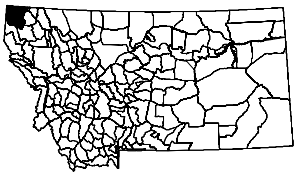
INDIVIDUAL
ELK MANAGEMENT UNIT
(EMU)
PLANS

PURCELL EMU
(Hunting District 100)



Description: Located in the extreme northwest corner of the state, this 1,414-square-mile EMU is bounded on the north by British Columbia, Canada, on the west by Idaho, and on the south and east by the Kootenai River and Lake Koocanusa, respectively. The terrain is mountainous and heavily timbered, featuring some of the wettest forest habitat types in Montana. Lands administered by the Kootenai National Forest comprise 95% of this EMU. The remaining 5% of the land base consists of small private holdings located primarily along the major stream corridors (2%), and corporate timberlands (3%), primarily Plum Creek Timber Company (PCT). The 172-acre Kootenai Falls Wildlife Management Area is situated along the north shore of the Kootenai River in the extreme southern portion of the EMU, and the 900-acre West Kootenai Wildlife Management Area is situated in the extreme northeast corner of the EMU adjacent to the Canadian Border. Several small roadless areas including Northwest Peaks, Buckhorn Ridge, Grizzly Peak, Roderick Mountain and Gold Hill exist as scattered islands of unroaded habitat totaling approximately 82,000 acres. Timber management is the dominant land use in the area.

Public Access: Approximately 3,000 miles of logging roads (about 2.1 miles of road per section) currently exist on USDA - Forest Service (USFS) lands in this EMU. Several hundred additional miles of road exist as private logging roads (PCT), and county roads. Most of the National Forest System Roads are closed to motorized travel either seasonally (145 miles, 5%) or yearlong (1,885 miles, 63%), with 967 miles (32%) remaining open yearlong (0.68 miles per section of open roads). Most of the road closures were implemented as a result of grizzly bear habitat security issues. All USFS system roads closed to motorized traffic are open to use via foot, horseback, bicycle or other non-motorized means. With the exception of small private holdings (2%), the remainder of the area (98%) remains open to public use for recreational pursuits, including big game hunting. Remnants of a once extensive pack trail system remain in isolated locations throughout the EMU, and provide foot access to the few remaining unroaded areas.

Elk Population: An unknown number of elk inhabit approximately 85% of the unit during spring, summer and fall. Good winter range is lacking, comprising no more than 15% of the total area. Elk numbers and distribution increased during the 1980's and early 1990s, but have stabilized and remained relatively constant over the last decade. The severe winter of 1996-97 reduced the elk population and compromised calf production and recruitment until 1998. The elk population appears to be recovering slowly since that time (Figure 1).

Recreation Provided: This EMU provided an average of 15,117 days of hunting recreation for approximately 2,115 hunters annually during 1999-2001. These figures represent a reduction of about 15% in hunter numbers and hunter recreation days compared to the early 1990's. More conservative hunting regulations during the past several years are probably responsible for these declines. Most elk hunting in this unit is accomplished by driving open roads, walking roads with motor vehicle restrictions or hiking from roads for partial to full day hunts. Backcountry hunting opportunity is limited because the few remaining roadless areas are relatively small (5,000 to 20,000 acres). Due to heavily forested terrain and scattered distribution of elk, viewing opportunities are limited to incidental encounters by people pursuing other activities. Some opportunity for viewing elk in their natural habitat is available in late winter/early spring when they congregate in open grassy areas such as the Horse Range along state Highway 37 between Libby and Libby Dam. Hunting for shed antlers has also become a popular activity for some individuals during April and May each year.

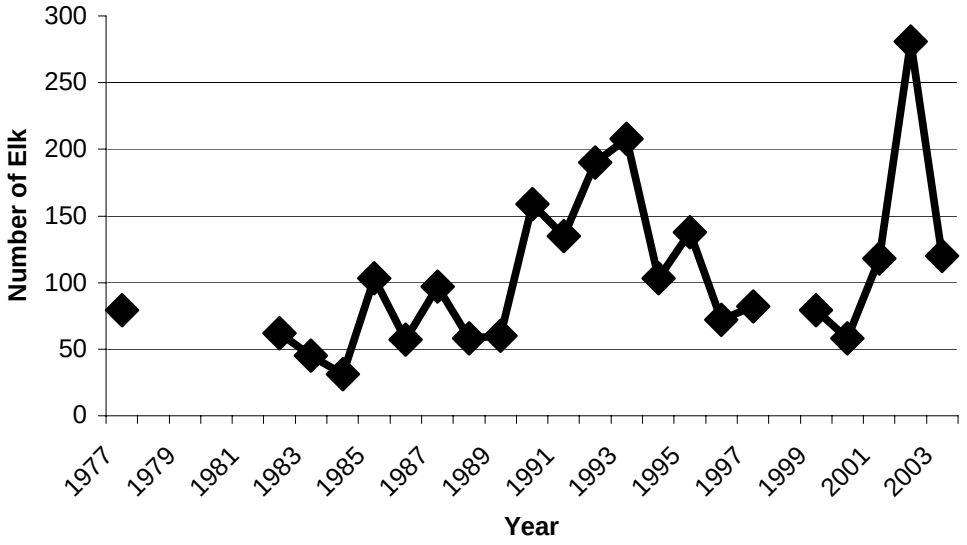


Figure 1. Number of elk observed during post-season aerial trend surveys in the Horse Range and Pipe Creek/Seventeenmile Creek areas, 1977-2003.

Annual Elk Harvest: The average annual elk harvest for this EMU during 1999-2001 was 81 animals consisting of 17 antlerless elk and 64 bulls. Currently, bull harvest is restricted to brow-tined bulls, and limited permits control antlerless harvest. Approximately 38% of the annual bull harvest is comprised of bulls with 6 points or more on at least one antler.

Accomplishments: Forage production for elk has been improved. During the past decade, major wildfires (1994 and 2000) have altered over 56,000 acres of forestlands in the Purcell EMU. The 1994 fire event burned 33,200 acres in the following major elk habitat areas: Pink Mountain to Zimmerman Hill; Big Creek to Webb Mountain; Seventeenmile Creek; O'Brien Creek and; Quartz Creek to Banfield Mountain. The 2000 fire event burned an additional 23,000 acres of elk habitat in the following areas: Young Creek; Big Creek to Boulder Creek; O'Brien Creek; Beaver Creek to Kelsey Creek; Grubstake; Lucky Point to Roderick Mountain and; Runt Creek. In addition to wildfires, big game habitat improvement projects, including prescribed burning,

were conducted on national forest lands by the three Ranger Districts on the Kootenai National Forest that have management responsibilities in the Purcell EMU. Utilizing funding from BPA Libby Dam Mitigation Trust Fund, Sikes Act, RMEF and USFS Wildlife Budgets, an additional 7,850 acres of elk habitat were treated in the following areas: Alexander/Jackson/Barron/Bristow/Ziegler/Parsnip/Dodge/Sullivan/ Young Creek areas along the west side of Lake Koocanusa; Horse Range to Rainy Creek just downstream from Libby Dam; Gold Hill and; Turner Mountain in the upper Pipe Creek drainage. In the Yaak River drainage, over 1,100 acres of elk habitat were treated in the following areas: Seventeenmile Creek; Bunker Hill; Roderick; West Yaak; Wood/Rat; Whitetail and; Rausch Point.

Management Challenges: The major portion (95%) of this EMU is public land, managed by the Kootenai National Forest and hunter access for elk hunting activity is generally non-restrictive. Plum Creek Timber Company (PCT) holds ownership on approximately 3% of this EMU and they have historically allowed public hunting on these lands. In recent years, PCT has been selling some of their timberlands in this EMU to private land developers who, in turn, are subdividing these properties for sale to private homeowners. Most of the PCT properties being marketed are in low elevation areas along water-ways, which are also wintering areas for big game animals, including elk. Although elk use some of these private development areas, the overall impact to elk winter range is minimal in this 900,000 acre EMU. Other small private housing developments, such as one on the Horse Range, are locally important to elk, and have impacted hunter access to National Forest Lands, but on a small scale.

Noxious weed invasion onto important elk winter ranges is having increasing impacts on winter range forage production. Prescribed burning on ungulate winter ranges to reduce conifer encroachment onto open foraging areas is an important habitat enhancement tool in the heavily forested environment of northwest Montana. The USFS prescribed burning policy precludes prescribed fires on winter ranges heavily infested by noxious weeds. A good example of this problem in the Purcell EMU is the Horse Range winter range east of Libby and just downstream from Libby Dam. We encourage noxious weed control activities by the USFS on important big game wintering areas so that other forms of habitat improvement, such as prescribed fire, will not be precluded.

Wolf reintroductions and recovery in the Purcell EMU will likely become an increasingly important issue over the next decade. Dispersing wolves from Canada have appeared more frequently in the Purcell EMU over the past decade. On two occasions over the past few years, the US Fish and Wildlife Service has released wolves into the EMU. Currently, there is no verified breeding pack activity in this area. However, it is probable that wolf packs will establish and become active in the near future. The Purcell EMU currently has healthy populations of mountain lions and black bears and increasing populations of grizzly bears and wolves. All of these large carnivores, collectively, will likely have a depressing influence on the elk population with a subsequent reduction in elk hunter opportunity.

Population Monitoring: Population monitoring through aerial surveys continues to be a challenging endeavor in the heavily forested landscape in northwestern Montana. Windows of opportunity for collecting trend data in population composition are generally restricted to brief periods in winter with continuous snow cover or during spring green-up of grasses when elk

become more visible for short periods of time. Due to limited budgets and scheduling conflicts with the FWP helicopter, less than 2% of the Purcell EMU is surveyed. Nonetheless, annual population composition samples in conjunction with EMU harvest statistics and hunter check station data provide information on elk population status. Because aerial trend count surveys cover such a small portion of winter range and they may not be flown every year due to scheduling conflicts, we emphasize use of observed calf:100 cow ratios for management direction. Increasing ratios or ratios above 35 calves:100 cows indicate the potential for population increase and decreasing ratios or those below about 20 calves:100 cows indicate the potential for population declines.

SUMMARY OF PUBLIC COMMENT

During the 1992 public scoping process conducted for the first Elk Management Plan, public comment indicated general satisfaction with the existing recreational character of this EMU. At that time, there was public preference for implementing road restrictions rather than shortening the hunting season to reduce elk vulnerability. Other comments indicated interest in instituting sex and antler point restrictions in the hunting regulations. Public comment suggested a preference among hunters for the opportunity to harvest an elk for the meat. However, some hunters also expressed a desire for the opportunity to harvest older bulls. In the recently completed Region One Elk Hunter Survey Report (2003), the majority (47%) of hunters surveyed in Lincoln County chose "any antlered bull throughout Region One" as their preferred hunting regulation. The majority (46%) of Lincoln County hunters responding to the survey also indicated a preference for general season antlerless elk hunting for a portion of the hunting season. They were also the most dissatisfied (49%) of all Region 1 hunters with the current brow-tined bull regulation in this area. Generally, public comment in 1992 and the 2003 Region One Elk Hunter Survey Report indicated that Lincoln County hunters preferred hunting elk of either-sex for a portion of the season, and then hunting any antlered bull during the remainder of the season.

MANAGEMENT GOAL

Manage for a stable elk population in a healthy condition consistent with available habitat on public and private land, with emphasis on maintaining a diverse bull age structure. Coordinate with land management agencies to provide diverse hunting opportunities.

HABITAT OBJECTIVES

Maintain elk distribution over 800,000 acres, and elk winter range on 100,000 acres throughout the EMU. Maintain or improve elk habitat security so that elk harvest is distributed throughout the hunting season so that no more than 40% (3 year average) of the bull harvest occurs during the first week of the general hunting season.

HABITAT MANAGEMENT STRATEGIES

FWP will work cooperatively with state, federal and corporate landowners to:

- Achieve increased consideration for elk habitat productivity and elk security needs in the planning of timber sales, transportation systems, and habitat enhancement projects.
- Identify and map elk winter ranges.
- Manage limited winter range to accommodate the current elk population.
- Achieve open road densities not to exceed 0.75 miles of road per section of land in big game summer/fall range, and no open roads on key winter ranges.
- Maintain about 90,000 acres of roadless elk security areas in the Northwest Peaks, Buckhorn Ridge, Grizzly Peak, Roderick Mountain, and Gold Hill areas, which also provide roadless elk hunting recreation.
- Maintain or enhance approximately 5,000 acres of elk winter range annually, to include the following key areas: West Kootenai, Bristow Creek, Barron Creek, Alexander Creek, Horse Range, Rainy Creek, Sheldon Mountain, Quartz Creek, Bobtail Creek, Pipe Creek, Teepee Mountain, Seventeenmile Creek, Whitetail Face, Grubstake Mountain, and Zimmerman Hill.

GAME DAMAGE STRATEGIES

Game damage is not an issue in this EMU.

ACCESS STRATEGIES

Because 95% of this EMU is National Forest Land, hunter access is generally not an issue. However, to insure continued hunter access opportunities, FWP will:

- Identify important points of access to public lands and provide recommendations for acquisition, maintenance, and development to the appropriate land management authority.
- Continue to review USFS road management and travel plans and provide input that encourages maintenance of elk habitat security and provide hunters with current levels of access.
- Work with public and private entities to discourage land exchanges and/or developments that would exclude lands from public hunting.

POPULATION OBJECTIVES

1) Achieve post-season classifications of 300 elk annually on 2 primary trend areas, the Horse Range and the Pipe Creek/Seventeenmile Creek area.
2) Maintain at least 8% bulls in the total elk observed during the post-season classification sample.
3) Manage for a bull harvest averaging at least 25 bulls with 6 points or more on at least one antler.

POPULATION MANAGEMENT STRATEGIES

Calf:100 cow ratios observed during post-season aerial trend surveys will play an important part in determining the status and trajectory of the elk population in this EMU. Because of high

variability in surveys in this area, the number of total elk observed during post-season aerial trend surveys will contribute to management decisions, but in a lesser role than calf:100 cow ratios.

REGULATION PACKAGES

Six-week archery regulation for brow-tined bulls/antlerless elk or either-sex elk, depending on regulations for the general season EXCEPT, see Restrictive Regulation for antlered elk.

Antlerless:

The Standard Regulation is: limited antlerless permits (currently 100 antlerless permits for this EMU).

The Standard Regulation will be recommended if: 1.) numbers of elk observed during post-season trend area samples are within 20% of the objective (300 elk) OR; 2.) calf:100 cow ratios observed during post-season trend samples remain between 20-40:100 OR; 3.) success for antlerless elk permit holders is between 20-40%. **Two consecutive years outside the range for 2 of the 3 criteria required for change in regulations.**

The Liberal Regulation is: **1)** increase antlerless permit levels (more than 100) OR; **2)** a general antlerless regulation for a portion of the 5-week general season.

1.) Increased antlerless permits will be recommended if: a) numbers of elk observed on post-season trend flights are more than 20% above the objective (300 elk) OR; b.) calf:100 cow ratios observed during post-season survey samples are more than 40:100 OR; c.) success for antlerless elk permit holders is more than 40%. **Two consecutive years outside the range for 2 of the 3 criteria required for change in regulations.**

2.) a general antlerless regulation for a portion of the 5-week general season will be recommended if: after 2 consecutive years of increased antlerless permits (more than 100) a) number of elk observed on post-season trend flights remain more than 20% above the objective (300 elk) OR; b.) calf:100 cow ratios observed during post-season survey samples remain more than 40:100 OR; c.) success for antlerless elk permit holders is more than 40%. **Two consecutive years outside the range for 2 of the 3 criteria required for change in regulations.**

The Restrictive Regulation is: no antlerless elk hunting or a very limited number of antlerless elk permits (less than 25).

