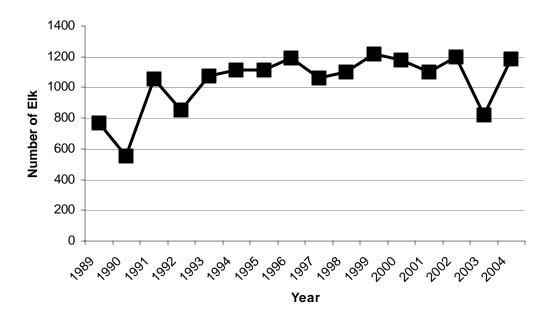


Figure 1. Number of elk counted during post-season aerial trend surveys in HD 392, 1989-2004.

Recreation Provided: During 1999-2001, an annual average of 12,500 hunting recreation days were provided for an average 1,870 hunters in this EMU. Wildlife viewing and photography are important uses of the elk resource in the portions of the EMU that offer backcountry settings, including Gates of the Mountains Wilderness and the Mount Edith area.

Current Elk Harvest: During 1999-2001 an annual average of 119 antlered and 140 antlerless elk were harvested in the EMU.

Accomplishments: There was a major fire in this EMU during summer 2000 and FWP worked closely with the Forest Service in relation to fire rehabilitation and interim travel management to benefit wildlife. Comprehensive travel planning on Forest Service lands is on-going and FWP continues to be involved in this process.

Management Challenges: The area from Whites Gulch south to Duck Creek has limited hunter access to private land. This makes it difficult to manage elk numbers through hunter harvest. Late hunts have been conducted in this portion of the district in the past to reduce elk numbers utilizing private lands.

Noxious weed infestations on publicly owned winter ranges degrade the quality and productivity of forage in these areas. These weed infestations are and will continue to be a challenge for land managers.

Population Monitoring: Elk surveys are flown annually during the winter using fixed-winged aircraft and elk observed are classified to sex and age class.

SUMMARY OF PUBLIC COMMENT

Public comment favors maintaining "status quo" for regulation types. Most hunters in this EMU are satisfied with the opportunity of hunting and potentially harvesting a BTB during a 5-week general season. There is some support for increased motorized travel restrictions on public lands although most hunters are satisfied with the current level of motorized access.

MANAGEMENT GOAL

Manage the elk population in a healthy condition with emphasis on cooperating with public land managers and private landowners in the management of elk habitats to provide a diversity of elk hunting experiences.

HABITAT OBJECTIVES

- 1) Develop cooperative programs that encourage public and private land managers to maintain an estimated 250,000 acres of occupied elk habitat.
- 2) Maintain elk security at levels that will assure that elk harvest is distributed throughout the hunting season, with no more than 40% of harvested bulls taken during the first week of the general season.

HABITAT MANAGEMENT STRATEGIES

FWP will work with state and federal land management agencies, and private landowners to pursue the following habitat strategies:

- Monitor soil and vegetation condition on publicly owned winter ranges and implement programs designed to maximize the attractiveness of these areas to elk.
- Assist in developing a comprehensive road management plan that will enhance elk security levels and improve hunter opportunity on the public land portion of the EMU while providing security and lack of disturbance during the winter period. This includes reclamation of unnecessary roads on public lands.
- Help design and implement livestock grazing allotment plans which will benefit vegetation, watershed values, wildlife and livestock.
- Pursue opportunities, as they arise, to protect important habitats on private lands through either Department programs or appropriate partnerships with other agencies or private sector programs.

GAME DAMAGE STRATEGIES

Where feasible, efforts will be made to attract elk currently using private lands to public lands. Providing stackyard materials to the landowner has rectified most past depredations problems that included elk utilizing haystacks. Some damage situations are not easily resolved because landowners do not qualify for game damage assistance under current guidelines.

ACCESS STRATEGIES

FWP will pursue opportunities to work with landowners who currently lease hunting access, with the objective of obtaining public access to their lands and/or adjacent public lands utilizing the block management program.

POPULATION OBJECTIVES

- 1) Maintain the number of elk observed during post-season aerial surveys within 20% of 1,100 elk (880-1,320).
- 2) Maintain at least 10 bulls:100 cows observed during post-season aerial surveys OR, if age classifications are not made, maintain at least 7% bulls in the observed elk.

POPULATION MANAGEMENT STRATEGIES

Elk numbers will be reduced or stabilized, depending on the survey data, in areas where winter range is in private ownership. Elk numbers will be stabilized in suitable habitats on publicly owned winter ranges.

REGULATION PACKAGES

Six-week brow-tined bull/antlerless archery regulation EXCEPT, see Restrictive Regulation for Antlered elk and Liberal Regulation 2.) for Antlerless elk.

Antlerless:

<u>The Standard Regulation is:</u> Options include: 1.) limited antlerless or brow-tined bull/antlerless permits OR; 2.) 1-2 week general season brow-tined bull/antlerless regulation. [Limited A-7 and/or A-9/B-12 antlerless licenses (B-tags) may also be recommended in combination with the above options].

The Standard Regulation will be recommended if: the total number of elk observed during post-season aerial surveys is within 20% (880-1,320 elk) of the objective (1,100 elk).

<u>The Liberal Regulation is:</u> **1.)** 4-5 weeks general season brow-tined bull/antlerless regulation [limited A-9/B-12 (B-tags) antlerless licenses may also be recommended]. If 4-week general season BTB/antlerless, then 5th week is antlerless ONLY. **2.)** 5-week general season antlerless ONLY [limited A-9/B-12 antlerless licenses (B-tags) may also be recommended]. Archery regulations will also be Antlerless ONLY.

Liberal Regulation 1.) (above) will be recommended if: the total number of elk observed during post-season aerial surveys is more than 20% above the EMU population objective (more than 1,320 elk).

Liberal Regulation 2.) (above) will be recommended if: after 2 consecutive years of application of Liberal Regulation 1.) (above), the total number of elk observed during post-season aerial surveys remains more than 20% above the HD elk objective.

<u>The Restrictive Regulation is:</u> few or no general season antlerless or brow-tined bull/antlerless permits.

The Restrictive Regulation will be recommended if: the total number of elk observed during post-season aerial surveys is more than 20% below the EMU population objective (less than 880 elk) for 2 consecutive years.

Antlered:

The Standard Regulation is: 5-week general season brow-tined bull regulation.

The Standard Regulation will be recommended if: the bull:100 cow ratio observed during post-season aerial surveys is at least10 bulls:100 cows OR, at least 7% of the elk observed during the survey is bulls.

<u>The Restrictive Regulation is:</u> <u>The Restrictive Regulation is:</u> **1.)** unlimited permits for brow-tined bulls OR; **2.)** limited antlered bull permits. ARCHERS WILL ALSO BE REQUIRED TO APPLY FOR THE UNLIMITED AND LIMITED PERMITS.

- 1.) Unlimited permits for brow-tined bulls will be recommended if: the bull:100 cow ratio observed during post-season aerial trend surveys is less than 10:100 OR, less than 7% of the elk observed during the survey is bulls for 2 consecutive years. If a Restrictive regulation is implemented, and the post-season aerial classification reaches 15 bulls:100 cows or greater for 2 consecutive years, a standard season would again be recommended.
- 2.) Limited permits for antiered bulls will be recommended if: the bull:100 cow ratio observed during the post-season aerial trend survey remains less than 10:100 OR, less than 7% of the elk observed during the survey is bulls after 2 consecutive years of application of unlimited permits.

BRIDGER EMU (Hunting Districts 312, 390, 391, and 393)



Description: This 1,826-square-mile Elk Management Unit (EMU) encompasses the Bridger Mountains and the south end of the Big Belt Mountains and is bounded by the towns of Bozeman, Three Forks, Livingston, Ringling, and Townsend. Approximately 83% of this EMU is in private land ownership. The remaining 17% is in public ownership managed by the USDA-Forest Service (USFS), USDI-Bureau of Land Management (BLM), Montana Department of Natural Resources and Conservation (DNRC), and US Bureau of Reclamation. Most of the occupied elk habitat, particularly elk winter range, is in private ownership, with a limited amount of spring, summer, and fall elk habitat in public ownership, primarily USFS lands. Most private land is rangeland and irrigated hay meadows, with some dry-land farming in the western and eastern portions of the EMU.

This EMU contains approximately 770,000 acres of elk habitat (66% of EMU), of which an estimated 345,000 acres is elk winter range. The majority of elk habitat, particularly elk winter range, is in private ownership managed as portions of small to large cattle ranches. Because only 17% of the EMU is in public ownership, and much of that is in small isolated parcels, there is little state or federal habitat management within this EMU. During summer 2000, a forest fire consumed approximately 70,000 acres of winter and summer elk habitat, largely on private land and included large portions of the Bar None, CA, and Brainard Ranches in hunting districts (HDs) 312, 390, and 391.

Public Access: Because most elk habitat is in private ownership and in some places outfitters have leased large blocks of private land, elk-hunting opportunity for the general public is limited. Public access issues continue to affect elk harvest numbers and elk regulation type. During the 2002 hunting season, there were 5 Block Management Areas (BMAs) in the EMU, accounting for a small elk harvest.

In HD 393, only 14% of the land base is in public ownership with 2 small areas of accessible USFS land in the Bangtails and on Elkhorn Ridge. In recent years the Gallatin NF has traded out of land in this hunting district as part of larger land consolidation efforts elsewhere on the Gallatin NF. In addition, the private/USFS checkerboard landownership pattern in the Bangtails was consolidated so that generally, east of Bangtail Ridge became USFS and west became

private. During the elk-hunting season, fewer than 10% of the elk occur on public lands. Due to leasing of private land by outfitters and very restrictive or closed elk hunting on other large private holdings, the majority of elk are not available to the general public during the hunting season.

In HD 390, access to elk during the hunting season is largely controlled by 2 large ranches, which are managed for trophy bulls and receive very little hunting pressure. In HD 312, 42 % of the occupied elk habitat is in public ownership, however elk use private land to a greater extent than public lands in the district. Hunting district 391 has almost 50,000 acres of Forest Service lands, which are mostly spring, summer, and fall range and provide relatively good access to elk hunters.

Elk Populations: Approximately 5,000 elk were observed in this EMU during aerial surveys in 2003. The estimate of 5,000 elk in the EMU was made by compiling 2003 survey information from all districts (Figure 1) and adding elk counted while conducting mule deer surveys in portions of HDs 312 and 393 in areas not flown for elk. Starting in winter 1990, a 3-year elk radio telemetry study was initiated which, in part, was designed to help identify seasonal movements in HD 390 and portions of HDs 312 and 393 in the Sixteenmile Creek Corridor. Based on this study, and annual surveys, there are 9 reasonably distinct wintering elk herd units. Historically, elk numbers have fluctuated, increasing until elk numbers exceed landowner tolerance, then declining as a result of special elk management efforts, typically late-season antlerless elk reduction hunts. Despite special elk seasons and liberal regulations, hunting access restrictions on private land have made it difficult for FWP to manage elk numbers through the use of annual hunter harvest. In the last 10 years, elk numbers have increased substantially in portions of this EMU, particularly in HD 393, exceeding previous EMU elk population objectives.