The Restrictive Regulation will be recommended if: 1.) numbers of elk observed during post-season trend area flights are more than 20% below the objective (300 elk) OR; 2.) calf:100 cow ratios observed during post-season trend survey samples are less than 20:100 OR; 3.) success for antlerless elk permit holders is less than 20%. **Two consecutive years outside the range for 2 of the 3 criteria required for change in regulations.**

Antlered:

The Standard Regulation is: **1.)** 5-week general season brow-tined bull regulation OR; **2.)** 5-week general season antlered bull regulation.

1.) A brow-tined bull regulation will be recommended if: a.) the percent bulls observed during post-season aerial surveys is at least 8% of total elk OR; b.) the number of bulls in the harvest with 6 points or more on at least one antler reported in the Statewide Harvest Questionnaire exceeds 30 for two consecutive years.

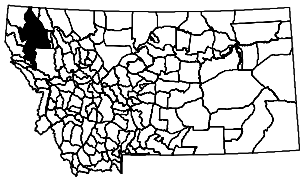
2.) An antlered bull regulation will be recommended if, in addition to a) and b) above: the majority of the public desires an antlered bull regulation AND; the adjacent EMUs also have antlered bull regulations.

The Restrictive Regulation is: **1.)** unlimited permits for brow-tined bulls or **2.)** limited permits for antlered bulls. ARCHERS WILL ALSO BE REQUIRED TO APPLY FOR UNLIMITED OR LIMITED PERMITS.

1.) Unlimited permits for brow-tined bulls will be recommended if: the percent bulls observed during post-season aerial surveys is less than 8% of total elk for 2 consecutive years OR; b.) the number of bulls in the harvest with 6 points or more on at least one antler reported in the Statewide Harvest Questionnaire is less than 30 for two consecutive years.

2.) Limited permits for antlered bulls will be recommended if: objectives for bulls (a. and b. above) have not been met after 2 consecutive years of unlimited permits for brow-tined bulls.

SALISH EMU
(Hunting Districts 101, 102, 103, 120, 122)



Description: The Salish EMU is located in northwestern Montana and encompasses approximately 3,350 square miles of land from Eureka to the west side of the Flathead Indian Reservation. This unit encompasses the western portion of the Flathead National Forest, the eastern portion of the Kootenai National Forest, and the northwestern portion of the Lolo National Forest. More than half of the land base is owned and managed by large timber corporations, primarily Plum Creek Timber Company (PCT). Extensive timber harvesting has occurred throughout the area, including lands managed by the U.S. Forest Service (USFS) and Department of Natural Resources and Conservation (DNRC). FWP's Kuhn's Wildlife Management Area lies within this EMU.

Public Access: Most areas within this EMU are accessible by road, although road closures by both private and public entities have reduced motorized access considerably in the last decade. There are no established wilderness areas and few large blocks (>5,000 acres) of unroaded habitat within this EMU. The largest conservation easement in Montana is in the Thompson and Fisher Rivers drainages in this EMU. This easement between FWP and PCT protects over 142,000 acres of habitat from residential development and guarantees access to hunters and anglers in perpetuity. In addition, other PCT lands within this EMU are enrolled in FWP's Block Management Program which allows hunters continued access.

Elk Populations: The majority of the area is elk habitat, although individual herds tend to be small and scattered. Due to forested cover, this EMU has a low sightability for elk. Some of the greater concentrations of elk are in the Fisher and Thompson River areas. Formal surveys for elk in this EMU are conducted only in HDs 103 and 120. During 1999-2002, between 283 and 455 total elk were counted annually in the 2 survey areas (Figures 1 and 2). In addition to the aerial survey areas, ground observations indicate that 150-200 elk spend winter near the Dancing Prairie Preserve and more than 50 elk winter in the Pinkham Creek/Black Butte areas in HD 101.

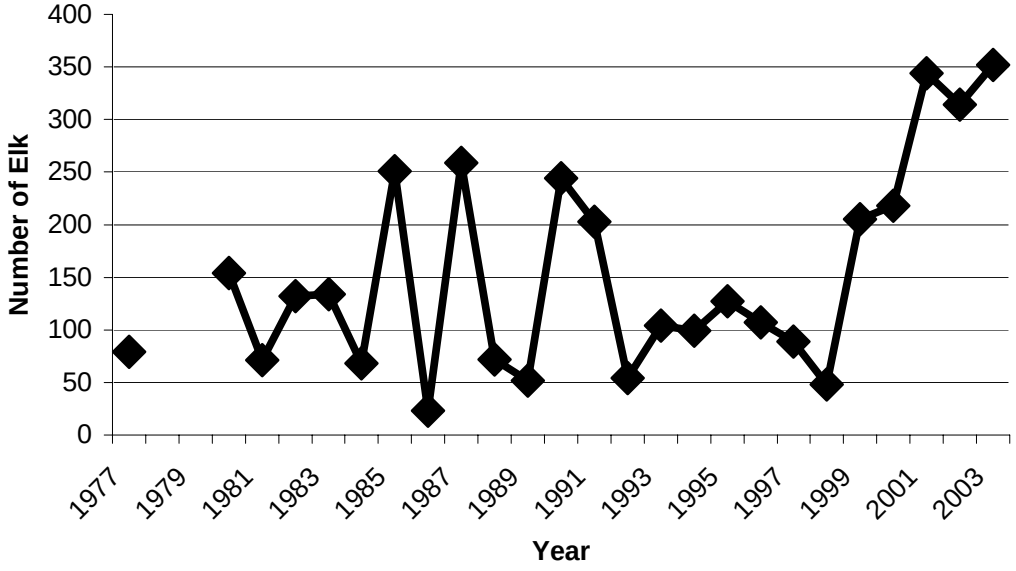


Figure 1. Number of elk observed during post-season aerial trend survey samples in HD 103, 1977-2003.

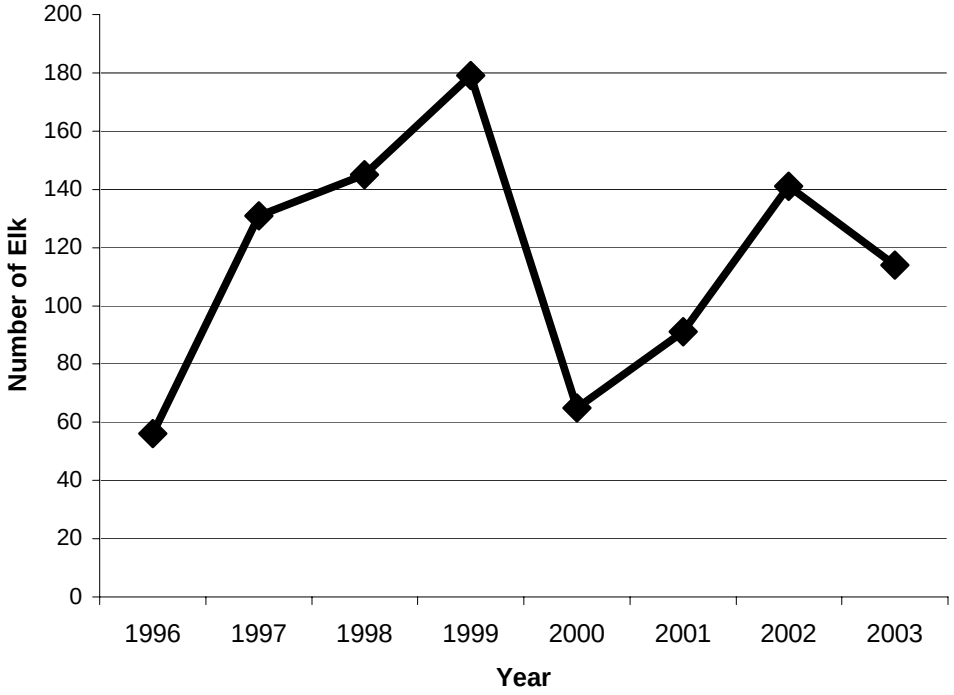


Figure 2. Number of elk observed in post-season aerial survey samples in HD 120 during 1996-2003.

Recreation Provided: This EMU provided about 58,800 days of elk hunting recreation annually for 8,000 hunters during 1999-2001. Annual hunter success for 1999-2001 varied from 2-3 %, with 275-430 days of effort required/elk harvested. Most hunters drawn to this area are pursuing white-tailed deer and will harvest an elk if the opportunity presents itself. Elk viewing opportunities are generally limited with the exception of the Lost Trail Ranch and several other areas. Elk viewing opportunities are usually best during winter and the spring green-up periods.

Annual Elk Harvest: The 3-year average harvest from 1999-2001 was 190 elk (122-160 antlered and 41-56 antlerless). Approximately 27% of the bull harvest was comprised of bulls with 6 points or more on at least one antler.

Accomplishments: FWP successfully coordinated the largest conservation easement in Montana, thereby protecting over 142,000 acres of PCT land in the Fisher and Thompson River areas from future development and guaranteeing access to hunters and anglers. FWP also coordinated with PCT the largest Block Management Area in Montana, guaranteeing hunters access to an additional 774,000 acres, the vast majority of it in this EMU. An FWP conservation easement held with The Nature Conservancy on Dancing Prairie Preserve (680 acres) in HD 101 is becoming an increasingly important wintering area for elk, with over 170 elk wintering there in 2002-2003. In 1999, the U.S. Fish and Wildlife Service acquired Lost Trail Ranch in HD 103, a 7,885-acre National Wildlife Refuge that provides important habitat for wintering elk and provides hunters access to adjacent State and PCT lands.

Several large wildfires in the past decade have inadvertently improved habitat conditions for elk. The Little Wolf and Hand Creek Fires in HDs 102 and 103 burned approximately 15,000 acres in 1994. In 2000, the Lydia and Stone Hill fires burned an additional 16,000 acres in HD 101. Numerous smaller fires occurred in the EMU during those same periods. Through the BPA Mitigation Program, FWP helps fund the burning of approximately 1,500 acres annually along Koocanusa Reservoir that provides benefits to elk, mule deer, and bighorn sheep.

One of the greater threats to elk habitat within this EMU is the proliferation of noxious weeds. The USFS is taking aggressive action to control an outbreak of Tansey Ragwort in the Hand Creek area. PCT, the USFS, and Stoltze Land and Lumber Company are all taking aggressive steps to control Spotted Knapweed by using herbicides on infested areas and requiring the cleaning of equipment before transport to new areas.

Management Challenges: A serious threat to hunting access and elk population management in this EMU is posed by new and expanding residential subdivisions. Of special concern are the thousands of acres in Plum Creek Timber (PCT) ownership. PCT lands have historically been open to the public, and hunters tend to take this privilege for granted. However, in recent years PCT has been marketing parcels for sale. The loss of hunting access on PCT lands, and the possible concurrent loss of elk habitat, would eliminate significant public hunting opportunities for elk and might negatively impact elk numbers.

The impact of predators on elk populations is poorly understood and often the center of controversy. Predators within this EMU capable of killing elk include black bears, wolves, and mountain lions. A few grizzly bears also are present within this area, and coyotes likely kill some

newborn elk calves. Black bears and mountain lions are under FWP management and are considered trophy animals with high value among many sportsmen, which further encourages greater numbers. Predators federally listed under the Endangered Species Act (grizzly bears and wolves) cannot be controlled to increase elk numbers. Balancing predator and elk numbers is an issue that will not be resolved to everyone's satisfaction. Given the variety and number of predators within this area, as well as environmental and habitat conditions, it is unlikely hunters will see a liberal antlerless elk harvest anytime soon.

Winter range productivity is threatened by an increasing invasion of noxious weeds, increased conifer encroachment, and an increase in decadent shrubs. Continued declines in forage productivity can lead to lower calf recruitment, lower populations, and greater elk use of private lands.

Although logging may increase most types of forage production for elk, it also may decrease the ability of canopies to intercept snow on winter range areas, resulting in additional stress on elk during periods of deep snowfall. This was especially evident during the severe winter of 1996-97. Private and public land managers should continue to exercise caution in the logging of winter range areas to ensure that adequate thermal and snow interception cover for elk exists.

Use of off-highway vehicles, particularly 4-wheelers, for hunting and retrieving elk has increased significantly during the past decade. Increasingly, hunters complain of 4-wheelers illegally accessing areas behind closed gates. This may be not only be a social and legal problem, but use of 4-wheelers reduces the effectiveness of security areas for elk and may contribute to additional bull harvest.

Population Monitoring: Elk classification surveys are generally conducted during spring to correspond with the "greenup" of vegetation. This window of opportunity is short but remains the best time to locate and classify elk in northwestern Montana. We use helicopters with a single observer and pilot to complete surveys. Currently, we only survey 2 areas on a regular basis in this EMU and they are in HDs 103 and 120. The number of surveys for elk that can be conducted in this EMU is limited by an abundance of forested cover and money and time available for surveys. If funding can be obtained, we propose addition of a new aerial survey area in the lower Pinkham Creek/Black Butte area in HD 101. The instrumentation and monitoring of radio-collared elk may be necessary to better define winter range areas, seasonal movements, and survival.

Because aerial trend count surveys cover such a small portion of winter range and they may not be flown every year due to scheduling conflicts, we emphasize use of observed calf:100 cow ratios for management direction. Increasing ratios or ratios above 35 calves:100 cows indicate the potential for population increase and decreasing ratios or those below about 20 calves:100 cows indicate the potential for population declines.

SUMMARY OF PUBLIC COMMENT

In 1992, the public indicated a desire for changes in the management of elk populations and elk habitats. Support was indicated for more road closures and some sex and antler-point restrictions

in the harvest – if restrictions were necessary to accomplish population objectives. Strong opposition to road closures was also heard. Public comment also indicated a desire for expansion of the Block Management program. Although hunters expressed a desire for the opportunity to harvest an elk for meat, they also expressed a desire for improved opportunities to harvest older bulls.

In the recently completed Region One Elk Hunter Survey Report, 43% of the responding public expressed some satisfaction with the current brow-tined bull hunting regulations and 31% were dissatisfied. When asked for their preferred bull elk hunting regulation, 33% supported the brow-tined bull regulation, 31% preferred an any antlered bull regulation, and 24% preferred a mix of the two regulations. The majority of respondents was satisfied with current antlerless elk hunting regulations and favored antlerless elk hunting by permit only over a general antlerless season for a portion of the hunting season.

MANAGEMENT GOAL

Manage the elk population in a healthy condition at levels commensurate with available habitat on public and private land, with emphasis on maintaining a diverse bull age structure. Cooperate with land managers in the management of elk habitat to provide a diversity of elk hunting experiences.

HABITAT OBJECTIVES

Develop cooperative programs that encourage public and private land managers to maintain productive and occupied elk habitat within this EMU. Maintain or enhance elk security so that elk harvest is distributed throughout the hunting season, with no more than 40% (3-year average) of the harvested bulls are taken during the first week of the general season.

HABITAT MANAGEMENT STRATEGIES

FWP will provide technical assistance to and cooperate with state and federal land management agencies to pursue the following:

- Planning and design of timber sales and road management systems to maintain elk security areas and secure travel corridors, particularly in remaining roadless areas and on winter ranges.
- Encourage protection of existing roadless areas in Le Beau Creek, Richards Mountain, Big Hole Peak, Priscilla Peak, and Cube Iron Mountain to provide security for elk during summer and fall.
- As important elk wintering areas continue to be identified, pursue additional protection of wintering areas through conservation easements.
- Continue cooperation with the USFS and Rocky Mountain Elk Foundation in the accomplishment of Sikes Act projects that benefit elk habitat.
- Cooperate with the USFS to establish a schedule to treat 300-600 acres of winter range annually with prescribed burning for improved forage production.

- Work with the USFS to identify areas where road closures are necessary to enhance elk security and to ensure that current open road densities are not increased.
- Review residential subdivision and other development proposals for potential impacts to elk and elk management and provide input to local government authorities responsible for approval of proposals.

GAME DAMAGE STRATEGIES

FWP will:

Pursue harvest strategies that help alleviate game depredation by reducing elk populations where chronic problems occur. Some strategies which may be used include issuing permits for early antlerless-only seasons which may start around 1 September, late season private land only permits for antlerless elk which run from 15 December through 31 January, and designation of portions of hunting districts for increased harvest through increased antlerless permits valid during the general season.

ACCESS STRATEGIES

FWP will:

- Identify important points of access to public lands and provide recommendations for acquisition, maintenance, and development to the appropriate land management authority.
- Continue to review USFS road management and travel plans and cooperate to maintain the current level of hunter access.
- Identify opportunities for additional Block Management projects and walk-in areas.
- Cooperate with private landowners to identify areas where elk numbers have increased so that more hunting opportunities may be realized outside the Block Management Program.
- Continue to work with private, state and federal entities to identify areas to allow motorized access for disabled hunters.
- Identify opportunities to provide points of access to public land through private lands through the Access Montana program.
- Work with public and private entities to discourage land exchanges and/or developments that would exclude lands from public hunting.

POPULATION OBJECTIVES

Due to the forested nature of this EMU, less than 3% of the area is surveyed annually. This EMU contains much corporate timberland with the potential to support more elk. Few depredation reports are received from landowners in this EMU, also indicating a potential for more elk, at least on public and corporate lands.

1) Achieve observation of 700 elk during post-season aerial surveys. These objectives include approximately 260 elk observed in HD 103 and 110 elk observed in HD 120. Additional elk would be added from a new upper Pinkham/Black Butte survey area.

2) Maintain at least 8% bulls in the total elk observed during post-season helicopter surveys.

POPULATION MANAGEMENT STRATEGIES

Calf:100 cow ratios observed during post-season aerial trend surveys will play an important part in determining the status and trajectory of the elk population in this EMU. Because of high variability in surveys in this area, the number of total elk observed during post-season aerial trend surveys will contribute to management decisions, but in a lesser role than calf:100 cow ratios.

REGULATION PACKAGES

Six-week archery regulation for brow-tined bulls/antlerless elk EXCEPT, see Restrictive Regulation for antlered elk.

Antlerless:

The Standard Regulation is: limited antlerless permits (some valid beyond the close of the general season depending upon game damage).

The Standard Regulation will be recommended if: the total number of elk observed during post-season aerial trend surveys is within 20% of the trend count objective, OR the calf:100 cow ratio observed during post-season helicopter flights is between 20 and 40:100 and the trend count is between 50% below and 20% above the objective.

The Liberal Regulation is: **1.)** increased antlerless permits, permits may be valid past the end of the general season, OR; **2.)** a general antlerless regulation for portions of the 5-week general season.

1.) increased antlerless permits will be recommended if: the total number of elk observed during post-season aerial surveys is more than 20% above the population objective for 2 consecutive years OR, the calf:100 cow ratio observed during post-season helicopter surveys is more than 40:100 for 2 consecutive years.

2.) a general antlerless regulation for portions of the 5-week general season will be recommended if: the total number of elk observed during post-season aerial surveys remains more than 20% above the population objective after 2 consecutive years of application of increased antlerless permits.

The Restrictive Regulation is: limited antlerless permits valid for portions of the 5-week general season.

The Restrictive Regulation will be recommended if: the total number of elk observed during post-season aerial surveys is more than 50% below the population objective for 2 consecutive years OR, the calf:100 cow ratio observed during post-season aerial surveys is less than 20:100 for 2 consecutive years.

Antlered:

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

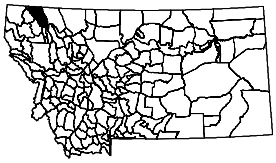
The Standard Regulation will be recommended if: at least 8% of the total elk observed during post-season aerial surveys is bulls, OR; a majority of the other hunting districts in the EMU are under brow-tined bull regulations.

The Restrictive Regulation is: **1.)** unlimited permits for brow-tined bulls or **2.)** limited permits for antlered bulls. ARCHERS WILL ALSO BE REQUIRED TO APPLY FOR UNLIMITED OR LIMITED PERMITS.

1.) Unlimited permits for brow-tined bulls will be recommended if: objectives for bulls (8% of total elk observed) have not been met after 2 consecutive years of a 5-week general season for brow-tined bulls.

2.) Limited permits for antlered bulls will be recommended if: bulls remain less than 8% of total elk observed after 2 consecutive years of unlimited permits for brow-tined bulls.

WHITEFISH EMU
(Hunting Districts 109 and 110)



Description: The Whitefish EMU is located in northwestern Montana and encompasses 1,067 square miles of land from Columbia Falls to the Canadian border. Most of the area is drained by the North Fork of the Flathead River, and this EMU was formerly called the North Fork EMU. However, in 2002 a new hunting district (HD 109) was created from that portion of HD 101 located on the east side of Highway 93. This area was combined with HD 110 to create this new EMU. The EMU encompasses 2 mountain ranges – the Whitefish Range and the smaller Galton Range. It is bordered on the east by Glacier National Park and contains the Ten Lakes Scenic area and several other areas under Wilderness consideration. Most of this area is administered by the USDA – Forest Service (USFS) Flathead National Forest, with the Kootenai National Forest administering the public lands within HD 109. Substantial areas administered by Department of Natural Resources and Conservation (DNRC; Stillwater and Coal Creek State Forests), Plum Creek Timber Company (PCT), and by Stoltze Land and Lumber Company (SLLC) also are within this EMU. FWP's 1,400-acre Woods Ranch WMA is located in the northwest corner of this EMU. Scattered parcels of private lands are located along the fringes of this EMU, especially in the northwest and southern portions.

Public Access: Although most of this EMU has undergone some level of timber harvesting, concerns over grizzly bear security has resulted in the closure of many roads during the past 2 decades. Many hunters considered this change negative, but habitat security for elk and other wildlife has increased. Most of the major drainages in this EMU contain at least 1 open road that provides access to hunters. Both PCT and SLLC have Block Management Agreements with FWP that allows hunters continued access to their lands.

Elk Populations: The vast majority of the EMU is elk habitat. Although elk numbers are probably lower than they were 10 years ago, they currently appear to be increasing. Formal surveys for elk are conducted annually in both HD 109 and HD 110. However, due to heavily forested cover, this EMU has a low sightability for elk. In spring 2003, 358 total elk were counted annually in the 2 survey areas (Figures 1 and 2). Although few game damage complaints are received for HD 110, problems exist in HD 109 that are addressed with extended late season hunts and by other means.

Recreation Provided: This EMU provided 6,227 days of hunting recreation for 1,040 hunters during 2002. Annual hunter success during 1999-2001 varied from 2.0 – 4.0%, with 179-427 days of effort required/elk harvested. Elk viewing opportunities are generally limited with the exception of the Home Ranch Bottoms in the North Fork and in the vicinity of the Woods Ranch WMA. Elk viewing opportunities are usually best during winter and the spring green-up periods.

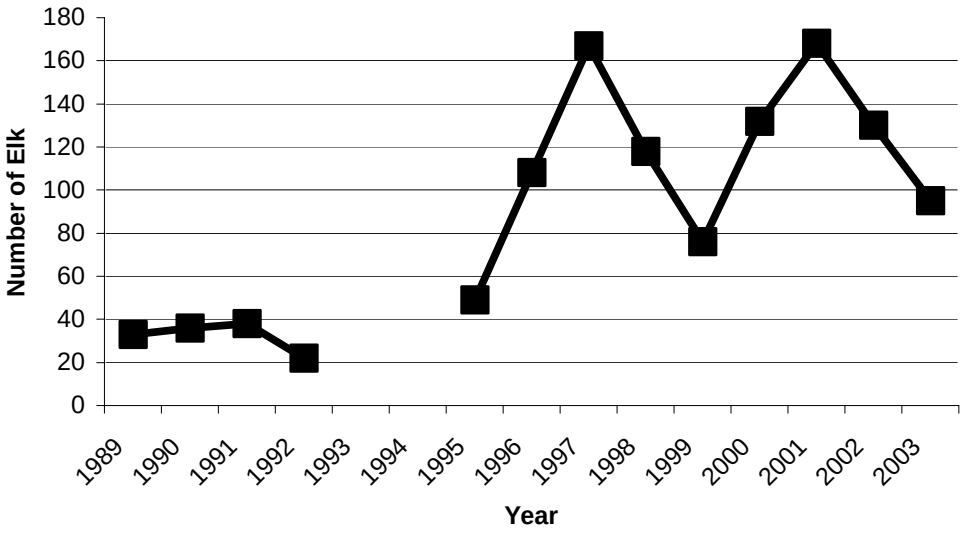


Figure 1. Number of elk observed during post-season aerial survey samples in HD 109 during 1989-2003.

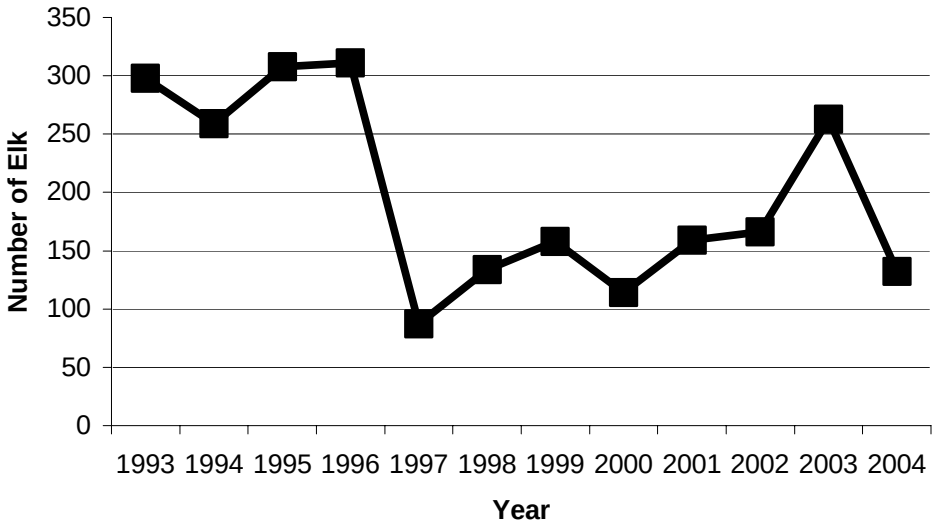


Figure 2. Number of elk observed during post-season aerial survey samples in HD 110 during 1989-2004.

Annual Elk Harvest: During 2002, 50 antlered and 16 antlerless elk were harvested in the EMU. Approximately 35% of the bull harvest is comprised of bulls with 6-points or more on at least one antler.

Accomplishments: FWP manages the 1,400-acre Woods Ranch WMA in the northwest corner of this EMU for the primary benefit of elk. The Nature Conservancy has been an active partner and has made protection of elk habitat in the North Fork of the Flathead River drainage one of their top 3 focal areas in the state of Montana. Thus far, they have placed several thousand acres of privately owned habitat along the North Fork, including a large portion of the famed Home Ranch Bottoms, under conservation easement.

Several large wildfires in recent years have inadvertently improved habitat conditions for elk. The Red Bench fire burned approximately 30,000 acres in the North Fork of the Flathead River drainage in 1988. In 2000, the Werner Peak and Moose Fires burned an additional 72,000 acres. In 1996, the Kopsi Fire burned approximately 1,000 acres in the Galton Range. Numerous smaller fires also occurred during those same periods.

FWP currently has block management agreements with both PCT and SLLC that allow hunters continued access on some of their lands within this EMU. These 2 agreements total approximately 28,000 acres, or 3% of this EMU.

Management Challenges: One of the greater threats to elk habitat within this EMU is the subdivision of key winter range areas for residential development. This is especially true in HD 109 along the west slope of the Galton Mountains and in the southern portion of HD 110. The sale and subdivision of 28,000 acres of corporate timberlands in these and other areas could also severely affect elk numbers and elk hunting opportunity.

The impact of predators on elk populations is poorly understood and often the center of controversy. Predators within this EMU capable of killing elk include wolves, grizzly bears, black bears, mountain lions, and coyotes. This EMU probably has among the highest predator densities of any EMU in Montana. Predators under FWP management (e.g. black bears and mountain lions) are considered trophy animals and have a high value among many sportsmen. Predators federally listed under the Endangered Species Act (grizzly bears and wolves) cannot be controlled to increase elk numbers. Balancing predator and elk numbers is an issue that will not be resolved to everyone's satisfaction. Given the variety and number of predators within this area, as well as environmental and habitat conditions, it is unlikely hunters will see a liberal antlerless harvest anytime soon.

Winter range forage productivity is threatened by an increasing invasion of noxious weeds, increased conifer encroachment, and an increase in decadent shrubs. Continued declines in forage productivity can lead to lower calf recruitment, lower populations and greater elk use of private lands. Continued vigilance and management of weeds is necessary if existing habitat is to be maintained. The proper use of prescribed burning and logging should be continued to provide necessary elements of habitat diversity for elk.

Although logging may increase most types of forage production for elk, it also may decrease the ability of canopies to intercept snow on winter range areas, resulting in additional stress on elk during periods of deep snowfall. This was especially evident during the severe winter of 1996-97. Private and public land managers should continue to exercise caution in logging winter range areas to ensure that adequate thermal and snow interception cover for elk exists.

Use of off-highway vehicles, particularly 4-wheelers, for hunting and retrieving elk has increased significantly during the past decade. Increasingly, hunters complain of 4-wheelers illegally accessing areas behind closed gates. This may be not only be a social and legal problem, but increased use of 4-wheelers reduces the effectiveness of bull security areas and may contribute to additional bull harvest.

Population Monitoring: Elk classification surveys are generally conducted during the spring to correspond with the "green-up" of vegetation. This window of opportunity is short but remains the best time period to locate and classify elk in northwestern Montana. We use helicopters with a single observer and pilot to complete surveys. Currently, we only survey 2 areas on a regular basis in this EMU and they are the Galton Foothills in HD 109 and the North Fork bottoms in HD 110. Most of the North Fork survey actually occurs within Glacier National Park. However, many of these elk spend summer and fall in the Whitefish Range. An abundance of forested cover and limited survey dollars restricts the surveys that can be conducted in this EMU for elk. Due to the forested nature of this EMU, less than 2% of the area is surveyed annually. However, given the abundance and history of predators within this EMU and the importance of elk within this EMU to resident hunters, continued population monitoring is critical.

A second type of population monitoring within this EMU is conducted indirectly through Region One's big game check stations. Hunter check stations located in Olney and the North Fork monitor numbers and sex and age of elk killed in this EMU.

SUMMARY OF PUBLIC COMMENT

In 1992 the public indicated a desire for changes in the management of elk populations and elk habitats. Support was indicated for more road closures and some sex and antler-point restrictions in the harvest – if restrictions were necessary to accomplish population objectives. Strong opposition to road closures was also heard. Public comment also indicated a desire for expansion of the Block Management program. Although hunters expressed a desire for the opportunity to harvest an elk for meat, they also expressed a desire for improved opportunities to harvest older bulls.