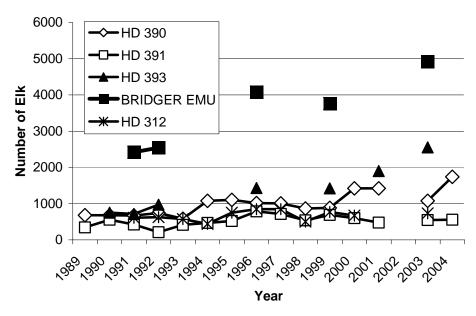


Figure 1. Number of elk observed during post-season aerial trend surveys in the Bridger EMU, 1989-2004.

Recreation Provided: During 1999-2001, this EMU provided an annual average of 19,600 days of hunting recreation for about 4,100 hunters. Expanding elk numbers and distribution in the Bridger Mountains have increased opportunities for the public to view and photograph elk.

Annual Elk Harvest: During 1999-2001, an average of 929 total elk comprised of an average of 451 antlered and 478 antlerless elk were harvested annually in this EMU.

Accomplishments: Although public lands inhabited by elk are somewhat limited in this EMU, FWP has worked with public land managing agencies in revising travel plans in relation to fires during summer of 2000 and continues to be involved in on-going travel plan revisions on the Helena National Forest portion of the EMU. FWP has worked closely with major landowners in an effort to increase elk harvest through liberalizing season structures.

Management Challenges: Limited public elk hunting on private land reduces the annual elk harvest, particularly of antlerless elk. Limited access and reduced harvests are in part due to large private ranches that are leased to outfitters. Reducing or even stabilizing elk numbers in this EMU will take cooperation from several major landowners in HDs 312, 390, and 393 in allowing some form of additional public hunting.

There is relatively little public (National Forest) land that provides elk hunting opportunities and the trend in National Forest land trades, sales, and consolidation is towards less public land in HD 393.

The limited hunting on lands leased or owned by outfitters has created "refuges" where few elk, particularly antlerless elk, are harvested. This has resulted in game damage concerns from landowners who are trying to make a living by ranching. In some cases, outfitting on adjacent ranches leads to increased elk numbers and to game damage problems on neighboring ranches after the hunting season.

Noxious weed infestations on publicly owned winter ranges degrade the quality and productivity of forage in these areas. These weed infestations are and will continue to be a challenge for land managers.

Population Monitoring: Aerial surveys for elk are flown in portions of this EMU every year and portions are flown only every 2-3 years. To better monitor elk in this EMU, surveys will be coordinated so that all occupied elk winter habitat is flown during the same years. These surveys would be accomplished every other year unless increased budgets allow surveys every year.

SUMMARY OF PUBLIC COMMENT

General comments include a desire for more public access to private lands that harbor elk during the hunting season. Many sportsmen believe there should be more access to the publicly owned wildlife resource, including bull elk in this EMU. Some landowners, with land where elk spend winter, expressed concern about lack of opportunity to harvest elk on private lands adjacent to them. They are concerned that the lack of harvest and increasing elk numbers hinders their ability to properly manage their property.

MANAGEMENT GOAL

Manage elk populations within the range of habitat availability and social tolerance. Work with the USFS to make public lands more attractive to elk while attempting to manage elk at levels consistent with landowner tolerance on private lands (increased elk harvest on private lands).

HABITAT OBJECTIVES

Develop cooperative programs that encourage public and private land managers to maintain an estimated 770,000 acres of occupied elk habitat.

HABITAT MANAGEMENT STRATEGIES

FWP will.

- Evaluate proposed logging, burning, grazing, mining, subdivision, and recreational development with regard to their potential impacts on elk habitat and elk populations.
- Encourage the Gallatin and Helena National Forests to maintain forest road densities at acceptable levels for wildlife.
- Encourage the USFS to consider the effects of previous timber sales and fires on elk habitat when planning future resource management projects.
- Help identify and facilitate purchase of conservation easements that will protect elk habitat and improve public access for hunting.
- Provide information to private landowners that are interested in protecting or enhancing wildlife habitat

GAME DAMAGE STRATGIES

Each game damage situation will be addressed based on its own individual circumstances. FWP has a set of possible options that include stack yard protection, herding, early or late season special hunts, directing hunters to the area during the general season, kill permits, use of A-7 elk licenses, liberalizing the general antlerless harvest, and the use of A-9/B-12 licenses (B-tags). Where it can be productive and where landowners meet game damage guidelines, special late season winter hunts for antlerless elk may be useful in this EMU. In addition to these game damage strategies, increasing public elk hunting on private land is crucial to helping reduce game damage problems. In this EMU, traditional ranches located adjacent to or between leased ranches typically experience the most elk problems.

ACCESS STATEGIES

Because most of the elk in this EMU reside on private land during the hunting season, FWP will pursue every opportunity to increase public access to elk on private land. Access strategies include expanding the number of BMAs, implementing liberal hunting season regulations (e.g., either-sex general season hunting, antlerless only hunting, extended season permit hunting) that will encourage some landowners to provide access for antlerless elk hunting, and supporting state and federal agencies in efforts to secure additional access to public lands.

POPULATION OBJECTIVES

- 1) Maintain the number of elk observed during post-season aerial surveys in the EMU within 20% of 3,550 elk (2,840-4,260). Individual late winter herd count objectives are:
 - <u>HD 312</u> Horseshoe Hills and Bridgers – 600 elk
 - HD 390
 - (A) Toston Herd segment 400 elk
 - (B) Middle Fork Sixteenmile 250 elk
 - (C) Ryegrass 250 elk
 - HD 391
 - (A) East Portion of District 275 elk
 - (B) West Portion of District 275 elk
 - HD 393
 - (A) North of Flathead Creek 500 elk
 - (B) Flathead and Looking Glass Creek 400 elk
 - (C) South of Brackett Creek 600 elk

These herd objectives are considered to be reasonable numbers of elk for each herd segment, compatible with the amount of habitat available and tolerance for elk by the landowners in this EMU that allow reasonable public hunting on their land.

- 2) Maintain a minimum of 255 bulls observed during post-season aerial surveys in the EMU. This number represents 7% of the total number of elk listed as the objective for observed elk in the EMU. Objectives by HD for minimum numbers of bulls observed post-season are as follows:
 - HD 312 45 bulls
 - HD 390 65 bulls
 - HD 391 40 bulls
 - HD 393 105 bulls

POPULATION MANAGEMENT STRATEGIES

In the past, a variety of season types were employed in portions of this EMU in an attempt to harvest more elk on private lands. The complexity of past regulations was primarily a result of negotiations with outfitted private landowners. In the future, development of regulations will be community based, rather then individual landowner based. Based on elk numbers and population objectives, FWP will explore new ways to harvest more antlerless elk in this EMU to include the use of general either-sex elk regulations, A-9/B-12 licenses (B-tags), and antlerless only regulations.

REGULATION PACKAGES

Six-week brow-tined bull/antlerless archery regulation EXCEPT, see Restrictive Regulation for Antlered elk and Liberal Regulation 2.) for Antlerless elk.

Antlerless:

<u>The Standard Regulation is:</u> 1.) limited antlerless or brow-tined bull/antlerless permits OR; 2.) 1-2 week general season brow-tined bull/antlerless regulation. [Limited A-7 and/or A-9/B-12 antlerless licenses (B-tags) may also be recommended in combination with the above options].

The Standard Regulation will be recommended if: the total number of elk observed during post-season aerial surveys is within 20% of the HD elk objective [HD 312 (480-720 elk), HD 390 (720-1,080 elk), HD 391 (440-660 elk) and, HD 393 (1,200-1,800 elk)].

<u>The Liberal Regulation is:</u> **1.**) 4-5 week general season brow-tined bull/antlerless regulation [limited A-9/B-12 (B-tags) antlerless licenses may also be recommended]. If 4-week general season brow-tined bull/antlerless regulation, then 5th week is antlerless ONLY. **2.**) 5-week general season antlerless ONLY regulation [limited A-9/B-12 antlerless licenses (B-tags) may also be recommended]. Archery regulations will also be Antlerless ONLY.

Liberal Regulation **1.)** (**above**) will be recommended if: the total number of elk observed during post-season aerial surveys is more than 20% above the HD elk objective [HD 312 (more than 720 elk), HD 390 (more than 1,080 elk), HD 391 (more than 660 elk) and, HD 393 (more than 1,800 elk)].

Liberal Regulation **2.)** (above) will be recommended if: after 2 consecutive years of application of Liberal Regulation 1.) (above), the total number of elk observed during post-season aerial surveys remains more than 20% above the HD elk objective [HD 312 (more than 720 elk), HD 390 (more than 1,080 elk), HD 391 (more than 660 elk) and, HD 393 (more than 1,800 elk)].

<u>The Restrictive Regulation is:</u> few or no general season antlerless or brow-tined bull/antlerless permits.

The Restrictive Regulation will be recommended if: the total number of elk observed during post-season aerial surveys is more than 20% below the HD elk objective [HD 312 (less than 480 elk), HD 390 (less than 720 elk), HD 391 (less than 440 elk) and, HD 393 (less than 1,200 elk)] for 2 consecutive years.

Antlered:

The Standard Regulation is: 5-week general season brow-tined bull regulation.

The Standard Regulation will be recommended if: the total numbers of bulls counted during post-season aerial surveys is at or above the HD objective [HD 312 (45 bulls), HD 390 (65 bulls), HD 391 (40 bulls) and, HD 393 (105 bulls).

<u>The Restrictive Regulation is:</u> **1.)** unlimited permits for brow-tined bulls by HD OR; **2.)** limited antlered bull permits. ARCHERS WILL ALSO BE REQUIRED TO APPLY FOR THE UNLIMITED AND LIMITED PERMITS.

- **1.)** Unlimited permits for brow-tined bulls will be recommended if: the total numbers of bulls counted during post-season aerial surveys is more than 20% below the HD objective for 2 consecutive years [HD 312 (36 bulls), HD 390 (52 bulls), HD 391 (32 bulls) and, HD 393 (84 bulls)].
- **2.)** Limited permits for antlered bulls will be recommended if: the total numbers of bulls counted during post-season aerial surveys remains more than 20% below the HD objective after 2 consecutive years of application of unlimited permits for brow-tined bulls.

GALLATIN/MADISON EMU[Hunting Districts 301, 310, 311, 314, 360, 361, 362 (and 309 if approved)]



This 3,006-square-mile EMU straddles the Gallatin/Yellowstone and Gallatin/Madison River Divides. It encompasses the Gallatin Range (including a wilderness study area), Madison Range, Lee Metcalf Wilderness Area, and Lionhead roadless area. There are 2,245-square-miles of elk habitat in the EMU (about 75% of the EMU). The USDA-Forest Service (USFS), Gallatin National Forest (GNF) administers 46% of the EMU and 61.5% of elk habitat. Forty-eight percent of the EMU and 35% of elk habitat is privately owned. Fifty-five percent of elk winter range is privately owned. The Gallatin (Porcupine) Wildlife Management Area (GWMA) and Bear Creek Wildlife Management Area (BCWMA) are in the EMU. At their December 2004 meeting, the FWP Commission tentatively approved a new hunting district (HD 309) that encompasses the former "Gallatin Valley weapons restricted area" along with some expansion of the area. This expansion would be at the southeast portion, including portions of HD 301 in the Cottonwood-Sourdough-Fort Ellis-Bear Canyon areas. This new HD encompasses portions of HDs 301, 311, 312, and 393 and creation of HD 309 will also slightly change the boundaries of those HDs. Deer and elk hunting in HD 309 will be restricted to archery equipment, shotgun, traditional handgun, muzzleloader, or crossbow only. A final decision on establishing HD 309 will be made at the February 2005 Commission meeting.