In the recently completed Region One Elk Hunter Survey Report, 33% of the public supported the brow-tined bull regulation, 31% preferred an antlered bull regulation, and 24% preferred a mix of the two regulations. The majority of respondents was satisfied with current antlerless elk hunting regulations and favored antlerless elk hunting by permit only over a general antlerless season for a portion of the hunting season.

MANAGEMENT GOAL

Manage the elk population in a healthy condition at levels commensurate with available habitat on public and private land, with emphasis on maintaining a diverse bull age structure. Cooperate with land managers in the management of elk habitat to provide a diversity of elk hunting experiences.

HABITAT OBJECTIVES

Develop cooperative programs that encourage public and private land managers to maintain 660,000 acres of productive and currently occupied elk habitat within this EMU. Maintain elk habitat security so the elk harvest is distributed throughout the hunting season, with no more than 40% of the harvested bulls (3-year running-average) taken during the first week of the general season.

HABITAT MANAGEMENT STRATEGIES

FWP will provide technical assistance to and cooperate with state and federal land management agencies to pursue the following:

- Planning and design of timber sales and road management systems to maintain elk security areas and secure travel corridors, particularly on winter ranges.
- Pursue additional protection of important elk habitat through conservation easements with PCT and other private entities.
- Continue cooperation with the USFS and Rocky Mountain Elk Foundation in the accomplishment of Sikes Act Projects that benefit elk habitat.
- Cooperate with the USFS to establish a schedule to treat 300-600 acres of habitat annually with prescribed burning.
- Work with the USFS, PCT and DNRC to ensure that current open road densities are not increased.
- Review residential subdivision and other development proposals for potential impacts to elk and elk management and provide input to local government authorities responsible for approval of proposals.
- Cooperate with ranchers and other landowners to minimize conflicts with elk.
- Cooperate with Burlington Northern – Santa Fe and Montana Department of Highways on strategies that will minimize the number of elk killed by collisions with trains and other vehicles.

GAME DAMAGE STRATEGIES

FWP will pursue harvest strategies that help alleviate game depredation by reducing elk populations where chronic problems occur. Some strategies which may be used include issuing permits for early antlerless-only seasons which may start around 1 September, late season private land only permits for antlerless elk which currently run from 1 December through 31 January, and designation of portions of hunting districts for increased harvest through increased antlerless permits valid during the general season.

ACCESS STRATEGIES

FWP will:

- Identify important points of access to public lands and provide recommendations for acquisition, development, or maintenance to the appropriate land management authority.
- Continue to review USFS, DNRC and PCT road management and travel plans and cooperate to maintain the current level of hunter access.
- Identify opportunities for additional Block Management projects and walk-in areas.
- Cooperate with private landowners to identify areas where elk numbers have increased so that more hunting opportunities may be realized outside the Block Management Program.
- Continue to work with private, state and federal entities to identify areas to allow motorized access for disabled hunters.
- Work with public and private entities to discourage land exchanges and/or developments that would exclude lands from public hunting.

POPULATION OBJECTIVES

1) Increase to 600, the number of elk observed during post-season aerial surveys. This objective was partially established based on recent fires in the EMU that should eventually provide much increased forage for elk on public and corporate lands. Also, many elk use areas near the border of the EMU and counts can vary considerably among years.
2) Maintain at least 8% bulls in the total elk observed during post-season aerial surveys.

POPULATION MANAGEMENT STRATEGIES

REGULATION PACKAGES

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

Antlerless:

<u>The Standard Regulation is:</u> limited antlerless permits (possibly valid past the end of the general season).

The Standard Regulation will be recommended if: the total number of elk observed during post-season aerial surveys is within 20% of the trend count objective OR, the calf:100 cow ratio observed during post-season aerial surveys is between 20 and 40:100 AND, the trend count is between 50% below and 20% above the objective.

The Liberal Regulation is: **1.)** increased antlerless permits, permits may be valid past the end of the general season OR; **2.)** a general antlerless regulation for portions of the general season.

1.) increased antlerless permits will be recommended if: the total number of elk observed during post-season aerial surveys is more than 20% above the population objective for 2 consecutive years OR, the calf:100 cow ratio observed during post-season helicopter surveys is more than 40:100 for 2 consecutive years.

2.) a general antlerless regulation for portions of the general season will be recommended if: the total number of elk observed during post-season aerial surveys remains more than 20% above the population objective after 2 consecutive years of application of increased antlerless permits.

The Restrictive Regulation is: limited antlerless permits valid for portions of the general season.

The Restrictive Regulation will be recommended if: the total number of elk observed during post-season aerial surveys is more than 50% below the population objective for 2 consecutive years OR, the calf:100 cow ratio observed during post-season aerial surveys is less than 20:100 for 2 consecutive years.

Antlered:

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

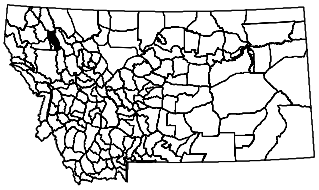
The Standard regulation will be recommended if: at least 8% of the total elk observed during post-season aerial surveys is bulls, OR; the proportion of bulls with 6 points or more on at least one antler reported in the Statewide Harvest Questionnaire is more than 25%, OR; a majority of the other hunting districts in the EMU are under brow-tined bull regulations.

The Restrictive Regulation is: **1.)** unlimited permits for brow-tined bulls OR; **2.)** limited permits for antlered bulls.

1.) Unlimited permits for brow-tined bulls will be recommended if: objectives for bulls (8% of total elk observed) have not been met after 2 consecutive years of a 5-week season for brow-tined bulls OR, the proportion of bulls with 6 points or more on at least one antler reported in the Statewide Harvest Questionnaire is less than 25% for 2 consecutive years.

2.) Limited permits for antlered bulls will be recommended if: bulls remain less than 8% of total elk observed OR, the proportion of bulls with 6 points or more on at least one antler reported in the Statewide Harvest Questionnaire is less than 25% after 2 consecutive years of unlimited permits for brow-tined bulls.

NORTH SWAN – FLATHEAD VALLEY EMU
(Hunting Districts 132 and 170)



Description: This 410-square-mile EMU encompasses the heart of the Flathead Valley and the northern ends of the Swan and Mission Mountains. In 1992, agriculture was the principal land use in this unit, with emphasis on timber, grain, and hay farming, and specialty crops such as mint, seed potatoes, and Christmas trees. Kalispell, Bigfork, Somers, and associated rural residential subdivisions occupied a significant portion of the land area. In the decade following the initial writing of the management plan for this EMU, the amount of land in residential subdivisions has increased dramatically. From 1992-1997 alone, over 60,000 acres of farmland (this does not include timberlands) were taken out of production based on a Census of Agriculture – over 20% of the available agricultural lands. The rate of subdivision has been increasing over the past 5 years with private and corporate timberlands being developed as well. The Flathead National Forest manages the federal lands that occur at higher elevations within this EMU. Approximately 62% of this EMU is in private, non-corporate ownership with the balance in federal/state (32%) or corporate (1%) ownership.

Public Access: The bulk of the Flathead and Swan valley floor is in private non-corporate ownership with limited hunting access. Much of the valley floor that was once in agricultural or timber production is now split into numerous residential subdivisions, small developed acreages, and other types of development, with a few scattered farms and ranches still intact.

Public roads currently provide reasonable vehicle access to the forested portions of the unit (primarily USFS and DNRC lands) along the east side of the valley and Crane Mountain (south of Bigfork). The exception to this is USFS lands in the northernmost portion of the Swan Range where access is more restricted. However, in much of the remaining area, road closures due to endangered species management have lowered open road densities. In addition to roads, numerous trails provide additional access to public lands not accessible via vehicles. There is also public ownership of numerous islands in the Flathead River between Columbia Falls and Flathead Lake.

Elk Populations: Based on reports and observations over the last decade, elk numbers in the Flathead Valley portion of this EMU have increased while those in the Swan Valley

portion (Swan Lake and Crane Mountain area) are stable to slightly increasing. Complaints about groups of elk (>20) getting into haystacks, foraging on green-up in hayfields and on other crops, and impacting fences have increased in the last 5 years. Elk have moved into the valley from the foothills along the Swan range to agricultural lands in the valley floor in areas where they have found a degree of security. Previous to the 1990s, no or few elk were harvested in HD 170 (which is located entirely in the valley bottom of the Flathead River).

During spring surveys for white-tailed deer along the valley floor in 2003, FWP observed 3 groups of elk (along with one concurrent public sighting) totaling nearly 100 individuals on private agricultural lands. In April 2004, FWP observed 177 elk in HD 132. Additional elk also utilize the foothills and valley bottom south of Columbia Falls. Elk can now be found in the Flathead Valley from Echo Lake north to Columbia Falls. Standard elk surveys are not conducted for this EMU, nor are there estimates for elk populations in the forested/public land portion of this EMU.

Recreation Provided: During 1999-2001, an average of 420 hunters spent an average of 2,600 days hunting elk in this EMU. Elk can be viewed and photographed from Highway 206 and Highway 35, and along associated county roads in agricultural lands between the Flathead River on the west and the foothills to the east between Columbia Falls and Bigfork. The presence of elk has become an issue in land use planning.

Annual Elk Harvest: During 1999-2001, an average of 19 elk per year were harvested in the EMU (11 antlered and 8 antlerless). For HD 132 the annual average was 8 bulls and 2 antlerless elk, and in HD 170 the average annual harvest was 3 bulls and 6 antlerless elk.

Recently, regulations allowed for the harvest of either-sex elk in the Flathead Valley portion of this EMU (HD 170) and brow-tined bulls only along with 20 antlerless elk permits in the foothills portion of this EMU (HD 132). The harvested bulls represented all age classes including spikes (legal in HD 170).

Accomplishments: Road closures implemented by the USFS, DNRC, and corporate timber interests in response to endangered species management have reduced road densities in forested areas to a point where elk security is no longer a concern. Prescribed burns were conducted in the EMU for the purpose of improving habitat productivity. Also, elk have benefited in some areas from habitat changes brought about by timber management. F.H. Stoltze Land and Lumber Company (SLLC) and Plum Creek Timber Company (PCT) have continued to provide public access for hunting on lands owned in the southeastern portions of the EMU.

Management Challenges: In the decade following the initial writing of the management plan for this EMU the amount of residential subdivisions has increased dramatically. The development of lands for housing has greatly reduced public access to the valley and foothill portions of this EMU. The ability of traditional elk hunting opportunities to control elk populations has been compromised and has the potential of being lost

altogether in the future. Monitoring game damage and populations in the valley portion of this EMU will be a challenge because this type of information can be either overstated or understated by landowners or neighbors. Because some people like to see elk, they will not report observations of new groups or increasing numbers. Others with game damage may complain even when only a few elk are infrequently on their property.

Limited suitable trend monitoring areas in the EMU along with funding and logistical constraints to conduct surveys impairs our ability to gather the data on elk populations that are considered basic information in other portions of Montana.

Population Monitoring: Formal aerial surveys are not conducted in this EMU. Observations of elk are made from the ground while conducting surveys of white-tailed deer. Additionally, observations made by the public are recorded as well as those made while investigating game damage reports.

SUMMARY OF PUBLIC COMMENT

In 1992 the Elk Management Plan stated, "Little public comment was received for this unit, reflecting the relatively limited potential of this area to produce elk or provide elk-related recreation." Also, "both support and opposition to road closures was registered" in 1992. Public comments over the last 5 years specific to this EMU have focused primarily on game damage.

In the recently completed Region One Elk Hunter Survey Report, 44% of the public residing in Flathead County expressed satisfaction with the current brow-tined bull hunting regulations, while 27% were dissatisfied. When asked for their preferred bull elk hunting regulation, 32% supported the brow-tined bull regulation, while 23% preferred an any antlered bull regulation and 30% preferred a mix of the two regulations. In Lake County, 40% of the public was neutral in their opinion of the current brow-tined bull hunting regulations while 11% were dissatisfied. When asked their preferred bull elk hunting regulation, 33% supported the brow-tined bull regulation, while 33% preferred an antlered bull regulation and 19% would like to see a mix of the two regulations. The majority of respondents was satisfied with the current antlerless elk hunting regulations and favored general season antlerless elk hunting for a portion of the general season over antlerless elk hunting by permit.

MANAGEMENT GOAL

Discourage growth of elk populations that primarily reside on private land (typically from as early as late August through April) by creating opportunities, sensitive to neighborhood concerns, for hunters to harvest elk. Manage elk that reside primarily on public lands for relative stability and long-term productivity to ensure recruitment of brow-tined bulls for harvest commensurate with the available habitat for elk. However, elk populations on public lands will be managed such that they do not become a constant source of game damage on neighboring private lands.

HABITAT OBJECTIVES

1) Support programs that encourage public land managers to continue to restore and maintain mule deer and elk winter ranges along the Swan front.
2) Increase the awareness of landowners, developers, and county officials of elk and elk-related problems in agricultural or suburban settings.

HABITAT MANAGEMENT STRATEGIES

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

Valley/Foothill Portions: In the private land/valley and foothill portion of this EMU:

- Provide educational information to landowners, Natural Resources & Conservation Service (NRCS) office, and planning offices on land management practices that can affect elk use on private lands.
- Encourage neighbors to visit with neighbors about land management activities that might either attract or discourage elk use in the neighborhood to help avoid game damage problems.
- Review residential subdivision and other development proposals and provide input relative to elk and elk management to local government authorities responsible for development approval.

Mountain/Foothill: In the Swan and Crane Mountain areas of this EMU:

- Provide technical input to land managers, and cooperate in the planning of timber sales, road management, recreational management, habitat projects, and enforcement across the entire EMU.
- Encourage fire management that improves elk habitat on roadless public lands.
- Participate with federal agencies, state agencies, and corporate interests in perpetuating elk/wildlife habitat and traditional public uses of those lands.

GAME DAMAGE STRATEGIES

FWP will pursue harvest strategies that help alleviate game depredation by reducing elk populations where chronic problems occur. Some strategies that may be utilized include:

- Help landowners and others in local communities with chronic game damage to work cooperatively on elk management goals and strategies that can be applied across property boundaries to the elk population.
- Prescribe antlerless harvest pressure in excess of estimated calf recruitment rates.
- Apply unique hunting opportunities that attempt to allow elk populations to be controlled in mixed agricultural/subdivision areas.

- Should strategies fail to reduce game damage problems to acceptable levels, develop programs that will encourage elk to not utilize the Flathead valley portion of the EMU.

ACCESS STRATEGIES

- Nonmotorized access for hunters should be maintained in the roadless areas of this EMU by assuring trail access on public lands outside of these areas.
- Continue to review USFS road management and travel plans, and cooperate to maintain the current level of hunter access.
- Identify important points of access to public lands and provide recommendations on acquisition, development, or maintenance to the appropriate land management authority.
- Identify opportunities to provide points of access to public lands through private lands through the Access Montana program.
- Work with public and private entities to discourage land exchanges and/or developments that exclude lands from public hunting.
- Work with private landowners to provide access for hunters that target known populations of elk causing damage.
- Use the Block Management program, special permits, special seasons, weapon restrictions, and other types of strategies to make hunter harvest palatable to nonhunting public/neighbors and those providing access or suffering from game damage.
- Use neighborhood workshops to develop elk management strategies and evaluate success.

POPULATION OBJECTIVES

No consistent elk survey data are collected for this EMU. Biologists will continue to report numbers of elk observed on white-tailed green-up survey routes. No trend or monitoring area exists for the mountainous portions of this EMU.

1) On public lands, maintain a small elk population capable of sustaining an annual harvest.
2) On private lands, maintain elk numbers at a level that provides for some public viewing and general enjoyment, but below population densities that result in significant game damage problems.

POPULATION MANAGEMENT STRATEGIES

- Continue to utilize observational data/ground classifications, public reports, check station data, and harvest data to monitor population trends.
- Increase opportunities for hunters to harvest elk in the valley/foothills area of the Flathead Valley.
- Enhance opportunities for youth to hunt elk.

REGULATION PACKAGES

Six-week archery regulation for brow-tined bulls/ antlerless elk.

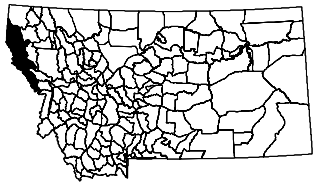
Antlerless:

For both HD 170 and HD 132 the objective is to provide as much opportunity as possible for hunters to harvest antlerless elk. There are many small-sized private properties located in this area so hunter access is extremely difficult. For that reason, for the majority of these two districts, general season and extended season antlerless elk hunting opportunity on private land will be provided. Essentially, this opportunity would be from the opening day of the general season until 15 February of each year. The exception is for the public land of the Swan Divide and southern part of HD 132 (primarily National Forest and DNRC lands) where no general season antlerless elk hunting is proposed.

Antlered:

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

LOWER CLARK FORK EMU
(Hunting Districts 104, 121, 123, 124, 200, and 202)



Description: This 2,896-square-mile EMU is located along the Montana-Idaho border in northwestern Montana. It is bounded by the Cabinet and Bitterroot mountains, and includes the Cabinet Mountain Wilderness. The Kootenai and Lolo national forests administer more than 70% of the land base. The 1,552-acre Mount Silcox Wildlife Management Area is located within the EMU. The quality of elk winter ranges is declining due to conifer encroachment, aging of shrub field, and increasing densities of noxious weeds. Although the majority of elk use is on U. S. Forest Service (USFS) lands, elk also utilize private lands through the year.

Public Access: Roads currently provide reasonable vehicle access to much of the unit. Numerous trails provide additional access to areas not accessible via vehicles. With the exception of the Cabinet Mountain Wilderness, the proposed Great Burn Wilderness, the proposed Scotchman Peak Wilderness, and the Trout Creek Roadless Area, increased construction of logging roads has provided additional hunter access to several areas in the past 10 years. The national forests, however, have established road management systems that limit vehicle access. Road obliteration is increasingly used to decrease open road density in the EMU.

Elk Populations: An elk population estimated between 4,800-6,000 animals (based on sightability analysis from the Lower Clark Fork Elk Study, Henderson et al. 1993) seasonally occupies all drainages in the unit. The number of elk counted during post-season aerial surveys averaged about 2,400 during 1999-2001 (Figures 1, 2, 3, and 4). During the same period, bulls have averaged 10% of total elk observed for the EMU with individual herd segments ranging from 5-12% bulls.

Recreation Provided: This EMU provides about 49,500 days of hunting recreation for approximately 6,700 hunters annually. From winter through spring, elk may be readily viewed from highways and county roads near St. Regis and Thompson Falls, including such areas as Cherry Creek, Dry Creek, Little Beaver Creek, Prospect Creek, West Fork of Elk Creek, and Boyd Mountain. During summer visits to backcountry areas, many recreationists view and photograph elk and other wildlife species.

Annual Elk Harvest: The 3-year average harvest from 1999-2001 was 500 elk (295 antlered and 205 antlerless). All of the bull harvest was comprised of brow-tined bulls.

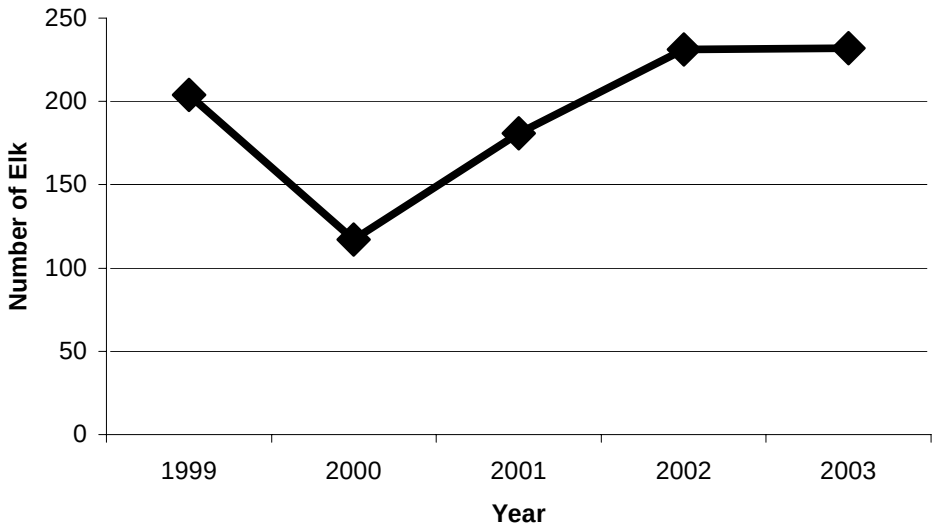


Figure 1. Number of elk counted during post-season aerial trend surveys in HD 104, 1999-2003.

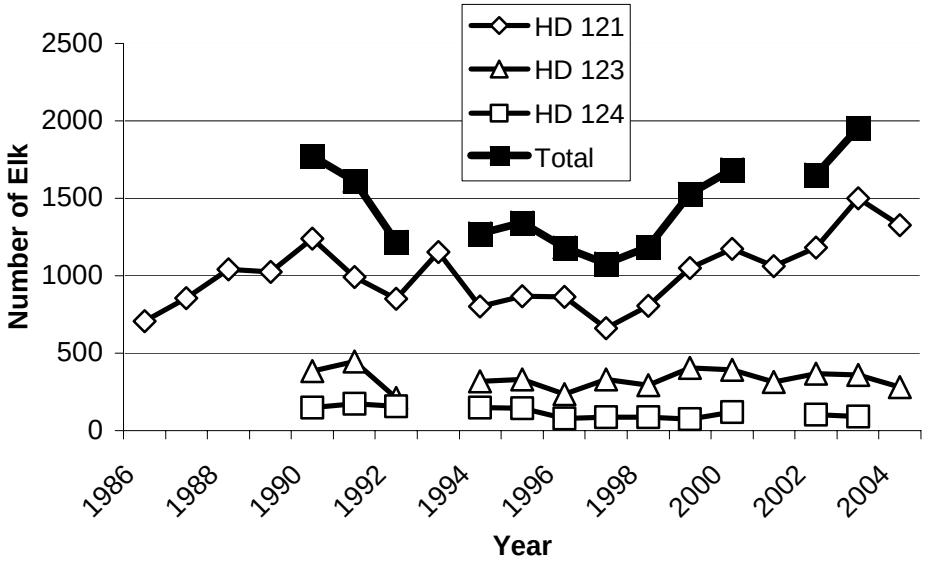


Figure 2. Number of elk counted during post-season aerial trend surveys in HDs 121, 123, and 124 during 1986-2004.

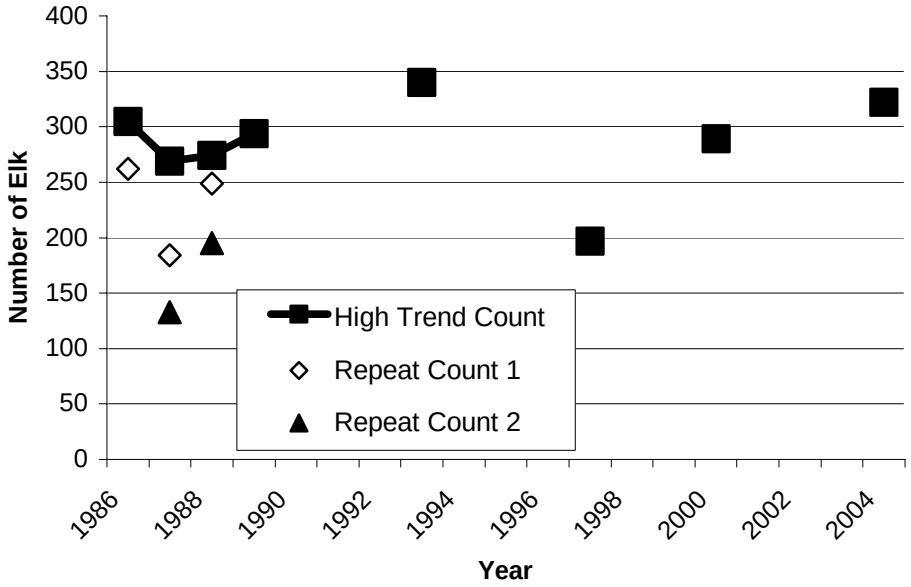


Figure 3. Number of elk counted during post-season aerial trend surveys in HD 200 during 1986-2004.

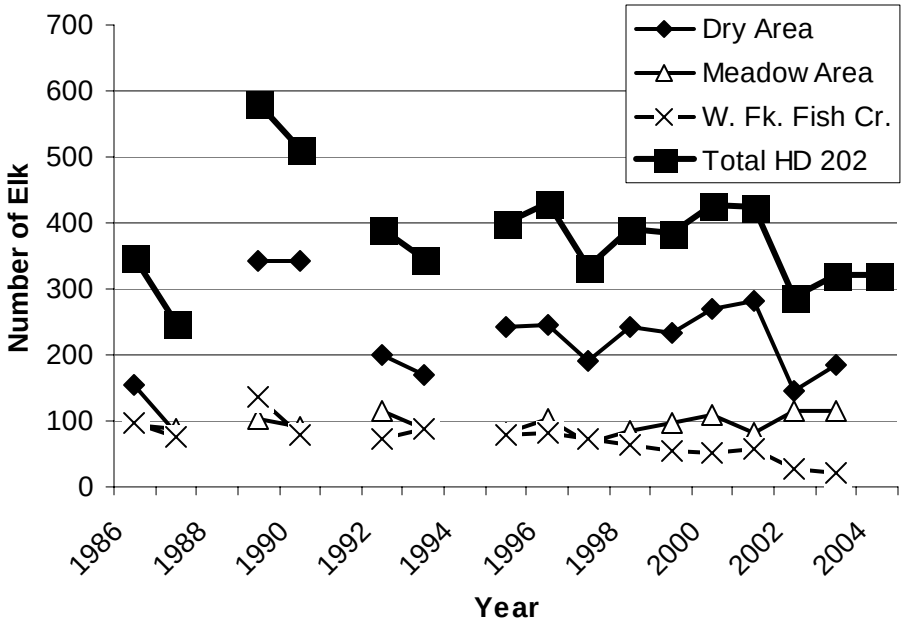


Figure 4. Number of elk counted during post-season aerial trend surveys in HD 202 during 1986-2004 (only partial surveys of HD).

Accomplishments: FWP cooperated with Lolo National Forest in planning and funding prescribed burning to rejuvenate decadent shrubs and set back conifer invasions on winter ranges to increase forage production for elk on Boyd Mountain, Donlan Flats, Thompson Creek, North Fork of Fish Creek, Clark Mountain, Wilkes Creek, Clear Creek, Cherry Creek, Deep Creek, and several areas in the Prospect Creek drainage. The Kootenai National Forest completed prescribed burning projects in Beaver Creek, Trout Creek, Vermilion River, Twenty-Odd drainage, and Green Mountain.

FWP cooperated with Lolo National Forest in planning and funding herbicide applications to control noxious weed infestations of winter ranges in Mayo Gulch, Thompson Creek, and Prospect Creek.

FWP and other land conservation organizations completed conservation easements on the Harlow Ranch (Squaw Creek) and Cavill Ranch (Swamp Creek). These easements protect important elk winter and spring ranges in this EMU.

Management Challenges: A serious threat to hunting and elk population management in portions of this EMU is the future disposition and management of thousands of acres in Plum Creek Timber Company (PCT) ownership. This EMU has limited PCT land except for areas south of Plains, in HD 124, and south of Tarkio, in HD 202. PCT lands have historically been open to the public, and hunters tend to take this privilege for granted. However, in recent years PCT has been marketing parcels for sale and may not be a longtime landowner in this EMU. The loss of hunting access on PCT lands, and possible concurrent loss of elk habitat, would eliminate significant public hunting opportunities for elk in this heavily hunted EMU. We estimate that, currently, 95% of elk in this EMU are accessible to hunters. The cumulative effect of small residential subdivisions on winter range will severely hamper the ability to manage elk in these areas, including increasing the percentage of elk that are unavailable to hunters.

Calf:100 cow ratios on winter ranges in this EMU have declined steadily over the past decade where data were collected. This appears to have also occurred in other areas of western Montana as well. Public concern has centered on the potentially increasing role of predation in the past decade. Low calf recruitment can result in fewer antlerless permits and greater reliance on conservative season structures and/or maintaining hunting season habitat security to meet bull population objectives.

Wolf restoration in western Montana is an emerging factor in elk population management. Wolves are increasingly evident in this EMU since the early 1990s. Wolves are well established in the Fish Creek area, where 3-4 packs may have impacted calf recruitment and affected elk distribution. Another pack recently formed near McKay Creek. It is possible that additional packs may form elsewhere in this EMU during the next decade. We anticipate some level of additive elk mortality with more wolf packs, which may necessitate a corresponding reduction in antlerless elk permits.

Residential subdivisions continue to be developed on or near elk habitat, particularly near Superior, St. Regis, Plains, and Thompson Falls. In some cases, such subdivisions have restricted public access to hunting elk and have contributed to chronic elk damage

complaints in those areas. In other cases, winter range productivity has been reduced by housing developments. We expect this trend to continue.

Winter range forage productivity is threatened by an increasing invasion of noxious weeds, conifer encroachment of shrub fields and grasslands, and an increase in decadent shrub plants. Continued declines in forage productivity can lead to lower calf recruitment, lower populations, and greater elk use of private lands.

Use of off-highway-vehicle, particularly 4-wheelers, for hunting and retrieving elk has increased significantly during the past decade. Increasingly, hunters complain of 4-wheelers illegally accessing areas behind closed gates. This may be not only a social and legal problem, but use of 4-wheelers reduces the effectiveness of bull security areas and may contribute to additional bull harvest.

Population Monitoring: Elk count and classification surveys are generally conducted during the spring to correspond with the "greenup" of vegetation. This window of opportunity is short, but remains the best time period to locate and classify elk in northwestern Montana. Some herd units within this EMU are surveyed during winter when elk are located on the winter range. We use fixed-wing aircraft or helicopter with a single observer and pilot to complete surveys. The observation/sightability rate varies by aircraft, seasonally, annually, and between herd units. Complete surveys are attempted on an annual basis for HDs 121, 123, and 124. Partial surveys are conducted annually for HDs 104 and 202. HD 200 is surveyed every 3-4 years, as budgets allow.

SUMMARY OF PUBLIC COMMENT

In 1992 the public expressed support for maintaining the current recreational character of the EMU, but preferred to see more bulls reach older age classes. Support was voiced for additional road closures and more aggressive habitat management actions directed toward enhancement of elk winter range and protection of elk security areas. Comments protesting additional road closures were also received. Landowners expressed concern about levels of elk use on private lands. Some concern was expressed that archery hunters may adversely affect elk populations by either harvesting too many bulls or disturbing the rut and lowering reproductive success. Many respondents also believed increasing numbers of outfitters were becoming incompatible with non-outfitted recreational use.