Portions of the EMU are characterized by extensive previous logging activity with some current commercial logging in a portion of the existing private/public checkerboard areas along the Yellowstone face. Since 1993, there have been several land trades and acquisitions that have consolidated most of the corporate checkerboard lands in the Gallatin and south half of the Madison Mountain Ranges into public ownership. These land trades and acquisitions have protected wildlife habitat, improved public access, and increased the use of public lands in the EMU. There have been 3 forest fires since 2001, the Beaver Creek fire in the south portion of the Madison Range in hunting districts (HDs) 362 and 310, the Squaw Creek fire in north portion of the Gallatin Range in HD 301, and the Fridley Creek fire (about 20,000 acres) along the Yellowstone face in HD 314.

Public Access: Since 1993, public access has improved on the Yellowstone River side of the EMU, but has decreased on the Madison River side. Excellent public access occurs in the Gallatin Drainage portion of the EMU. However, there is still no public access to the GNF

between Big Creek and Dry Creek (HD 314) on the Yellowstone River side, and between Mill Creek and Jack Creek (HD 360) and between Indian Creek and Papoose Creek (HD 362) on the Madison River side. The USFS and a private conservation group are working on an easement opportunity near Deadman Creek (HD 362) that would provide additional access to National Forest lands. Since 1993, the general hunting public lost access to private lands in Jack Creek (about 20,000 acres) and the Yellow Mules (about 20,000 acres). Plum Creek Timber Corporation sold these lands to private development interests.

Elk Populations: Numbers of elk counted during post-season aerial surveys in the Yellowstone (HD 314) and Madison portion (HD 360 and 362) of the EMU have reached record high numbers (Figures 1 and 2). However, wintering elk numbers in the Gallatin (HD 310), have declined in recent years from 1,400-1,600 pre- 1995, to about 1,000 elk (Figure 3). Elk numbers in HD 301 (Figure 4) are increasing from reductions in the early 1990s and numbers in HD 311 (Figure 5) are relatively stable since declining from a peak in 1995.

Recreation Provided: During 1999-2001, this EMU provided an annual average of 11,279 hunters with 55,556 days of hunting recreation beginning with archery season in early September and extending through the Gallatin and Madison late hunts in January. Wildlife viewing, photography, educational tours, antler gathering, and a variety of winter activities dependent on snow are major recreational pursuits in this EMU, particularly in the Gallatin drainage portion.

Annual Elk Harvest: During 1999-2001, an average 1,660 elk (941 bulls, 719 antlerless elk) were harvested annually during the archery and general seasons. In addition, 4 of the HDs (310, 311, 360, and 362) had regularly scheduled late antlerless elk hunts, with very limited numbers of either-sex permits. Late hunts in HDs 310, 360, and 362 are conducted to manage elk that migrate from Yellowstone National Park to winter in the Gallatin and Madison drainages. The average annual harvest in these late hunts was 444 elk (7 bulls) during 1999-2001.

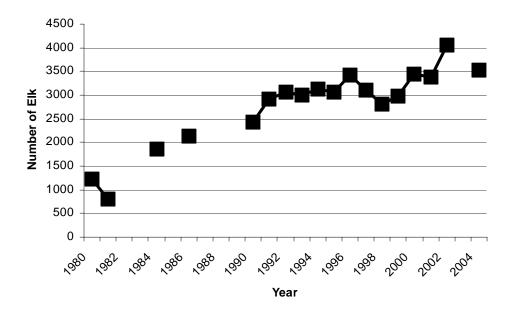


Figure 1. Number of elk observed during post-season aerial trend surveys in HD 314, 1980-2004.

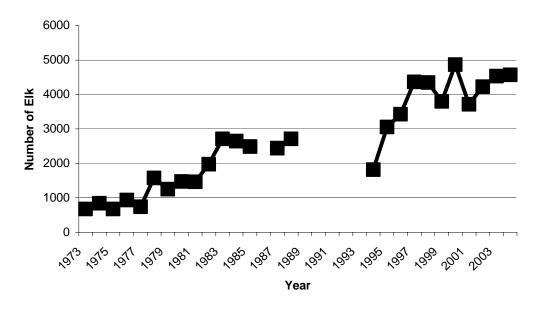


Figure 2. Number of elk observed during post-season aerial trend surveys of the west slope of the Madison Range (HDs 360 & 362), 1973-2004.

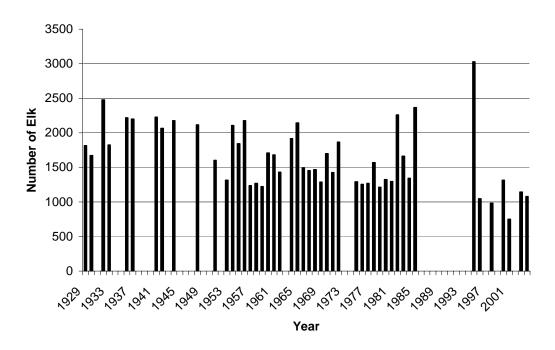


Figure 3. Number of elk observed during post-season aerial trend surveys in HD 310, 1929-2004.

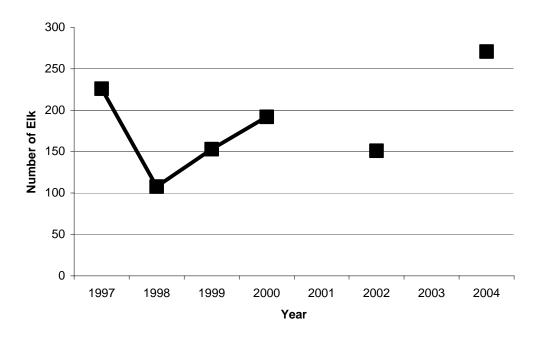


Figure 4. Number of elk observed during post-season aerial trend surveys in HD 301, 1997-2004.

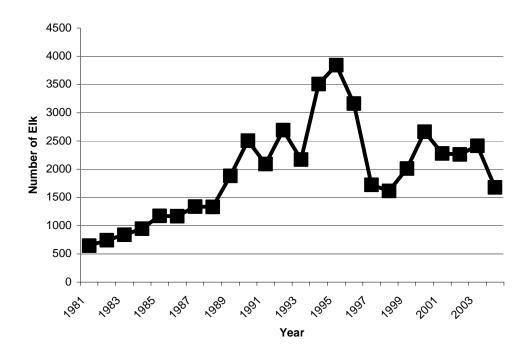


Figure 5. Number of elk observed during post-season aerial trend surveys on the Flying D Ranch, HD 311, 1981-2004.

Accomplishments: The Gallatin and Madison Mountain Ranges have been in a private/public checkerboard ownership pattern since the building of the railroads. Beginning in1992, efforts were made to consolidate public lands in these two mountain ranges. As of the summer of 2003, about 100,000 acres of private land was placed in public ownership through a series of purchases, land trades and timber receipt for land deals, consolidating blocks of public and private lands.

Beginning in 2000, a cooperative Wolf-Ungulate study centering in this EMU was begun with FWP, Montana State University, the U. S. Fish & Wildlife Service, and the National Park Service –YNP as cooperators. These cooperative studies are designed to gather information that will assist FWP in managing wolves and ungulates after the State of Montana assumes authority for wolf management.

Management Challenges: There is limited access to public land and adjacent private land in some portions of the EMU due to changes in land ownership. This has resulted from a change in landownership toward landowners who do not make their primary living from ranching. These new owners have a higher tolerance for elk and a different perspective on public hunting and elk numbers than traditional landowners. These factors contribute to reductions in the potential hunter harvest. These reductions in hunter access are particularly true for portions of HDs 314, 360, and 362.

There is growing concern about the impact of wolf reintroduction on elk numbers, distribution, and behavior throughout this EMU. Wolf activity and pack formation is increasing in the area and some hunters and landowners believe wolves have changed the behavior and distribution of elk, making it more difficult to harvest elk.

In portions of HDs 311, 314, and 360, commercial outfitting on private property restricts public access to both private and public land, reducing potential elk harvest, particularly of antlerless elk.

Elk that migrate out of Yellowstone National Park (YNP) to winter in Montana present unique management challenges. Some travel through the Gallatin to winter in Tom Miner Basin in HD 314 and several thousand travel through the Gallatin drainage and along the Madison River to winter along the west face of the Madison Range in HDs 362 and the southern portion of HD 360 (BCWMA). In general, the combination of "non- Park" and "Park" elk that winter in those districts are at very high levels. In the past, late season hunting has been an effective tool at controlling numbers. However, in the Yellowstone and Madison valleys, it is becoming more difficult to attain adequate harvest even with late season hunts.

Elk that migrate out of YNP and winter in the Gallatin drainage are below population objective and recruitment of calves has been consistently low since the late 1990s. The number of permits issued for late season hunts have been reduced dramatically. Concern about wolf predation in this deep snow wintering environment, bear predation on newborn calves, and long-term drought combine to cause FWP to be cautious regarding the harvest of antlerless elk in HD 310. This cautious approach includes the elimination of the Gallatin late elk hunt for the 2004-2005 season.

The late hunt in HD 311 is not associated with elk migrating from YNP. Most of the late season hunting that occurs is on a large outfitted ranch that manages bull harvest in a very restrictive manner to maintain high bull:100 cow ratios of about 50 bulls:100 cows. This ranch has agreed to a population objective for numbers of wintering elk. However, even with regularly scheduled late season hunts and some limited general season antlerless hunting, it has been difficult to maintain the population at the objective level. Maintaining elk near the population objective is difficult when the period of hunter access does not coincide with weather that produces favorable conditions for adequate harvest.

The north half of HD 360 has a high prevalence of outfitted hunting on ranches that control elk winter range. Based on telemetry data from the 1980s, a majority of elk wintering here spends the summer and fall in Jack Creek and Yellow Mules. The increase in elk populations in this portion of HD 360 is directly linked to the loss of public hunting access to Jack Creek and the Yellow Mules. Elk population management options are limited because of little access for hunters to these private lands.

Population objectives for elk wintering in HDs 360 and 362 are tentative. During winter, these elk are primarily on private land owned by a very diverse range of landowners with different economic interests, cultural backgrounds, and management objectives. The Madison Valley Ranch Lands Group and FWP sponsors the Madison Valley Wildlife Working Group (landowners, hunters, local business people, FWP, USFS and other private conservation organizations). A purpose of this group is to work toward developing population objectives for elk based on informed consent. Community-based problem solving takes time to evolve and decisions are not reached immediately. The Working Group intends to submit population objectives for approval by the FWP Commission. If approved, these objectives will replace the tentative objectives listed in this Plan.