In the recently completed Region One Elk Hunter Survey Report, 47% of the public residing in Sanders County expressed satisfaction with the current brow-tined bull hunting regulations and 28% were dissatisfied. When asked about their preferred bull elk hunting regulation, 38% supported the brow-tined bull season, 28% preferred an any-antlered-bull season, and 28% preferred a mix of the two regulations. The majority of respondents was satisfied with the current antlerless elk hunting regulations and favored antlerless elk hunting by permit only over a general antlerless season for a portion of the hunting season.

Concern was expressed about the effects on elk populations of deteriorating winter range conditions from lack of fire and old clearcuts becoming revegetated with timber. There is increasing concern about the effects of wolf predation on elk populations and hunting opportunity. Landowners continue to be concerned about levels of elk use on private lands and associated crop damage.

MANAGEMENT GOAL

Manage the elk population in a healthy condition at levels commensurate with available habitat on public and private land, with emphasis on maintaining a diverse bull age structure. Cooperate with land managers in the management of elk habitat to provide a diversity of elk hunting experiences.

HABITAT OBJECTIVES

Develop cooperative programs that encourage public and private land managers to maintain 1.8 million acres of productive, secure, and currently occupied elk habitat.

HABITAT MANAGEMENT STRATEGIES

FWP will cooperate with state and federal land management agencies to pursue the following:

- Planning and design of timber sales and road management systems to maintain elk security areas and secure travel corridors, particularly in remaining roadless areas and on winter ranges where bulls become vulnerable to hunting pressure with increased snow accumulation. Protection of existing roadless areas in Dry Creek, Cedar Creek, Big Creek, Trout Creek, Cataract Creek, Pellick Ridge, and drainages around Mount Bushnell is a priority of FWP because these areas provide important upper-elevation security during the summer and fall seasons.
- Protection of the Little Beaver Creek and Cherry Creek wintering areas through conservation easements or fee title acquisition will also be a priority in the event that current land ownership or ranch management philosophy changes.
- Cooperate with the Forest Service to establish a schedule to treat 1,000-2,000 acres of winter range annually with prescribed burning to increase forage production for elk.
- Work with the USFS to identify areas where road closures are necessary to enhance elk security and to ensure that current open road densities are not increased. Encourage mitigation of any new road building through obliteration or through the closure of an equivalent number of miles of existing roads.
- Review subdivision and other development proposals for potential impacts to elk and elk management and provide input to local government authorities responsible for approval of proposals.

GAME DAMAGE STRATEGIES

Most game damage reports are registered during the spring, with a lesser number of complaints during the summer and winter months.

FWP will:

Pursue harvest strategies that help alleviate game depredation by reducing elk populations where chronic problems occur. Some strategies which may be used include issuing permits for early antlerless-only seasons which may start around 1 September, late season private-land-only permits for antlerless elk which currently run from 15 December through 31 January, and designation of portions of hunting districts for increased harvest through increased antlerless permits valid during the general season.

ACCESS STRATEGIES

FWP will:

- Identify important points of access to public lands and provide recommendations on acquisition, maintenance, and development to the appropriate land management authority.
- Pursue additional walk-in access to public land on the north side of Pellick Ridge and on the south side of Green Mountain.
- Continue to review USFS road management and travel plans, and cooperate to maintain the current level of hunter access.
- Identify opportunities for additional block management projects and walk-in areas.
- Identify opportunities to provide points of access to public land through private lands through the Access Montana program.
- Work with public and private entities to discourage land exchanges and/or developments that would exclude lands from public hunting.

POPULATION OBJECTIVES

1) Maintain the number of elk observed during post-season aerial surveys within 20% of 2,400 elk in the EMU or HD objective. This objective was established based on the 3-year average for numbers of elk observed during surveys conducted in the EMU during 1999-2001. Comments by private landowners and sportsmen were also considered, as was the number of game depredation complaints received in recent years. Individual, observed herd count objectives by hunting district are as follows: (helicopter survey unless noted)

   HD 104 – 225 elk (partial survey)
   HD 121 – 1,355 elk
   HD 123 – 365 elk
   HD 124 – 130 elk
   HD 200 – 300 elk
   HD 202 – 350 elk (partial survey)
   [50-100 elk in the North Fork of Fish Creek (fixed-wing aircraft)]
   [50-100 elk between Quartz Creek and Cougar Gulch (fixed-wing)]
   [200-300 elk between Thompson Creek and Cold Creek (fixed-wing)]

2) Maintain at least 8% bulls in the total elk observed during post-season aerial surveys OR, an observed bull count of:

HD 104 – 16 bulls
HD 121 – 88 bulls
HD 123 – 28 bulls
HD 124 – 10 bulls
HD 200 – 24 bulls
HD 202 – 28 bulls

POPULATION MANAGEMENT STRATEGIES

REGULATION PACKAGES

Six-week brow-tined bulls/antlerless archery regulation for elk EXCEPT, see Restrictive Regulation for antlered elk.

Antlerless:

The Standard Regulation is: limited antlerless permits (may be valid past the end of the general season).

The Standard Regulation will be recommended if: the total number of elk observed by herd unit during post-season aerial trend surveys is within 20% of the HD objective.

Below is the range of permits necessary to maintain the herd unit within the objective range for the Standard Regulation.

HD 104	50-150 permits
HD 121	200-650 permits
HD 123	50-250 permits
HD 124	25-75 permits
HD 200	50-275 permits
HD 202	100-400 permits

The Liberal Regulation is: **1.)** increased antlerless permits, permits may be valid past the end of the general season OR; **2.)** a general antlerless regulation for portions of the general season OR; **3.)** A-9/B-12 antlerless licenses (B-tags) in addition to the above regulations.

1.) Increased antlerless permits will be recommended if: the total number of elk observed by herd unit during post-season aerial trend surveys is more than 20% above the herd unit objective.

Below is the estimated number of permits necessary to reduce herd unit numbers by 20% to the stated population objective.

HD 104	200 permits	26% avg. success
HD 121	800 permits	34% avg. success
HD 123	300 permits	28% avg. success
HD 124	100 permits	28 % avg. success
HD 200	350 permits	22% avg. success
HD 202	500 permits	18% avg. success

Assumed permit success is based on the 3-year average from 1999-2001.

2.) A general antlerless regulation for portions of the general season AND/OR; **3.)** A-9/B-12 antlerless licenses (B-tags) in addition to the above regulations will be recommended if: the total number of elk observed by herd unit during post-season aerial trend surveys remains more than 20% above the HD objective after 2 consecutive years of increased antlerless permits.

The Restrictive Regulation is: no antlerless permits or a limited number of antlerless permits targeted to areas of game damage and valid for various portions of the EMU.

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

Below is the number of permits necessary to address local elk depredation problems.

HD 104	< 50 permits
HD 121	< 200 permits
HD 123	< 50 permits
HD 124	< 25 permits
HD 200	< 50 permits
HD 202	< 100 permits

Antlered:

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

The Standard Regulation will be recommended if: The percent bulls observed during post-season aerial surveys is at least 8% of total elk OR; the number of bulls observed during post-season aerial surveys is at least the numeric bull objective.

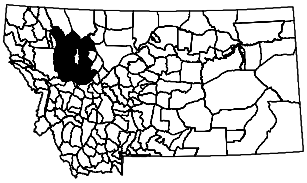
The Restrictive Regulation is: **1.)** unlimited permits for brow-tined bulls or **2.)** limited permits for antlered bulls. ARCHERS WILL ALSO BE REQUIRED TO APPLY FOR UNLIMITED OR LIMITED PERMITS.

1.) Unlimited permits for brow-tined bulls will be recommended if: the percent bulls observed during post-season aerial surveys is less than 8% of total elk for 2 consecutive years OR; the number of bulls observed during post-season aerial surveys is more than 20% below the numeric bull objective for 2 consecutive years.

2.) Limited permits for antlered bulls will be recommended if: objectives for bulls are not achieved after 2 years of application of unlimited permits.

BOB MARSHALL WILDERNESS COMPLEX EMU

(Hunting Districts 130, 140, 141, 150, 151, 280, 281, 282, 285, 415, 422, 424, 425, 441, and 442)



Description: The 6,280-square-mile Bob Marshall Wilderness Complex (BMWC) EMU straddles the Continental Divide and includes the Bob Marshall, Great Bear and Scapegoat Wilderness Areas, and the Sun River Game Preserve. This EMU consists of 15 hunting districts (HDs) within FWP administrative regions 1, 2, and 4 and includes portions of the Lewis and Clark, Flathead, Helena, and Lolo National Forests. It is bounded on the north by Glacier National Park, the Blackfoot Indian Reservation to the northeast, and the Confederated Salish and Kootenai Tribes to the west.

About 5,750-square-miles (92%) of the EMU is elk habitat. USDA-Forest Service (USFS) lands comprise 72.6% of the EMU and 79.2% of elk habitat in the EMU. Although private land comprises only 14% of the EMU, 29% of elk winter range is on private lands. The largest amount of elk habitat on private lands is in HDs 281, 422, and 441. Eighty-five percent of elk winter range is on private land in HD 422 and 52% in HD 441. Four FWP Wildlife Management Areas (WMAs) are in this EMU: the Blackfoot-Clearwater WMA (B-CWMA), Sun River WMA (SRWMA), Blackleaf WMA (BLWMA), and Ear Mountain WMA (EMWMA).

Wilderness status of much land, FWP WMAs, and forest fire history are very important in the ecology and management of elk in this EMU.

Public Access: Public access to or through some private lands along the eastern slope of the Rockies and the Blackfoot River drainage is limited or non-existent. Excessive open-road densities in the Blackfoot, Seeley-Swan, and South Fork of the Flathead portions of the EMU were a concern in the 1992 Elk Plan. Currently, however, road closures due to endangered species management have reduced open road densities in most areas to the point where security for elk is no longer a significant concern. Public access to the Wilderness portion of the EMU is provided by more than 60 maintained trails.

Access in the HDs in Region 1 is very good and limitations are mostly because of the remoteness of the terrain and the means by which it must be accessed.

HD 280 is backcountry and roadless, but publicly accessible to hikers and those who use horses during the hunting season. HD 280, along with HDs 150 and 151 are managed for a traditional backcountry rifle hunting opportunity during the rutting (bugling) season from mid-September through early October.

Most of HD 281 is publicly accessible during hunting season. Access to elk hunting is most significantly affected by the remote character of Lolo and Helena National Forest lands outside the Wilderness boundary and walk-in hunting on heavily roaded lands owned by Plum Creek Timber Company (PCT) and other private parties managed through the Block Management Program.

Most of HDs 282 and 285 is publicly accessible during hunting season. Access to elk is most significantly affected by "permit-only" access for elk hunting in HD 282 during the general season, the remote character of Lolo National Forest lands around the Wilderness boundary, and widespread closures to motorized vehicles that PCT instituted on its roads in the mid-1990s.

Most public access to USFS property in HD 422 utilizes only three formalized trailheads with a fourth entry point persisting with informal private landowner permission. These trailheads are Smith/Goss Creek, Elk Creek, Dearborn River, and Falls Creek. Other entry points exist but are used less extensively or are less effective. Most use of public land is non-motorized foot or horse traffic. Although backcountry areas are remote, day hunting does occur near established trailheads. Access to private land is extremely limited. Dependent upon daily elk distribution, approximately 90% of these elk may be unavailable to the general public hunter. Considerable outfitting occurs on public land with some conflict potential with non-outfitted hunters.

Public access in HD 424 is secured by a Forest road system in the Benchmark and Willow Creek areas. Although there are remote backcountry areas in this HD, considerable day hunting occurs as well. Most access is non-motorized foot or horse traffic from open roads. Access to private land is limited. Considerable outfitting occurs on public land with some conflict potential with non-outfitted hunters.

Public access to areas within HD 425 is through an open road system across the SRWMA. From these roads, non-motorized access is mostly foot traffic. Access to private land is limited.

Public access in HD 442 is facilitated by an open road system in the Sun Canyon area. From these open roads, most access is non-motorized, with both day hunting on foot and remote backcountry camping with horses represented. Access to private property is very limited. Considerable outfitting occurs on public land with some conflict potential with non-outfitted hunters.

Public access to the Lewis and Clark National Forest (LCNF) in HD 415 occurs mainly from five trailheads: Birch Creek at Swift Dam, Little Badger via the Blackfeet Reservation, and three sites along U.S. Highway 2 from East Glacier to Marias Pass.

Roughly 50% of the area is accessible by ATV or motorcycle on existing trails; the remainder is traveled by horse or on foot. Both day hunting and extended backcountry trips are common. ATVs are used to haul hunting camps, hay, and other equipment into the interior of the hunting district on motorized trails. Private lands comprise less than 5 % of this hunting district, and access is moderately limited on those tracts. All of the elk in this area are available to the general public.

Hunting access to public lands in HD 441 occurs from trailheads along the Teton River, Blackleaf Canyon, and Birch Creek at Swift Dam. Very little of the LCNF and adjacent BLM lands are authorized for motorized use; however, both day trips and extended backcountry trips on foot or horseback are common from these trailheads. Access to private lands for hunting varies from limited to severely limited. Hunting that does occur on private property is mainly day use, with little camping available. Roughly 50% of the elk in this hunting district are unavailable to the public during the hunting season. Only 5% of the private acreage is completely open to public hunting. On private lands, approximately 5% are completely unavailable for public use, another 40% severely restricted, and 50% moderately restricted.

Elk Populations: More than 80% of the elk observed in this EMU use Wilderness habitats during at least a portion of the year. Eighty percent of the elk that utilize the Wilderness areas migrate to non-Wilderness winter ranges (Figure 1). Forty major winter ranges, comprising 65% of the available winter range in the unit, are located outside of Wilderness boundaries. Privately owned winter and spring elk range is located along the East Front of the Rockies and throughout the Blackfoot, Clearwater, and Swan River drainages.

The potential for elk production varies among portions of the EMU. Elk that occupy the south and east peripheries consistently exhibit higher calf survival than do the elk that occupy the South and Middle Fork of the Flathead in the interior of the BMWC. Bulls that reside yearlong within the Wilderness boundaries exhibit higher survival through hunting season than those in non-Wilderness areas.

Elk populations wintering in HDs 140, 141, 150, and 151 are currently lower in number than in past decades. Forest succession in the absence of wildfires is likely the predominant factor influencing this decline. The heavily forested habitats in much of FWP Region 1 result in considerable year-to-year variability in observed elk numbers that is independent of actual population trends. Only portions of the winter ranges in HDs 140 and 150 are suitable for aerial surveys, and the data indicates that elk populations there have been relatively stable over the last decade (Figure 2). Although no surveys are conducted in HD 130, field observations indicate that numbers of elk wintering in the Swan Valley have increased over the last few years.

There is no winter range in HD 280. Based on radio telemetry data, up to 50% of the elk wintering in HDs 281, eastern 285, and 422 migrate into HD 280 in early summer and accomplish the reverse migration in early winter.

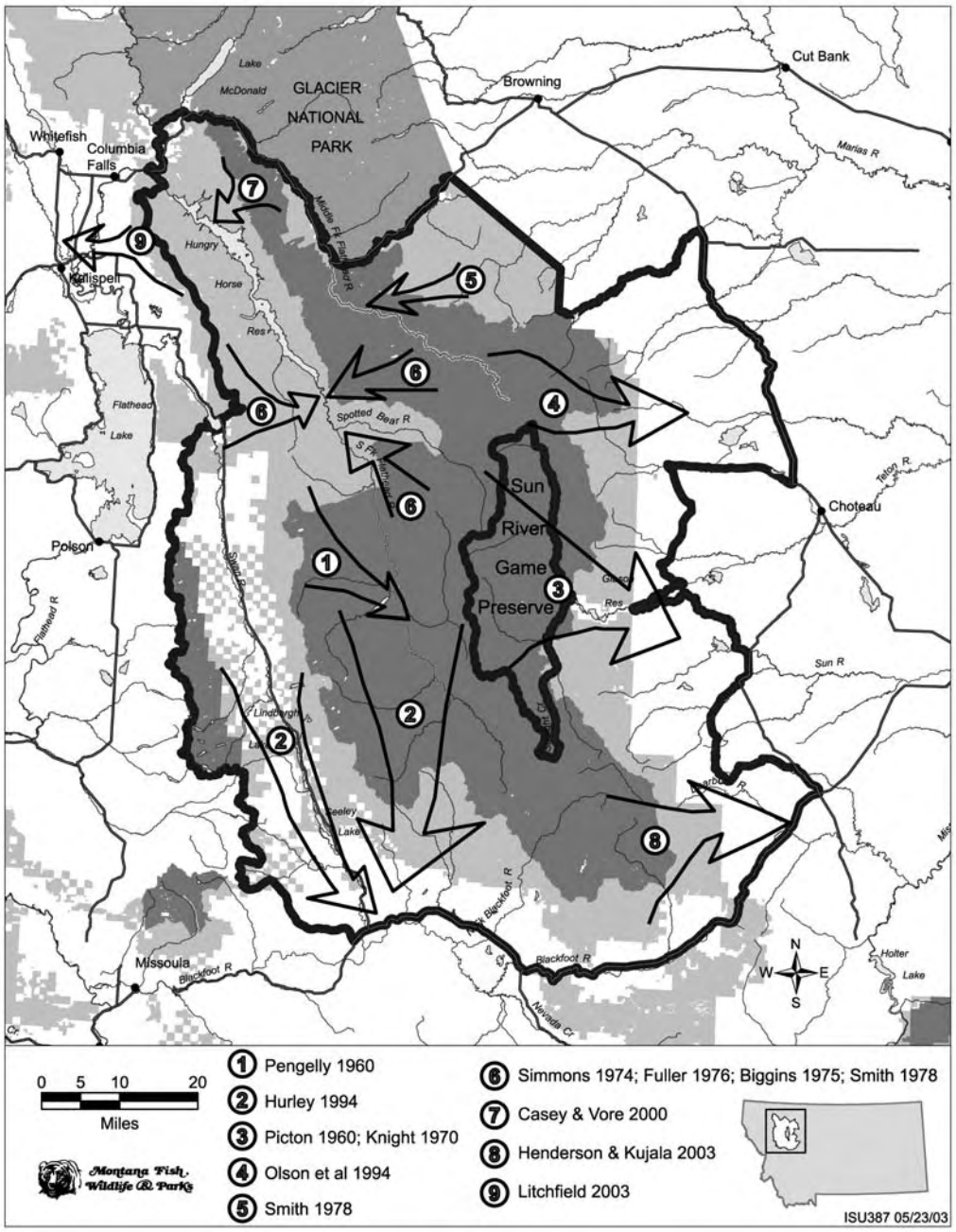


Figure 1. Known patterns of movement to winter range for elk using the Bob Marshall Wilderness Complex during summer and fall.

Elk populations wintering in HD 281, 282, and 285 are near modern day highs. About 650 elk were counted in HDs 281 and 285 (Figure 3) and 1,153 elk were counted in HD 282 during 2004 (Figure 4). About 1,000 elk winter in HD 422 (Figure 5), and more than 500 of these elk migrate through Alice Creek and the lower Landers Fork to summer/fall ranges in HD 280. About 30% of the cows and 50% of the bulls that winter in HD 282 use the upper South Fork of the Flathead drainage (HD 150) as summer-fall range.

Declining calf recruitment in the 1990s has moderated increases in elk numbers and opportunities for antlerless harvest. Late-winter calf:100 cow ratios in HD 281 ranged between 30 and 40 calves per 100 cows in the1980s; between 25 and 35 calves in the 1990s, with a low of 12 in 1998; and from 16-22 calves per 100 cows since 1999. Mid-winter calf:100 cow ratios in HD 282 ranged from a high of 46 calves per 100 cows in 1993 to a low of 12 in 1998, and ranged from 22-33 calves:100 cows in 1999-2003.

Late-winter bull:100 cow ratios have ranged from 9-33 bulls:100 cows in HDs 281 and 282 since 1990, averaging about 20 bulls:100 cows.

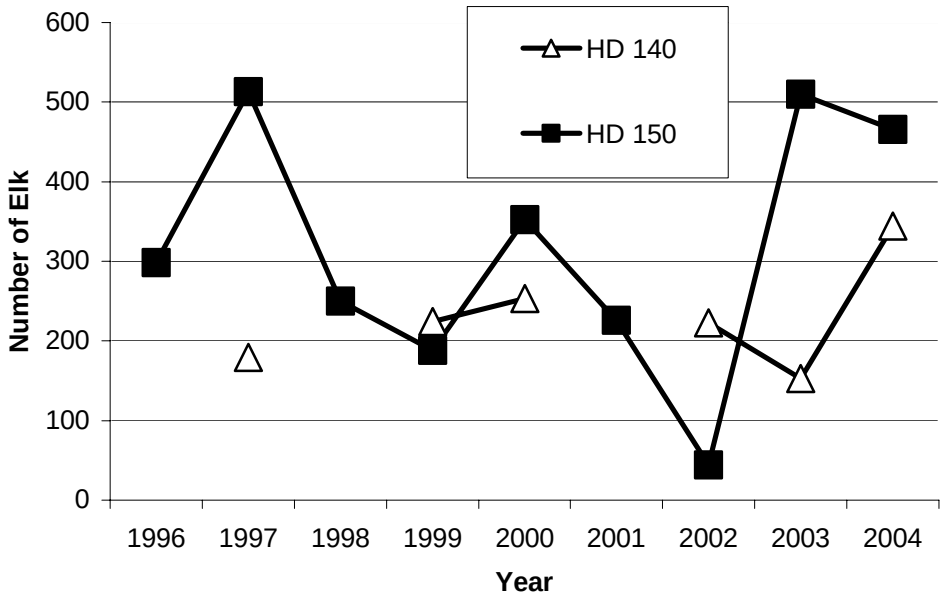


Figure 2. Number of elk counted during post-season aerial trend surveys in small sample areas of HDs 140 and 150 during 1996-2004.

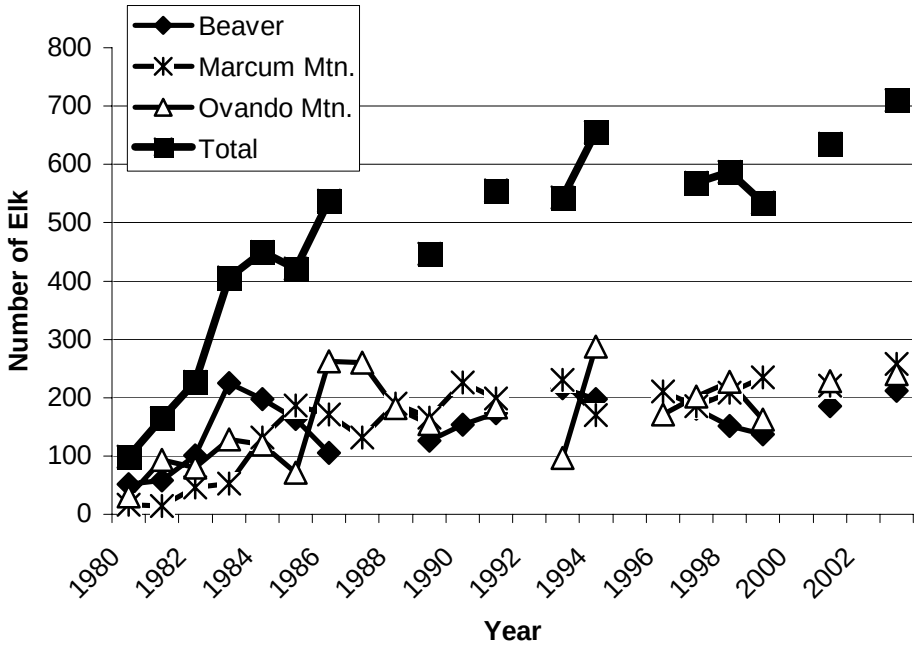


Figure 3. Number of elk counted during post-season aerial trend surveys in HD 281, 1980-2003.

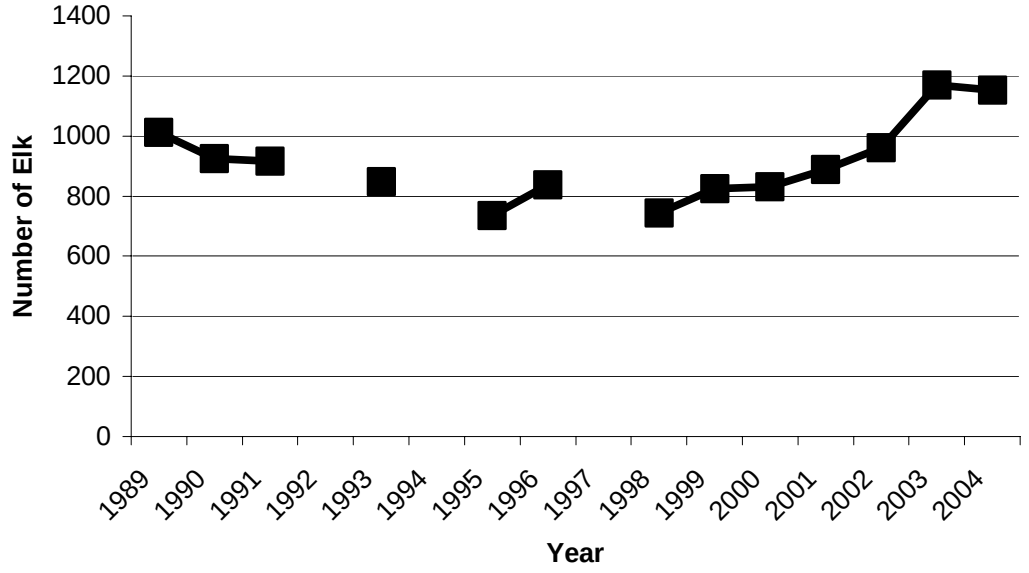


Figure 4. Number of elk counted during post-season aerial trend surveys in HD 282, 1989-2004.

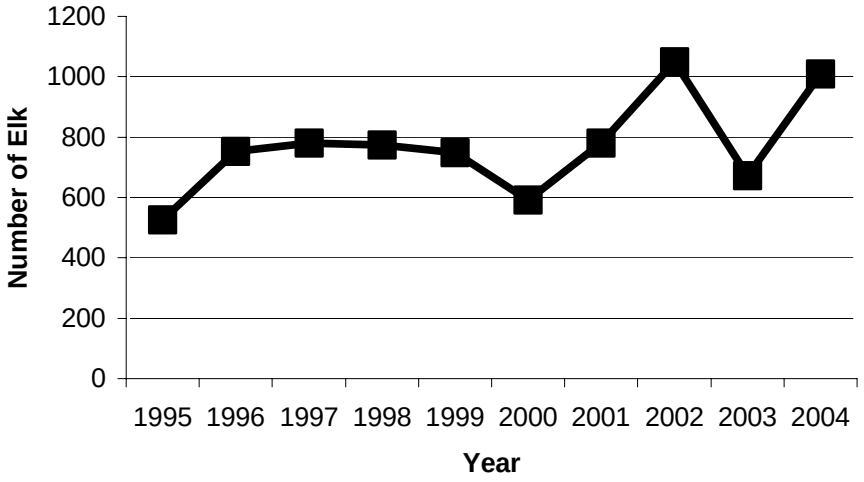


Figure 5. Number of elk counted during post-season aerial trend surveys in HD 422, 1995-2004.

Few elk spend winter in HD 424. Recently, the number of elk observed in HD 425 has ranged between 2,000-2,500. Most of these are typically observed on the SRWMA. The number of elk wintering in HD 442 ranges from 100-500. Some (100-200) are usually found near the Ear Mountain Wildlife Management Area and are partially managed via management prescriptions in HD 450. Combined trend counts for HDs 424, 425 and 442 are presented in Figure 6.

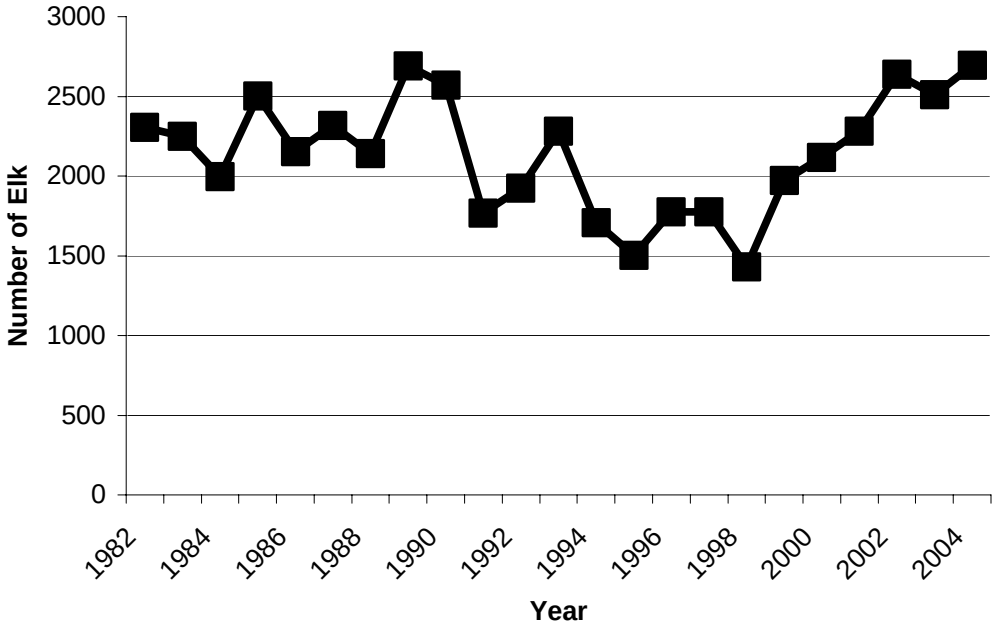


Figure 6. Number of elk counted during post-season aerial trend surveys in HDs 424, 425, and 442 (primarily SRWMA), 1982-2004.

Annual counts of wintering elk in HD 415 vary depending upon snow cover and flying conditions, but generally 100-200 elk are observed in the head of Hyde Creek, Mettler Coulee, and on Lubec Ridge. Severe winter conditions may move some scattered groups of elk onto the Blackfeet Indian Reservation in the vicinity of Dog Gun Lake and on the east end of Lubec Ridge. Until recently, Tribal members were allowed to hunt elk year-round, which precluded substantial use of the Blackfeet Reservation by this elk herd. Currently, elk hunting is prohibited between Heart Butte and East Glacier. Calf recruitment ranges from 21-35 calves:100 cows and bull:100 cow ratios range from 14-25:100 cows. Numbers of elk counted during post-season aerial trend surveys are presented in Figure 7 for HDs 415 and 441 combined.