Elk winter range continues to be lost to rural housing development along the north end of the Gallatin Range south of Bozeman in HD 301. Human safety issues and conflicts with traditional agriculturalists intermixed with these housing developments make it difficult to obtain the desired harvest of elk. We expect some segments of these elk, especially those that are becoming accustomed to human presence, to increase under these circumstances.

Generally, no general hunting has occurred in the Gallatin Closed Area since 1910 when it was established as a preserve under state statute. Preserve status was abandoned in 1957 and the area was open to public hunting for a very brief period and eventually became known as the Gallatin Closed Area. FWP closed this area to all big game hunting during the archery and general seasons, but hunting occurred on the winter range portions of the closed area during the Gallatin late elk season. A purpose of this closed area was to encourage elk to leave YNP and migrate toward winter ranges. Once movement occurred, opening this area during the late hunt allowed hunters to harvest elk that were unavailable during the general season. A unique opportunity exists on this 44,000-acre area to provide limited entry (permit only) hunting for trophy bull elk for a minimal number of license holders without displacing hunters to other areas. Even with wintering elk populations below objective for this HD, the harvest of a small number of bulls would not have a significant impact on the recovery of this elk herd.

We will establish a public working group representing the interests surrounding future management of the Gallatin Closed Area. One objective of this group will consider a proposal to establish the Gallatin Special Management Area. The objective of this proposal is to provide a unique limited entry, high quality hunting experience defined as: 1) an opportunity to harvest a mature bull elk; 2) a very low hunter density and; 3) an opportunity to hunt from archery through the general season (with the appropriate weapon). Compared to other limited entry options for trophy bulls, opening this new area will not displace hunters to other areas. It also increases opportunity for the general hunting public.

Brucellosis a concern for elk management because of the occurrence of free-ranging bison and elk from YNP in this EMU. FWP responses include maintenance of relatively low elk densities, continuing efforts to preserve open space on key wintering areas, enforcement of the ban on artificial feeding, and continuing serologic surveys of elk.

Livestock grazing, using specific grazing systems, continues to be an integral part of forage and habitat management on some WMAs. Similar systems may be appropriate for the Bear Creek WMA as a means of encouraging elk use and presence on public winter ranges in the Madison Valley. Also, FWP supports the present efforts in the Madison Valley toward developing a collaborative grazing program promoting quality range management practices and balancing the needs of private livestock producers and wildlife.

Movement of wintering elk in the Madison Valley suggests there is interchange between elk wintering in HD 360 and 362. At times, the majority of wintering elk could be found in either hunting district. Also, there is growing evidence that elk wintering in the Gallatin, especially the Taylor Fork drainage, move to the Madison during some winter months. These movements present challenges to interpreting survey information and formulating management decisions based on the established population objectives.

Population Monitoring: A mid-winter fixed-wing aircraft flight is made to obtain a trend count and sex/age classifications in HD 301. For HD 310, complete coverage helicopter surveys for counts and classifications are flown in late December and late March – early April. Additionally, as part of the Wolf-Ungulate Study, a flight with fixed-wing aircraft to classify calves:100 cows is conducted in mid- to late-July. An early to mid-winter helicopter survey for trend count is made on the Flying D Ranch in HD 311 by Turner Enterprises in cooperation with FWP. A late winter fixed-wing aircraft survey is flown each year in HD 314 to obtain a trend count and bull classification. A small sample of the elk observed in the HD 314 trend count is classified for calf:100 cow ratio. A late March – early April fixed-wing aircraft trend count and bull classification survey is conducted on east Madison winter ranges in HDs 360 and 362. We plan to fly this survey with a helicopter every other year to enhance classifications and test counting efficiencies. Calf:100 cow classifications in HDs 360 and 362 are conducted from the ground in late winter. Occasionally, a mid-winter fixed wing aircraft survey for trend count and bull classification is made on the Sheep Creek to Mile Creek winter range in HD 361.

SUMMARY OF PUBLIC COMMENT

Public comment strongly reflects the desire to maintain the diverse, high quality recreational opportunities found in this EMU. With the changes in private land ownership there is less concern expressed about high elk numbers and their impacts on ranching. There continues to be strong public support for protecting key elk habitats, both on private and public lands. Many people support the use of fee title acquisition, land trades, conservation easements, and conservation buyers as tools to protect and preserve wildlife habitat. Considerable debate occurs about the appropriate proportion of motorized and non-motorized use of the Gallatin Crest Divide and the South Madison. People are very concerned about the possible impacts of increasing predator populations on elk, particularly the impacts of wolves and grizzly bears. There is a perception that wolves have already made it more difficult for hunters to harvest elk. Many people would also like improved access to the GNF in HD 314 between Dry Creek and Big Creek and also along the Madison Face north of Mill Creek (HD 360) and south of Indian Creek (HD 362). Many are concerned about the potential effects of large-scale forest fires on elk habitat. Many have expressed interest in exploring opportunities for limited entry bull hunting.

MANAGEMENT GOAL

Manage elk populations within the constraints of habitat availability, expanding predator populations, and diverse social and agricultural interests. Encourage and cooperate in the wise management and conservation of elk habitat on public and private land and provide diverse hunting and non-hunting, elk-related recreational opportunities.

HABITAT OBJECTIVES

Develop and promote cooperative programs that encourage public and private land managers to maintain and conserve 1,437,000 acres of productive elk habitat.

HABITAT MANAGEMENT STRATEGIES

FWP will:

- Work collaboratively with other state and federal agencies, private non-profit land trusts, and agricultural interests like the Madison Valley Ranch Lands Group to conserve the agricultural base and elk winter range in the Madison, Gallatin and Yellowstone areas. Use State (FWP's Habitat Montana program), federal, county, and private funding sources to achieve this effort. FWP considers conservation easements, leases, land trades, and/or fee title acquisition as tools to protect and conserve elk habitat.
- Evaluate logging, burning, grazing, mining, and housing (subdivision) and recreational development proposals with regard to their potential impacts on elk habitat and elk populations.
- Cooperate with the GNF in their efforts to rewrite their forest wide travel management plan and to maintain forest road densities at acceptable levels for wildlife.

• Encourage the GNF to consider the effects of previous timber sales and fires on elk habitat when planning future resource management projects.

GAME DAMAGE STRATEGIES

FWP will:

- Changing land ownership trends, particularly in HDs 301, 311, 314, 360 and 362, have lead to increased tolerance of high elk numbers and fewer game damage complaints.
- Each game damage situation will be addressed based on its own individual circumstances. FWP has a set of possible responses that include stack yard protection, herding, early or late season special hunts, directing hunters to the area during the general season, kill permits, use of A-7 elk licenses, and liberalizing the general antlerless regulations by use of either-sex regulations or A-9 licenses. In addition to these game damage strategies, increasing public elk hunting on private land is necessary to help reduce game damage problems.

ACCESS STRATEGIES

FWP will:

- Identify important public access needs and provide recommendations to the GNF, the Access Montana Program, and landowner groups.
- Identify and pursue new Block Management contract opportunities as they become available

POPULATION OBJECTIVES

HD 314:

- 1) Maintain the number of elk observed during post-season aerial trend surveys within 20% of 3,000 elk (2,400-3,600). Individual herd count objectives are as follows:
 - A) Wineglass Mountain to West Pine Creek. 1,000 elk.
 - B) West Pine Creek to Eight-Mile Creek 300 elk.
 - C) Eight-Mile Creek to Big Creek 500 elk.
 - D) Big Creek to Point of Rocks 250 elk.
 - E) Point of Rocks to Rock Creek 450 elk.
 - F) Rock Creek to Tom Miner Basin 500 elk.
- 2) Maintain a minimum of 7% bulls in the total elk observed during post-season aerial trend surveys.

HD 301:

- 1) Maintain the number of elk observed during post-season aerial trend surveys from the mouth of the Gallatin Canyon east to Bear Canyon within 20% of 500 elk (400-600).
- 2) Maintain a minimum of 7% bulls in the total elk observed during post-season aerial trend surveys.

HD 310:

1) Maintain the number of elk observed during post-season aerial trend surveys in the upper Gallatin drainage within 20% of 1,500 elk (1,200-1,800).

2) Maintain a minimum of 10% bulls in the total elk observed during post-season aerial trend surveys.

HD 311:

- 1) Maintain the number of elk observed during post-season aerial trend surveys within 20% of 2,700 elk (2,160-3,240). Individual herd count objectives are as follows:
 - A) North end of the Spanish Peaks -2,500 elk.
 - B) Gallatin Canyon from Karst to Big Sky Spur Road 200 elk.

HD 360:

- 1) Maintain the number of elk observed during post-season aerial trend surveys in the south half of the HD, from Indian Creek to Shell Creek within 20% of 1,000 (800-1,200) and the number of elk observed in the north half of the HD, from Cedar Creek to the Jumping Horse area within 20% of 1,200 elk (960-1,440).
- 2) Maintain a minimum of 10% bulls in the total elk observed during post-season aerial trend surveys.

HD 362:

- 1) Maintain the number of elk observed from Indian Creek to Quake Lake during post-season aerial trend surveys within 20% of 2,500 elk (2,000-3,000) and maintain 100 elk observed in the Hebgen Lake Basin portion of the HD.
- 2) Maintain a minimum of 10% bulls in the total elk observed during post-season aerial trend surveys.

HD 361:

Winter elk populations in this district are highly dependent on winter weather conditions. The more severe the weather the more they move to the Wall Creek and HD 362 winter ranges. Typically, in moderate winters we expect to observe 150 - 200 wintering elk in this HD.

POPULATON MANAGEMENT STRATEGIES

REGULATION PACKAGES

Six-week either-sex (HD 314) or brow-tined bull/antlerless (HDs 301, 310, 311, 360, 361 and 362) archery regulations EXCEPT, see Restrictive Regulations for antlered elk and Liberal Regulation 2.) for antlerless elk.

If the FWP Commission approves new HD 309, the following elk regulations will be recommended for HD 309:

Because of public safety concerns, only a Standard Regulation with special weapons restrictions will apply. Deer and elk hunting will be limited to archery equipment, shotgun, traditional handgun, muzzleloader, or crossbow.

<u>The Standard Regulation is:</u> antlerless elk only, 1 September – 15 December with weapons restrictions

Antlerless:

Entire EMU:

The Standard Regulation is: 1.) limited either-sex (HD 314) or brow-tined bull/antlerless permits OR; 2.) 1-2 weeks general season either-sex (HD 314) or brow-tined bull/antlerless regulations AND; regularly scheduled limited entry late season elk hunts (HDs 310, 360, 362) or limited A-9/B-12 licenses (B-tags) valid during and after the general season (see late hunt criteria for HD 310 below).

The Standard Regulation will be recommended if: the total post-season aerial trend survey count is within 20% of the HD elk objective.

<u>The Liberal Regulation is:</u> **1.)** 4-5 week general season either-sex (HD 314) or brow-tined bull/antlerless regulations AND; regularly scheduled limited entry late season elk hunts (HDs 310, 360, 362) or limited A-9/B-12 licenses (B-tags) valid during and after the general season (see late hunt criteria below). OR; **2.)** 5-week general season antlerless ONLY Regulation AND; regularly scheduled limited entry late season elk hunts (HDs 310, 360, 362) or limited A-9/B-12 licenses (B-tags) valid during and after the general season (see late hunt criteria below). Archery regulations will also be antlerless ONLY.

Liberal Regulation 1.) (above) will be recommended if: the number of elk observed during total post-season aerial trend surveys is more than 20% above the HD objective.

Liberal Regulation 2.) (above) will be recommended if: after 2 consecutive years of application of Liberal Regulation 1.) (above) the number of elk observed during total post-season aerial trend surveys remains more than 20% above the HD objective.

<u>The Restrictive Regulation is:</u> few or no general season either-sex (HD 314) or brow-tined bull/antlerless permits AND; no regularly scheduled limited entry late season hunts (see late hunt criteria below).

The Restrictive Regulation will be recommended if: the total post-season aerial trend survey count is more than 20% below the HD objective.

Criteria for recommending re-establishment of the late elk hunt in the Gallatin (HD 310)

The Gallatin late elk hunt began in 1965 as a method to manage elk that migrated from YNP, toward winter ranges in the upper Gallatin Drainage. Following a three-year closure, FWP biologists reestablished the hunt in 1971. Since that time, permit levels ranged from 2,800 eithersex permits in 1978 to 80 antlerless and 4 brow-tined bull/antlerless permits in 2003. Elk harvests during this period ranged from 750 elk (197 bulls, 370 cows, and 183 calves) in 1965 to 35 antlerless elk in 2003.

Our objective for numbers of elk on winter ranges in HD 310 is 1,400-1,600 observed elk. These wintering areas are primarily public lands and include FWP's Gallatin Wildlife Management Area near Big Sky, Montana. A late hunt in the Gallatin drainage (HD 310) will be recommended only when necessary to maintain wintering elk numbers at or near the objective of 1,500 elk.

FWP will recommend a late elk hunt in the Gallatin drainage (HD 310) if: 1) the number of elk observed in the upper Gallatin Drainage during post-season aerial trend surveys is at least 1,500 elk for two consecutive years AND; 2) at least 20 calves:100 cows are observed for two consecutive years during post-season aerial trend surveys.

Antlered:

HD 314:

The Standard Regulation is: 5-week general season antlered bull regulation.

The Standard Regulation will be recommended if: at least 7% of elk observed during post-season aerial trend surveys are bulls.

The Restrictive Regulation is: 5-week general season brow-tined bull regulation.

The Restrictive Regulation will be recommended if: less than 7% of elk observed during post-season aerial trend surveys are bulls for 2 consecutive years.

HDs 301, 310, 311, 360, 361, and 362:

The Standard Regulation is: 5-week general season brow-tined bull regulation.

The Standard Regulation will be recommended if: at least 10% of elk observed during post-season aerial trend surveys are bulls.

<u>The Restrictive Regulation is:</u> unlimited brow-tined bull/antlerless permits by HD for both archery and the general season AND no late season either-sex permits. ARCHERS WILL ALSO BE REQUIRED TO APPLY FOR UNLIMITED PERMITS.

The Restrictive Regulation will be recommended if: less than 10% of elk observed during post-season aerial trend surveys are bulls for 2 consecutive years OR, less than 20 calves:100 cows are observed during post-season aerial trend surveys for 2 consecutive years.

If the proposed working group recommends the Gallatin Special Management Area and the FWP Commission adopts it, the following are additional recommended antlered bull regulations for HD 310:

<u>The Standard Regulation is:</u> 5 either-sex permits (or a number established by the working group) valid in the Gallatin Special Management Area during the archery and general seasons.

The Standard Regulation will be recommended if: standard or liberal regulations for both antlerless and antlered elk are in place in at least two of the following three HDs: 314, 360 and 362.

The Restrictive Regulation is: no hunting in the Gallatin Special Management Area.

The Restrictive Regulation will be recommended if: two of the three HDs, 314, 360 and 362 are in the restrictive regulation for both antlered and antlerless elk.

NORTHERN YELLOWSTONE EMU [Hunting Districts 313, 314 (S. portion), 316]



Description: This EMU includes the 700-square-mile area immediately north of Yellowstone National Park (YNP) between Cooke City and Gardiner and north to the Boulder River Divide, Mill Creek Divide, and Six-mile Creek east of the Yellowstone River and Sphinx Creek west of the Yellowstone River. Approximately 75% of the EMU lies within the Absaroka-Beartooth Wilderness Area. Overall, about 94% of the EMU is in public ownership [USDA Forest Service (USFS), Montana Department of Natural Resources and Conservation (DNRC), Montana Fish, Wildlife & Parks (FWP), USDI Bureau of Land Management (BLM)], and 6% is in private ownership. The Gallatin National Forest manages more than 95% of the public land. The terrain is moderately to extremely rugged with extensive areas of timber and high elevation sub-alpine and alpine habitats. Private land ownership is largely restricted to subdivisions and small ranches along the Yellowstone River between Gardiner and Six-mile Creek and in Cinnabar Basin.

The EMU contains almost 400,000 acres of elk habitat. Approximately 130,000 acres within the EMU is occupied elk winter range. Since 1989, over 16,000 acres of critical elk winter range have been transferred into public (USFS, FWP) ownership; most notably through the interagency Northern Yellowstone Elk Herd Project completed in 1993 and the Royal Teton Ranch Conservation Project Phase I and II completed in 1998 and 1999. Road densities are generally low over much of the EMU with little opportunity for future change due to Wilderness Area designations. Future opportunities for logging, grazing, mining, and subdivision are also very limited due to land ownership, and resource and management restrictions. Elk habitat in this EMU is relatively secure from significant modification.

Public Access: Most of the public land is legally accessible through numerous trailhead or secondary road access points. Approximately 75% of the EMU lies within the Absaroka-Beartooth Wilderness, where access is by foot or horseback only; there are no roads or vehicle access to about 530-square-miles of wilderness area.

Elk Populations: This EMU helps support the Northern Yellowstone elk herd, a large migratory population of 9,000-19,000 elk that occupies about 1.5 million acres of summer range inside and

north of YNP. This elk herd winters on about 380,000 acres, of which about 130,000 acres lies north of YNP within this EMU. During 2000-2004, total elk counts have ranged from 8,300-14,500 elk (Figure 1), with 3,500-5,000 elk wintering in this EMU. During severe winters, up to 8,600 elk have wintered in this EMU. Since 1968, the Northern Yellowstone elk population has fluctuated widely between 3,200 and 19,000 elk, often with annual changes of 10-20% and some annual changes of up to 40%, as a result of major winterkill events. Population fluctuations in the Northern Yellowstone elk herd are more dynamic than other elk populations in southwest Montana.

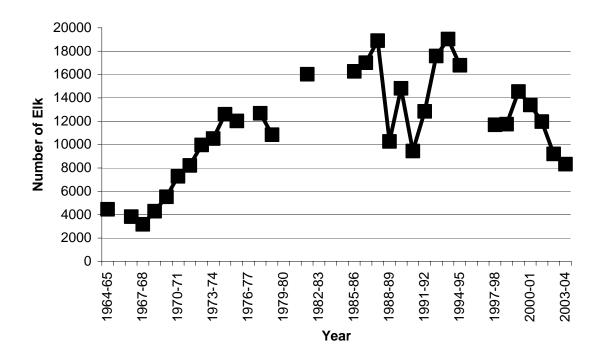


Figure 1. Number of elk counted during Cooperative early winter post-season trend surveys of the Northern Yellowstone elk winter range (includes elk wintering in Yellowstone National Park), 1964-1965 through 2003-2004.

Recreation Provided: This EMU provides longer and more diverse elk hunting opportunities than any EMU in Montana. Opportunities include a 6-week archery elk season, (HD 313, southern portion of HD 314), a 6-week early backcountry rifle season beginning 15 September in HD 316, a 5-week general rifle elk season (HD 313, southern portion of HD 314), and a very popular 6-week limited access Gardiner Late Hunt from early January to mid-February (HD 313, southern portion of HD 314). These diverse seasons provide approximately 8,000 days of hunting recreation to about 3,200 hunters annually. Exceptional big game viewing opportunities occur on winter ranges in the Dome Mountain WMA and Gardiner Basin areas. Wildlife viewing is also an important summer and fall recreational use on hundreds of miles of backcountry trails in the Absaroka-Beartooth Wilderness portion of this EMU. Much of this EMU experiences considerable year-round tourist activity because it is adjacent to YNP.

Current Annual Elk Harvest: During 1999-2001, an average estimated 175 elk (150 antlered and 25 antlerless) were harvested during the archery, early rifle and general season. Through the same period, an average estimated 1,200 elk (100 antlered, 1,100 antlerless) were harvested during the Gardiner late hunt. Late hunt harvest can be quite variable, depending on population level, weather conditions and migration. From 1988-1989 to 2002-2003, estimated late hunt harvest varied from 273 elk in 1993-1994 to 2,465 elk in 1996-1997. Note: the harvest data does not include the archery and general season elk harvest in the small portion of HD 314 (51 square miles) within this EMU; that harvest is estimated to be < 75 elk.

Accomplishments: About 7,000 acres of important wildlife habitat changed from private ownership to Gallatin National Forest (GNF) ownership in Phase I and II of the Royal Teton Ranch Conservation Project in 1998 and 1999. This effort helps to protect valuable big game winter range and migration routes from future development. Beginning in 2001, two new Gardiner Late Hunt either-sex elk permit types were issued for the first time. These permits provide new opportunities for youth and disabled hunters, to include special permits for severely handicapped hunters who are restricted to hunting from a vehicle. These permits have met with strong public support. In 1998 FWP developed and implemented a comprehensive monitoring plan for a conservation easement on the 160-acre Allen Nelson property adjacent to the Dome Mountain WMA.

Management Challenges: Several unique factors affect elk management in this EMU. The Northern Yellowstone EMU differs from most EMUs in the state, in the following significant ways:

- This EMU does not include the entire year-round home range of the Northern Yellowstone elk herd.
- The majority of the Northern Yellowstone elk are seasonal migrants, spending only 4-5 months during the winter/early spring in this EMU.
- A large portion of the total elk population is not available to sport hunting, and the majority of elk that are available to hunters, are hunted during a special limited access winter late hunt.
- The Northern Yellowstone elk herd is subject to higher natural mortality than elk in other EMUs, including periodic major winterkill events and high predation rates from a full complement of large predators, including gray wolves. Drought conditions during recent years may have further increased mortality/reduced recruitment.
- As a result of natural predation and environmental conditions, elk recruitment for Northern Yellowstone elk is typically lower than elk recruitment rates in other EMUs in southwest Montana. Trends in elk recruitment become a major factor in determining if the size of this elk population declines, increases, or remains stable.

Wolf restoration and subsequent predation has contributed to the reduction of elk numbers and influenced elk distribution and behavior. Elk management decisions and hunting opportunities are impacted by the effect of wolves on elk populations, movements, and behavior. Montana has completed an acceptable state wolf management plan. When wolves are delisted and Montana assumes management authority for wolf populations, FWP will attempt to balance the needs of both wolf and elk populations with the interests of hunters, non-hunters, and landowners. This

management will be within the legal requirements of the Montana Gray Wolf Conservation and Management Plan. Until then, FWP can only manage the elk component of the equation and not the wolf component.

In addition to wolves, results of an ongoing elk calf mortality study in YNP indicate that grizzly and black bear predation is the major cause of elk calf mortality during the first few weeks of life. Like wolves, grizzly bears are currently protected under federal law and black bear are protected within YNP.

Based on movement patterns and elk distribution, FWP elk management actions can only affect a portion of the entire Northern Yellowstone elk herd, typically 30-50% of the population. For this reason our EMU population objectives focus primarily on the number of elk that winter north of YNP and are available to hunters. In this EMU, hunter harvest of elk is only a portion of overall elk mortality that includes predation by wolves, bears, and mountain lions, and mortality due to periodic winterkill events. However, hunting outside YNP is currently the only type of elk mortality that can be regulated. We do not anticipate human directed population management of wolf, bear, or elk populations within YNP.

Another challenge in this EMU is managing the relatively small "resident" portion of the Northern Yellowstone elk herd that spends the entire year north of YNP. It is impossible to accurately monitor the trend in population size and recruitment of the "resident" population because before they move to more open winter ranges where they can be surveyed, they are joined by large numbers of migrant YNP elk early in the winter (often in early December). In some years migrant elk may cause elk depredation problems adjacent to the Dome Mountain WMA and move onto private lands in HD 317 north of Six-mile Creek Road.

Population Monitoring: An interagency Cooperative Elk Count is flown annually between mid to late-December. This is a aerial population trend count covering 68 winter range units inside and outside YNP accomplished with 4 fixed-wing airplanes flying simultaneously over the entire Northern Yellowstone winter range. No effort is made to correct for observability bias. FWP conducts 2-3 fixed-wing aerial elk counts north of YNP to estimate the number of elk that migrate onto winter ranges within HDs 313 and 314. This information is used to estimate trends in migration size/timing and potential impacts on winter range habitat. In late February to early March NPS biologists conduct a helicopter classification survey of Northern Yellowstone elk to document the trends in calf:cow:bull ratios. In addition to elk population monitoring there are several elk/predator and elk/habitat research projects underway inside YNP. These studies help shed light on important questions related to elk mortality, behavior, and habitat use.

SUMMARY OF PUBLIC COMMENT

Much of the recent public comment revolves around concerns over declining Northern Yellowstone elk numbers and the impacts of wolf predation. People are very concerned about the loss of hunting opportunities, particularly the long-term viability of the Gardiner Late Hunt and the negative impact on the local economy.

MANAGEMENT GOAL

Maintain the carrying capacity and continued winter use by northern Yellowstone elk on winter ranges north of YNP and provide unique elk hunting opportunities to include an early season rifle hunt for older age bulls, and a special late elk season that offers high success antlerless elk hunting. Acknowledge and attempt to balance the needs of diverse predator populations (to include newly restored wolves) and a viable elk population with the diverse existing human interests.

HABITAT OBJECTIVES

Maintain healthy, productive elk habitat in the EMU, including quality winter range that contributes to the long-term viability of this nationally important elk population.

HABITAT MANAGEMENT STRATEGIES

FWP will provide technical assistance to and cooperate with state, federal, and private land managers to pursue the following:

- Evaluate proposed logging, burning, grazing, mining, subdivision, and recreational development with regard to their potential impacts on elk habitat and elk populations.
- Work with the GNF to maintain forest road densities at acceptable levels for wildlife.
- Encourage the GNF to consider the effects of previous timber sales and fires on elk habitat when planning future resource management projects.
- Protect and maintain major elk winter ranges on public and private lands to include the 16,000+ acres of winter range acquired by the interagency Northern Yellowstone Elk Herd Project and the Royal Teton Ranch Conservation Project.
- Monitor habitat and vegetation conditions on the 4,680-acre Dome Mountain WMA.

GAME DAMAGE STRATEGIES

Due to land ownership patterns and public acquisition of elk winter range, there are relatively few elk related game damage problems in this EMU. The only exceptions occur on relatively small parcels of private land adjacent to the Dome Mountain WMA and near Six-mile Creek. In some years, particularly during late winter or early spring, elk move off the Dome Mountain WMA and cause game damage concerns on private grazing land. FWP has addressed this issue through the use of herders, opening public access to the WMA 2 weeks earlier in spring (to encourage an earlier elk migration back to YNP), and providing assistance with fence repair. FWP and other groups have also secured conservation easements on private land that will facilitate continued winter range use by elk. There may be future opportunities for easements or acquisitions that would help address game damage issues.

ACCESS STRATEGIES

Over 90% of this EMU is in public ownership and is accessible to public hunting. As a result, there are few public access problems or concerns in this EMU.

POPULATION OBJECTIVES

- 1) Use the Gardiner late hunt to regulate wintering elk numbers to help ensure the long-term viability and productivity of winter range habitat.
- 2) Provide early and general season elk hunting opportunities commensurate with elk population levels.

POPULATION MANAGEMENT STRATIGIES

Early Backcountry Elk Hunt

This hunt, within portions of the Absaroka-Beartooth Wilderness Area north of YNP in HD 316, provides a backcountry elk hunting opportunity to hunt older age-class bull elk with a rifle during the rut. Due to the backcountry nature of the area, only 400-500 hunters participate and they harvest relatively few (75-150) elk, primarily bulls. This hunt is not a population management hunt, but rather a regulation type that provides an uncommon recreational experience. Considering the large size of the Northern Yellowstone elk herd and sex ratios of 40+ bulls:100 cows, this hunting season has very little biological effect on the elk population. This early season hunt can be offered over a wide range of population levels.

General Archery and Rifle Elk Season

FWP provides archery and general season elk hunting opportunities to harvest elk in HD 313 and a small portion of HD 314 (S. of Sphinx Creek). These hunting seasons depend on a relatively small portion of the Northern Yellowstone elk population (400-600 elk) that is north of YNP during fall. The last week or two of the general season, may also provide an opportunity to harvest migrant elk as they move out of YNP. This potential movement can attract a large number of hunters and increase the harvest substantially in some years. Due to the difficulty in monitoring the trends in this sub-population of elk, FWP is not able to set guidelines for different season types during the archery and general rifle seasons. Considering this situation, these seasons should be managed conservatively. FWP has established area closure guidelines to address hunter safety issues, if and when large general season elk migrations occur.

REGULATION PACKAGES

HD 316:

Antlerless and Antlered:

<u>The Standard Regulation is:</u> an either-sex regulation beginning 15 September and continuing to the opening of the general season. Antlered bull elk regulation during the 5-week general season.

The Standard Regulation will be recommended if: observed bull:100 cow ratios are at least 10 bulls:100 cows.

The Restrictive Regulation is: a reduction in length or elimination of the early backcountry hunt.

The Restrictive Regulation will be recommended if: observed bull:100 cow ratios are less than 10 bulls:100 cows for 2 consecutive years.

HD 313:

Six-week brow-tined bull/antlerless archery regulation.

Antlerless and Antlered:

<u>The Standard Regulation is:</u> 5-week general season brow-tined bull regulation and a very limited number of brow-tined bull/antlerless permits **Note:** With the addition of a small portion of HD 314 into HD 313, the number of brow-tined bull/antlerless permits recommended during the general season may be split by portion of HD to regulate the antlerless harvest on the east and west side of the Yellowstone. This would allow for a more conservative antlerless elk harvest east of the Yellowstone River.

Gardiner Late Hunt (GLH)

Since the mid 1990's the GLH has been managed under an Adaptive Harvest Management (AHM) approach that attempted to match regulation type and elk harvest with current population and migration data in order to meet two primary management objectives:

Management Objective 1: FWP administers the GLH to help manage elk numbers on winter ranges north of YNP (primarily on public lands). Our objective is to provide winter range forage for migrant Northern Yellowstone elk on a sustainable basis. To accomplish this we regulate the number of elk that winter in this area by annually harvesting elk. The GLH is a wildlife management tool that uses hunters to help regulate elk numbers. The goal is to regulate elk numbers so they do not exceed the long-term carrying capacity of the range and cause long-term changes in plant communities or declines in forage production. The objective range in elk numbers counted during post-season aerial trend surveys is: 3,000-5,000 elk counted north of YNP to Six-Mile Creek, with 2,000-3,000 of these wintering north of Dome Mountain. If migratory elk, that are protected inside YNP during the general elk hunting season, are not harvested annually, increasing numbers of wintering elk may potentially exceed the carrying capacity of the winter range.

<u>Management Objective 2:</u> Harvest elk during the GLH in ways that will minimize the effect of hunting on migratory behavior, allowing traditional elk winter use to be distributed over the winter range in proportion to forage availability. In particular, our objective is to allow or encourage elk use of recently acquired winter ranges to the north of YNP (e.g., OTO Ranch, Dome Mountain WMA).

Since 1996, changes in the GLH season have been systematically based on AHM guidelines related to changes in migration size, winter elk distribution north of YNP, total elk population trends, hunter participation, hunter success, elk recruitment trends, and other biological and environmental factors. The GLH regulation types fell into 3 categories; Restrictive (less than

2,000 permits), Standard (2,000-2,700 permits), and Liberal (more than 2,700 permits). Based on changing biological conditions since 1996, the GLH has moved from Liberal to Standard to Restrictive regulations, with the number of antlerless permits reduced from 2,900 to 1,100 since 1996. With revision of Montana's Elk Management Plan, FWP has further refined its AHM approach to the GLH in the following regulation packages.

REGULATION PACKAGES

Because the GLH is primarily a population management hunt, the majority of permits issued (90%+) are for antlerless elk. A small percentage of permits are issued for brow-tined/ antlerless elk, allowing a limited number of hunters the opportunity to harvest an older age "trophy class" bull. Although limited in number, there is a great deal of public interest in applying for this permit type. Similar permits that provide limited opportunities to hunt for older age class bulls occur in some other EMUs.

Antlerless:

The Standard Regulation is: 1.) 1,000-2,000 antlerless permits.

The Standard Regulation will be recommended if: 1.) 3,000-5,000 elk wintering north of YNP are observed during post-season aerial surveys OR; 2.) 2,000-3,000 elk wintering north of Dome Mountain are observed during post-season aerial surveys AND; 3.) recruitment has not been below 20 calves:100 cows for 3 consecutive years.

The Liberal Regulation is: 1.) at least 2,500 antlerless permits.

The Liberal Regulation will be recommended if: 1.) more than 5,000 elk wintering north of YNP are observed during post-season aerial surveys OR; 2.) more than 3,000 elk wintering north of Dome Mountain are observed during post-season aerial surveys AND; 3.) at least 20 calves:100 cows are observed during post-season surveys. (if recruitment is less than 20 calves:100 cows the Standard or Restrictive Regulation could be recommended regardless of the size of the elk migration).

The Restrictive Regulation is: 1.) 500 or fewer antlerless permits.

The Restrictive Regulation will be recommended if: 1.) less than 3,000 elk north of YNP are observed during post-season aerial surveys for 2 consecutive years OR; 2.) less than 2,000 elk north of Dome Mountain are observed during post-season aerial surveys for 2 consecutive years OR; 3.) less than 20 calves:100 cows are observed during post-season surveys for 3 consecutive years regardless of migration size.

Antlered:

<u>The Standard Regulation is:</u> brow-tined bull/antlerless elk permits issued at a rate of no more than 10% of the number of antlerless elk permits issued.

ABSAROKA EMU (Hunting Districts 317, 520 and 560)



Description: This 2,420-square-mile EMU is located on the north and west flanks of the Beartooth and Absaroka Mountains and includes the north portion of the Absaroka-Beartooth Wilderness. The area is a mixture of public (68%) and private (32%) lands. Much of the EMU (62%) falls within the boundaries of the Custer and Gallatin National Forests, however the majority of the 341 square miles of elk winter range occurs on small parcels of privately owned land used for cattle grazing and hay production. About 77% of the EMU is elk habitat.

Public Access: Fifty percent of HD 317 provides a backcountry hunting opportunity, with the rest of the HD in a minimum to moderately-high motorized access situation. Seventy percent of HD 520 provides a backcountry hunting opportunity. The remainder of the hunting district is evenly divided between minimum motorized access and moderate-high motorized access. Seventy percent of HD 560 provides a backcountry hunting opportunity while the remainder of the area is in the minimum motorized access category.

Essentially 100% of the elk in Line Creek-Grove Creek and Silver Run areas in HD 520 are available to the hunting public. The 2 primary landowners in the Line Creek-Grove Creek area are currently enrolled in the Block Management Program and the Silver Run herd unit occurs primarily on U. S. Forest Service (USFS) lands. Hunter access to the Butcher Creek herd unit is mixed with good access on 3 ranches (one in Block Management Program), but essentially no public access on 2 large ranches owned by non-resident landowners. In addition, hunting rights on the last remaining large ranch are leased to a private individual and hunting is extremely limited. These 3 ranches serve as elk "refuges" for this herd unit. Three USFS access points provide only limited access to elk. Overall, only about 30% of the elk in this herd unit are available to hunters during a portion of the season. Access to the Morris Creek herd unit is also mixed. One major ranch allows access to antlerless permit holders but charges bull hunters an access fee. Non-resident landowners control enough land to serve as an elk "refuge" for a portion of this herd unit. Public access to USFS land in the Benbow area and on 2 Block Management Areas provides only limited access to the remainder of this herd. Overall, about 60% of the Morris Creek elk are available to some level of harvest. The Horseman's Flat subunit of the Stillwater herd unit remains primarily on private land, which is outfitted, although some antlerless permit holders are allowed access during the late season. Only about 10-20% of these elk are available to the general elk hunter. The Trout Creek subunit resides primarily on USFS

land to which access is somewhat difficult. However, 100% of the Trout Creek elk are available to hunters who will expend the required effort.

In HD 560, about 70% of the Main Boulder elk herd are year-round residents to national forest lands and are available to hunters throughout the hunting season. The remaining 30% (the Green Mountain herd) spend part of the year on private lands off the national forest. Four landowners control access to these elk when they are off the national forest. One (a non-resident landowner) is basically closed to hunting. Two allow limited hunting (primarily for antlerless elk) and 1 is in the Block Management Program.

Sixty to seventy percent of the West Boulder/Greeley Creek elk herd spend the summer/early fall period on USFS lands. The remaining elk are year-round residents of private land. Once the hunting season begins, only about 30% of the elk in these herds are available to the general public, either on national forest lands or on the private lands where some hunting is allowed. One ranch is in the Block Management Program and does provide some elk hunting opportunity. However, 50-60% of the elk move onto 2 ranches in the Ellis Basin area, one of which allows no hunting and the other restricts hunting to the owners, their relatives and friends. One ranch in the McLeod Basin area is leased by an outfitter and a ranch in the Greeley Creek area charges to hunt bulls but does allow locals and friends with antlerless permits to hunt free.

In recent years, 70-80% of the elk in the Deer Creeks/Susie Creek herd have moved onto private lands bordering USFS land prior to the start of the hunting season. With sufficient pressure on the private lands, many of these elk do move back onto USFS lands where they are available to the general public. However, hunting on the private lands during the general season is usually restricted to the owners and ranch employees. In some years there is not enough pressure to move the elk back onto USFS lands during the general season. Most of these landowners, however, do allow access to hunters of antlerless elk after the general season.

About 50% of the elk in HD 317 remain on USFS land during most of the hunting season. The other 50% either move onto private land, move between private and public land, or occur where reasonable access to public land is restricted during the hunting season by private land ownership. Access to elk on or through private land during the hunting season is particularly difficult in the Mill Creek North and Mill Creek South herd units. In many cases hunting pressure on private land is insufficient to move elk back onto USFS land once they leave. Some landowners allow limited access to antlerless elk hunters during the general season or during the extended antlerless hunt period.

Elk Populations: Over 1,200,000 acres of elk habitat currently support approximately 2,900 elk, representing 12 reasonably distinct elk populations. Elk numbers have increased dramatically during the last 20+ years with many herds doubling or tripling in size (Figures 1 and 2).

In HD 520, we counted about 200 elk in the Line Creek-Grove Creek area during the early 1980s. Numbers of elk counted doubled to about 400 by 1990 and then dropped to less than 200 in 2003 as some of these elk pioneered into adjacent Hunting Districts 502 and 510.

Number of elk counted in the Silver Run area increased steadily from about 60 in 1978 to over 250 in 2002. Only 30 elk were counted in the Butcher Creek area in 1978. The number of elk counted there increased to just over 80 in 1990 and then declined to about 35 by the late 1990's following intense harvest management pressure. However, immigration of elk from the Morris Creek herd into Butcher Creek resulted in an increase in number of elk counted to nearly 150 by 2002.

In 1977, only 35 elk were counted on the Morris Creek winter range. By 1990 this number had increased to 230 and has remained stable since. However, this stability was enabled only because more than 100 elk emigrated to Butcher Creek and a similar number moved into adjacent portions of HD 575.

During the early 1970's only 35-40 elk were counted annually in the Stillwater area – all in the vicinity of Horseman's Flat. This elk herd has increased gradually with more than 75 elk remaining in the Horseman's Flat area and more than 120 elk moving north into Trout Creek.

There are 3 fairly distinct herd units in HD 560 based on summer/winter range areas: the Main Boulder herd, the West Boulder/Greeley Creek herd, and the Deer Creeks/Susie herd. There were 30-40 elk in the Deer Creeks/Susie Creek herd throughout the 1970s and early 1980s. The herd began increasing in the mid-1980s and by 1991 we estimated 120-130 elk were present. Increased antlerless harvest reduced elk numbers over the next few years and currently 75-100 elk winter in this area.

Throughout most of the 1970s there were less than 100 elk wintering along the Main Boulder River with virtually all being yearlong residents to USFS lands. The herd began increasing in the early 1980s and by the early 1990s the winter population peaked at an estimated 450-500 elk. By the early 1990s, nearly 30% of the population was resident to private lands adjacent to the national forest. More liberal hunting regulations have resulted in a somewhat reduced elk population. Currently, we estimate about 400 elk spend winter along the Main Boulder, of which nearly 30% spend much of the year (most of the winter) on private land.

In 1977, we counted only 51 elk on winter ranges in the West Boulder/Greeley Creek area. By 1987 that number had increased to 170, and we counted 241 elk on these same winter ranges in 1992. Sixty to seventy percent of these elk spend the summer/early fall period on USFS lands. The remaining elk are yearlong residents of private land. Virtually all of these elk winter on private lands. Over the last 10 years, numbers of elk in this herd have continued to increase. We counted 362 elk here in late winter 2002 and estimate the total population at more than 400 elk.

Throughout the 1970s, we counted 150-200 elk in HD 317. About 1,200 elk have been counted annually in the same area since 1998. Number of elk counted in the Livingston Peak herd unit has increased from less than 50 elk in the early 1990s to about 150 elk in 2003. Numbers of elk counted in the Mill Creek North herd unit have increased from 200 elk in 1990 to 700 elk in 2002. Counts of the Mill Creek South herd unit have fluctuated between 75 and 150 elk over the past 10 years. Number of elk wintering on the Emigrant Face has varied considerably from 150 to 550, depending on the amount of influx of migrant northern Yellowstone elk in some years.

The number of elk wintering on Emigrant Face will depend largely on trends in the northern Yellowstone population and winter severity. There are perhaps 100-150 "resident" elk (non-Northern Yellowstone elk) that use this winter range.

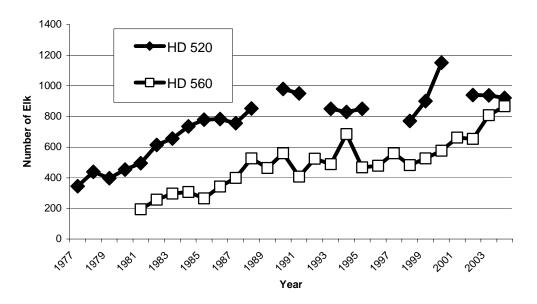


Figure 1. Number of elk counted during post-season aerial trend surveys in HDs 520 and 560, 1977-2004.

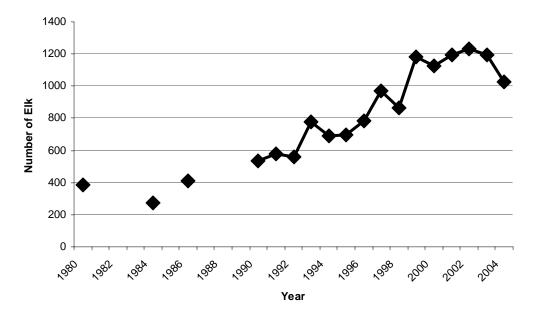


Figure 2. Number of elk counted during post-season aerial trend surveys in HD 317, 1980-2004.

Recreation Provided: This EMU provided an annual average of 13,587 days of hunting recreation to an average 2,558 hunters during 1999-2001. Hunter numbers have remained stable over the last 10 years while hunter days have increased by 11%. Winter elk viewing is also an important recreational use of the Boulder, Emigrant Face and Stillwater herds and is particularly prevalent on the Silver Run winter range (located adjacent to the heavily used West Fork Rock Creek road and the Beartooth Highway). Wildlife viewing is an important aspect of summer recreational use in this EMU, particularly on the open plateaus in the Line Creek, Silver Run, Main Boulder and East Boulder areas as well as the backcountry in Mill Creek. Typically, large numbers of mature migrant bull elk winter on Emigrant Face, which attracts a great deal of late winter/early spring antler hunting activity.

Annual Elk Harvest: The average annual harvest was estimated at 470 elk during 1999-2001, very similar to the average annual harvest during 1990-1992. During1999-2001, bulls comprised 57% of the elk harvested (average = 266) and the number of bulls harvested during 1990-1992 averaged 255. Thirty percent of the harvested bulls were spikes during both periods. Residents accounted for approximately 70% of the bull harvest during each period. The average harvest of antlerless elk was approximately 200 animals during 1999-2001, 11% below the average antlerless harvest during 1990-1992.

Accomplishments: We have successfully worked with the Custer and Gallatin National Forests to develop programs designed to improve vegetation diversity and increase carrying capacity of winter ranges by burning (Line Creek, Silver Run, Stillwater, Mill Creek and Emigrant Face), aspen enhancement (Main Boulder, Elk Creek, Butcher Creek, Morris Creek, Stillwater) and maintaining wildlife openings by reducing conifer encroachment (Deer Creeks, Cherry Creek/Castle Creek, Butcher Creek, Morris Creek and Emigrant Face). A conifer encroachment reduction program is also underway on the Silver Run WMA and adjacent Custer National Forest lands. FWP will continue to cooperate with the Custer and Gallatin National Forests in developing and implementing these programs.

We currently have 8 Block Management Areas in the EMU and are working to expand on this number.

Management Challenges: There has been an increase in landowners who do not make their primary living from ranching. These landowners have less interest than traditional landowners in allowing elk hunting. This situation has created elk "refuges", reduced elk harvest, and resulted in increasing elk populations. A primary management challenge will be to find ways to increase hunter access and elk harvest in these situations.

Wolf activity and pack formation is increasing in the EMU. There is growing concern among some of the public over the impact of wolves on elk numbers, distribution and behavior. There is a perception among hunters and landowners that wolves have changed the behavior and distribution of elk, making it more difficult to harvest elk. Further, the changes in distribution appear to be resulting in elk spending more time occupying areas in or near agricultural croplands, thereby increasing damage complaints.

Population Monitoring: Dependent on weather conditions and aircraft/pilot availability, each elk herd unit in this EMU is counted at least once each year between 1 January and 15 May. Total numbers of elk and numbers of bulls observed are recorded.

SUMMARY OF PUBLIC COMMENT

Traditional landowners feel elk populations are excessive and support reduction in numbers. Non-traditional (typically non-resident) landowners feel substantial numbers of elk increase the value of their land, generally do not support reduction in elk numbers and are resistant to elk harvest even if such harvest is in the best interest of their neighbors. Sportsmen generally enjoy the increased number of elk that are available to them, but they are willing to support reduction in numbers where traditional landowners are being negatively impacted or where elk numbers appear to be too high for available winter range. All public comment was opposed to general season hunting (favored limited permits) for the Silver Run/Line Creek portion of HD 520.

MANAGEMENT GOAL

Stabilize elk populations at current levels for most herd units (commensurate with available habitat on private and public land), while attempting to reduce elk numbers to meet objectives in other herd units (Silver Run, West Boulder/Greeley Creek, Livingston Peak, Mill Creek North and South, and Emigrant Face). Successfully reducing elk numbers will depend largely on increasing/improving hunter access to elk.

HABITAT OBJECTIVES

Continue to participate in cooperative programs that encourage public and private landowners to maintain or improve existing elk habitat.

HABITAT STRATEGIES

The Custer and Gallatin National Forests have developed programs designed to improve vegetation diversity and increase carrying capacity of winter ranges by burning (Line Creek, Silver Run, Stillwater, Mill Creek and Emigrant Face), aspen enhancement (Main Boulder, Elk Creek, Butcher Creek, Morris Creek, Stillwater), and maintaining wildlife openings by reducing conifer encroachment (Deer Creeks, Cherry Creek/Castle Creek, Butcher Creek, Morris Creek and Emigrant Face). A conifer encroachment reduction program is also underway on the Silver Run WMA and adjacent Custer National Forest lands. FWP will continue to cooperate with the Custer and Gallatin National Forests in developing and implementing these programs.

Over the past decade, no more than 40% of the bulls harvested in this EMU were taken during the first week of the season. An increase in this percentage could indicate deteriorating elk habitat security. This percentage will be monitored to detect and assess any possible deterioration of elk security. To help ensure elk habitat security, FWP will continue to work with the USFS on road management and travel plans.

GAME DAMAGE STRATEGIES

Cooperate with the USFS to pursue efforts to increase the carrying capacity of winter ranges on USFS lands adjacent to chronic problem areas on private lands. Range improvement projects are a priority for the Mill Creek, Emigrant Face, Line Creek, Silver Run, Stillwater and Main Boulder areas

Each game damage situation will be addressed based on its own individual circumstances. FWP has a set of possible options that include stack yard protection, herding, early and late season special hunts, directing hunters to the problem area during the general season, kill permits, use of A-7 elk licenses, or liberalizing the general antlerless harvest. The A-9/B-12 license for a second elk (antlerless only) is also another management tool. In many cases, increasing public hunting on private land will be necessary to help reduce game damage problems.

ACCESS STRATEGIES

FWP will identify important points of access to public lands that do not now exist and provide recommendations to the appropriate land management authority for acquisition/development. Access programs will generally be designed to allow vehicle access to the boundary of USFS lands, with only non-vehicular traffic allowed beyond that point. Greater access to public land is needed between Pine Creek and Mill Creek in HD 317 and in the Bad Canyon/Trout Creek and Fishtail/Fiddler Creek areas of HD 520.

FWP will identify opportunities to increase block management projects and walk-in areas. A walk-in program will be maintained in the Line Creek/Grove Creek area and the Willow Creek area in HD 520.

POPULATION OBJECTIVES

1) Maintain the number of elk counted during post-season aerial surveys within 20% of 2,650 elk (2,120-3,180) in the EMU. Individual hunting district and herd unit count objectives are as follow:

Hunting District 520 total count objective – 1,050 elk

- a) Line Creek 250 elk
- b) Silver Run 200 elk
- c) Butcher Creek 150 elk
- d) Morris Ingersol Creeks 250 elk
- e) Stillwater (Horseman Flat/Trout Creek) 200 elk

Hunting District 560 total objective – 700 elk

- f) Deer Creeks 100 elk
- g) Main Boulder 300 elk
- h) West Boulder/Greeley Creek 300 elk

Hunting District 317 total objective – 900 elk

- i) Livingston Peak 100 elk
- j) Mill Creek North 550 elk
- k) Mill Creek South 100 elk
- I) Emigrant Face 150 elk
- 2) Maintain an overall observed late winter bull elk count of 185. Bull count objectives by Hunting District are as follow:

Hunting District 317 – 50 bulls (Exclusive of migratory bulls on Emigrant Face)

Hunting District 520 west of West Fork of Rock Creek- 40 bulls

Hunting District 520 south and east of West Fork of Rock Creek – 40 bulls

Hunting District 560 – 55 bulls

POPULATION MANAGEMENT STRATEGIES

A portion of this EMU (the part of HD 520 west of the West Fork of Rock Creek) has permitonly rifle hunting. The remainder of the EMU has a general elk season. Management strategies are presented separately for the 2 areas. Management strategies (regulation types) will be implemented by hunting district or portion of a hunting district, not necessarily for the EMU as a whole.

REGULATION PACKAGES

Portion of the EMU with a general elk season (HD 317, HD 560 and the part of HD 520 west of the West Fork of Rock Creek):

Six-week either-sex archery regulation EXCEPT, should Restrictive regulation for antlered elk be adopted, six-week brow-tined bull/antlerless archery regulation and see Liberal Regulation 2.) for Antlerless elk in HD 317.

Antlerless:

The Standard Regulation is: 1.) limited either-sex or brow-tined bull/antlerless permits AND, in HD 520 and 560, antlerless permits valid past the end of the general season. 2.) 1-2 week general season either-sex or brow-tined bull/antlerless regulation. - HD 317 only. [Limited A-9/B-12 antlerless licenses (B-tags) may also be recommended in combination with the above options – HD 317 only].

The Standard Regulation will be recommended if: the combined total post-season aerial trend counts for all herd units in a hunting district are within 20% of the hunting district objective.

<u>The Liberal Regulation is:</u> **1.)** either-sex regulation for a portion of (or the entire) 5-week general season AND, in HD 520 and 560, antlerless permits valid past the end of the general season OR; **2.)** (**HD 317 only**) 5-week general season antlerless ONLY regulation. [Limited A-9/B-12 antlerless licenses (B-tags) may also be recommended]. Archery regulations will also be Antlerless ONLY.

Liberal Regulation 1.) (above) will be recommended if: the combined total post-season aerial trend counts for all of the herd units in a hunting district are more than 20% above the hunting district objective.

In HD 317, Liberal Regulation **2.)** (**above**) will be recommended if: after 2 consecutive years of application of Liberal Regulation 1.) (above), the total number of elk observed during post-season aerial surveys remains more than 20% above the HD elk objective.

<u>The Restrictive Regulation is:</u> limited either-sex or brow-tined bull/antlerless permits valid for a portion of the season.

The Restrictive regulation will be recommended if: the combined total post-season aerial trend counts for all herd units in a hunting district are more than 20% below the herd objective for 2 consecutive years.

Antlered:

The Standard Regulation is: 5-week general season antlered bull regulation.

The Standard regulation will be recommended if: the post-season aerial trend count of bulls is within 50% of the HD objective.

The Restrictive Regulation is: 5-week general season brow-tined bull regulation.

The Restrictive regulation will be recommended if: the post-season aerial trend count of bulls is less than 50% of the HD objective for 2 consecutive years.

Permit-only portion of the EMU (the part of HD 520 south and east of the West Fork of Rock Creek):

Six-week either-sex archery regulation, EXCEPT, if Restrictive Regulation is adopted, all hunting, INCLUDING archery is by limited permit.

Antlerless:

<u>The Standard Regulation is:</u> limited either-sex AND antlerless permits issued for the general 5-week season. Antlerless permits may be valid beyond the general season.

The Standard Regulation will be recommended if: the total post-season count for the combined Silver Run and Line Creek herd units is within 20% of the objective.

The Liberal Regulation is: an increased number of either-sex AND antlerless permits will be issued for the general 5-week season [Antlerless permits will be valid for a period beyond the general season (at least through 15 December)] OR, a portion (or all) of the general season may be open for general hunting of antlerless elk (no permit required). [Limited A-9/B-12 antlerless licenses (B-tags) may also be recommended].

The Liberal Regulation will be recommended if: the total post-season count for the combined Silver Run and Line Creek herd units is more than 20% above the objective.

<u>The Restrictive Regulation is:</u> limited antlerless permits valid for the archery and the 5-week general season.

The Restrictive Regulation will be recommended if: The total post-season count for the combined Silver Run and Line Creek herd units is more than 20% below the objective for 2 consecutive years.

Antlered:

The Standard Regulation is: limited either-sex permits.

The Standard Regulation will be recommended if: the total post-season bull count for the permit area is within 50% of the objective.

<u>The Restrictive Regulation is:</u> limited permits for brow-tined bulls valid during for the archery and general season.

The Restrictive Regulation will be recommended if: The total post-season bull count for the permit area is less than 50% of the objective for 2 consecutive years.