Two herd units exist in HD 441, one of about 100-150 elk in the Blackleaf WMA - Teton River area and another of approximately 500 elk further north in the Dupuyer Creek - Birch Creek area. The Blackleaf group is stable in numbers, but spend an increasingly greater amount of the year in adjacent Hunting District 450. Winter cow/calf use of the Blackleaf WMA is sporadic, but groups of 10-40 bulls are often observed west of Antelope Butte. The northern herd in this HD has increased to over 500 elk in recent years. Winter elk use is uniformly spread across the unit, particularly in the area between Scoffin Butte, the Theodore Roosevelt Memorial Ranch, and the Broken O Ranch. Severe winter conditions tend to increase elk herd size and push them eastward several miles from more traditional wintering areas mentioned above. This winter movement has prompted depredation complaints from local grain farmers and a Hutterite Colony. Calf recruitment ranges from 27-34 calves:100 cows and bull:100 cow ratios range from 6-25 bulls:100 cows.

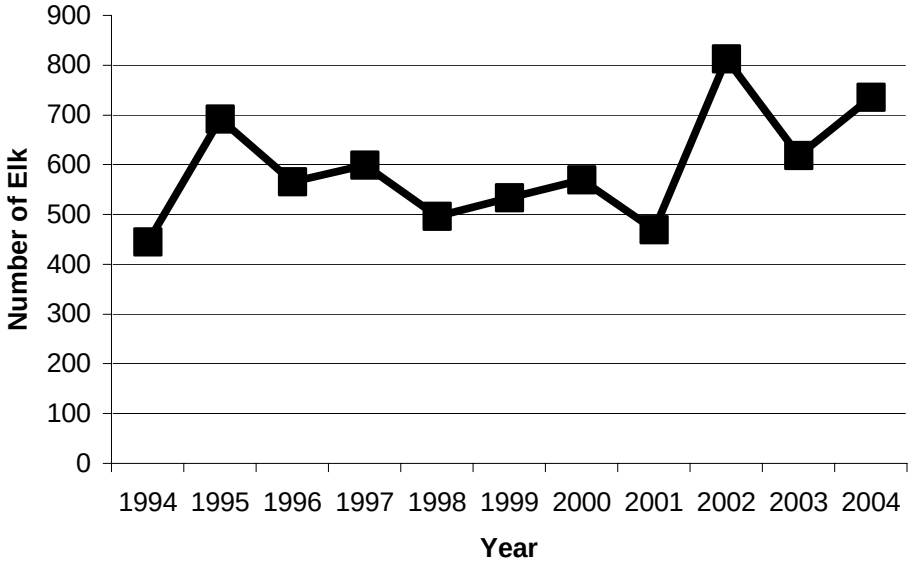


Figure 7. Number of elk counted during post-season aerial trend surveys in HDs 415 and 441 combined, 1994-2004.

Recreation Provided: During 1999-2001, this EMU provided an annual average of 47,356 days of hunting recreation to about 8,006 hunters. Thirty-two percent of the hunters and hunter days were in FWP Region 1, 41% of hunters and hunter days were in Region 2, and 27% of hunters and hunter days were in Region 4. The EMU also provides a diversity of elk viewing opportunities, ranging from viewing elk in high alpine and other wilderness settings during summer to viewing large concentrations of wintering elk on the Sun River and the Blackfoot-Clearwater WMAs.

Annual Elk Harvest: During 1999-2001, an annual average of 753 elk (222 antlerless and 531 bulls) was harvested in this EMU. Fifty-five percent of the antlerless harvest in this EMU was from Region 4, 43% from Region 2, and 2% from Region 1. Of bull harvest, 30% each was from Regions 1 and 4 and 40% was from Region 2. Generally, most hunters, hunter days, and harvest occur in HDs 281, 285, 422, and 442.

Accomplishments: FWP and private landowners cooperated in addressing conflicts involving elk on private land in the Ovando area and in portions of HDs 281 and 285. Accomplishments and solutions also applied to the Garnet EMU (HDs 283, 290, 291, and 292) and are more thoroughly discussed in the description of that EMU.

Masters theses in HDs 282/285 on elk migration patterns, responses to hunting pressure, vulnerability to harvest, habitat preferences, competition with sympatric deer populations, diets, and population estimation were completed since the 1992 Elk Plan (Hurley 1994, Baty 1995, and Ward 1999). Findings from these studies were implemented in the form of: (1) hunting district boundary changes to match herd-units; (2) an annual helicopter census using sightability methodology; (3) an area closure to motorized vehicles during hunting season from Morrell Mountain to Dunham Creek; (4) acquisition (by the Lolo Forest) of Plum Creek Timber Company parcels in an elk migration corridor; (5) input on timber sales, particularly in the Horseshoe Hills and Cave Creek areas; (6) acquisition of PCT inholdings within the Blackfoot-Clearwater Wildlife Management Area (BCWMA); and (7) cooperative forest management across FWP and DNRC lands on the BCWMA.

Plum Creek Timber Company enhanced elk habitat security independent of FWP in the mid-1990s by gating all but selected cost-share and collector roads. These gated roads were in addition to lands managed for walk-in hunting in the Block Management Program. Access can be accomplished by foot, horseback, and mountain bicycle. As a result of PCT's actions and Block Management walk-in areas, security for elk is widespread across HDs 130, 281, and 285, with low security areas for elk more localized in distribution. Road closures on public lands have also provided widespread security areas in HDs 130, 140, 141, 281, and 285. Hunting access also was enhanced since 1992 with the addition of the Dick Creek BMA.

The Reinoehl Ranch and FWP agreed in 1998 to protect important elk winter habitat and the traditional ranch operation with a conservation easement on a 600-acre portion of the ranch in HD 282. Significant elk habitat was also protected since 1992 in HDs 281, 282, and 285 with conservation easements granted by private landowners and acquired by the U. S. Fish and Wildlife Service (primarily).

Control of noxious weeds increased as a priority among FWP, private landowners, DNRC, the Forest Service, and the BLM in many of the HDs since 1992. Weed control efforts, particularly those directed toward spotted knapweed, have maintained or improved elk forage on thousands of treated acres in localized portions of this EMU. Perhaps more importantly, weed awareness among land managers is at an all time high, which could prevent the establishment of new exotic species in this EMU.

The Blackfoot-Clearwater WMA Citizens Advisory Council has remained active since 1992, providing valuable input on property and population management in relation to local community needs. Also during this period, the Blackfoot Challenge emerged as an exceptionally effective forum for coordinating resource management issues, concerns, and opportunities among local communities and agencies in the Blackfoot Valley. As a result, communication and cooperation between FWP and others in the Blackfoot has improved considerably on a variety of topics, including elk management, since 1992.

The occurrence of natural fire in the North Fork of the Sun River has improved elk habitat. We completed a livestock grazing plan review on the Ear Mountain WMA and significantly reduced grazing by horses on the Sun River WMA. FWP purchased a conservation easement on approximately 300 acres adjacent to the north edge of the Sun River WMA. Hunting season adjustments, increased communication with landowners, and more focused elk herding efforts have enhanced the climate surrounding game damage conversations if not the actual problems along the Rocky Mountain Front. Extended camping opportunities for hunters in the Beaver Creek area were maintained to help ensure adequate harvest.

Management Challenges: Motorized access for hunters was reduced by extensive road closures in the past decade. Road closures that PCT and the Forest Service implemented in the mid-1990s went beyond FWP objectives for maintaining and enhancing elk habitat security, bull survival, and walk-in hunting opportunities in many of the Region 1 and 2 HDs within the EMU. As a result, hunters have complained about lost vehicular access to favored hunting destinations. Although factors such as weather and variably restrictive hunting regulations were also involved, declining hunter participation as measured at the Bonner Check Station has coincided with the road closures.

Habitat management in an EMU with such a large percentage of designated Wilderness and roadless area presents challenges that ultimately influence population management. Many segments of the elk populations are influenced by the successional stages of vegetation in the wilderness and by roadless habitats. Much of this area is not at a successional stage of vegetation that is conducive to producing abundant forage and dense elk populations. Extensive habitat-altering events, such as forest fires, must occur before increased elk populations could be realized. Some natural fires have occurred in appropriate areas recently, but positive results for elk may not occur for 10 years or more.

A serious threat to hunting and elk population management in HDs 130, 281, 282, and 285 is the future disposition and management of hundreds of thousands of acres in Plum Creek Timber Company ownership. PCT lands historically have been open to the public,

and hunters tend to take this privilege for granted. However, in recent years PCT has been marketing parcels for sale, and there are no guarantees that PCT will remain a landowner in this EMU. The loss of hunting access on PCT lands, and possible concurrent loss of elk habitat, would eliminate important public hunting opportunities for elk in the EMU. FWP and others have been in discussion with PCT to consider ways of perpetuating elk habitat and public access. Currently, the Blackfoot Challenge, an organization of public agencies and private landowners in the Blackfoot Watershed, is working with PCT and The Nature Conservancy on strategies for the future disposition of certain PCT lands in the middle and upper watershed, with an effort to perpetuate historic land uses and lifestyles. In the Swan Valley (HD 130), the Swan Lands Coordination Committee comprised of private, state, federal, corporate, and nonprofit interests is also investigating alternatives/opportunities with regards to PCT lands and overall development in the valley as well. The scope of current discussions with both groups would affect a fraction of PCT lands in this EMU.

Calf:100 cow ratios have declined over the past decade in much of this EMU. Decreased recruitment rates: (1) reduce numbers of antlered bulls available for harvest, (2) reduce opportunities to prescribe antlerless hunting on publicly accessible lands, (3) temper increases of elk and game damage on and around private lands, and (4) reduce the capacity of heavily exploited population-units to recover from severe winters or other additive mortality. Public concern has centered on the potentially increasing role of predation in the past decade. FWP initiated a multi-year study of elk calf mortality rates just south of HD 281 in 2002 to identify causes of decreased recruitment rates.

Potential impacts of large predators such as mountain lions, black bears, grizzly bears, and wolves need to be taken into account in elk population management. The combined impacts of these predators will be difficult to predict and will vary among habitats and through time. Black bears, grizzly bears, and mountain lions are common throughout the EMU. Since 1992, at least 2 wolf packs have been present in the EMU and dispersing individual wolves are observed throughout the EMU.

Snowmobile use of elk winter ranges continues to be a problem. Despite the cooperative efforts of the Lincoln snowmobile club and closures on BLM lands in the Marcum and Kershaw winter ranges, many snowmobile users continue to recreate on elk winter ranges in the Lincoln Valley. Snowmobile activity on elk winter ranges can lead to greater energy expenditures by elk, displacement to less productive habitat, and greater elk use of private lands.

Extremely limited hunter access to private property in HD 422 makes control of elk populations there difficult. Several large key properties allow essentially no harvest. Some private properties provide elk "refuges" that reduces elk presence and management/harvest potential on neighboring public properties. Additionally, a significant number of elk migrate from west of the Continental Divide only after the general fall hunting season. We have experienced the same difficulty with the "refuge" effect and varying levels of hunter access and in trying to conduct late hunts.

Overuse of forage by elk resulting in degraded forage conditions has long been a concern on the SRWMA and adjacent areas of the National Forest.

Elk depredation occurs on private lands across the East Front of the Rockies. Most of this elk use is on standing pasture or crop, especially at green-up or seed ripe. The most acute problem is on private lands adjacent to the SRWMA, where tolerance of elk is extremely limited. Other areas of elk depredation include Elk and Smith Creek and the Sunrise/Sunset area, where large numbers of elk from west of the Continental Divide spend winter.

HD 415 lies adjacent to the Blackfeet Indian Reservation, where different traditions, regulations, and philosophies apply. Cooperative efforts at managing elk should be initiated between FWP and the Blackfeet Fish and Wildlife Department.

Hunter access to elk on private lands in HD 441 continues to be a management problem, resulting in less than desired harvest. Although elk harvest on the public lands portion of the hunting district continues to be important, it is increasingly obvious that the elk herd will continue to increase unless hunters have more and better access to private land.

Population Monitoring: Mid- to late-winter aerial surveys are conducted on most winter ranges in the EMU to obtain trends in total elk numbers and sex and age classifications. Because winter ranges in HDs 140,141, 150, and 151 are heavily timbered, neither fixed-wing, nor helicopter trend flights are an attempt to obtain complete counts of elk on all winter range. Only occasional sex/age classifications from the ground are obtained in HD 130.

Post-season aerial trend counts are conducted in HD 281 by fixed-wing aircraft and in HDs 282/285 by helicopter. Total numbers and sex and age are recorded. Based on previous work, helicopter counts are adjusted by sightability calculations.

Post-season aerial trend counts are conducted in HD 422 by fixed-wing aircraft and in HDs 424, 425, and 442 by a combination of fixed-wing aircraft and helicopter. Generally, the helicopter is used to count and classify bulls. Winter calf:100 cow ratios are determined by classifications from the ground on the SRWMA. During summer, we conduct a helicopter survey of summer range to obtain calf:100 cow ratios and trend in total numbers.

Post-season aerial trend counts of elk (usually in March) are conducted in HDs 415 and 441 by helicopter in conjunction with the mule deer trend survey. Locations of observed elk groups are recorded with a GPS unit. We classify elk to sex and age category by surveys from the ground during mid- to late-winter.

SUMMARY OF PUBLIC COMMENT

Public input provided for the 1992 Elk Management Plan for this EMU came from individuals and organizations, spanned a wide spectrum of viewpoints, and is listed below:

- The most frequently expressed topic of concern pertained to elk habitat relationships and habitat management. The public expressed a desire for additional habitat management actions (such as prescribed fire in the Wilderness and on winter ranges) and expanded wintering areas along the East Front and in the Blackfoot-Clearwater drainages. Maintenance of west side winter ranges was also a concern.
- The public believed that more attention should be directed to private landowners that support wintering elk, with the objectives of minimizing game damage, promoting elk population increases, and expanding hunting opportunity on private lands.
- The issue of competition between archers and gun hunters for bull elk surfaced, primarily in hunting districts outside the Wilderness.
- The public voiced concern about potential competition between early backcountry rifle hunters and general season hunters along the periphery of the Wilderness, competition between outfitted and non-outfitted hunters, and overuse of the Wilderness by commercial interests.
- Although hunters expressed a desire to hunt elk for meat, they also wanted to harvest older bulls. They frequently commented that too much hunting pressure was applied on bigger bulls. However, hunters also wanted to maintain a five-week general big game hunting season, even if that resulted in survival of fewer bulls.
- The public expressed a preference for land management actions (such as road management and enhancement of elk habitat) rather than more restrictive regulations to reduce elk vulnerability during hunting season.
- Concern was expressed about impacts of snowmobile use in proximity to elk winter ranges and for elk security needs to be fully considered in the planning of commercial snowmobile recreation developments.
- Public comment supported use of A-7 licenses to regulate the antlerless harvest and brow-tined bull (BTB) hunting regulations (with the perception that these regulations would result in increased numbers of older bulls postseason).
- Public comments indicated opposition to permit-only hunting, except for circumstances involving migratory elk herds and publicly owned elk winter ranges (such as in HDs 282 and 425).
- The issues of wolf recovery and potential abolishment of the preserve status of the Sun River Game Preserve were controversial, subject to the full spectrum of public opinion.

There was continuing interest in managing for older bulls. Interest was also expressed about the recent fires and their effects on elk habitat.

MANAGEMENT GOAL

Manage elk populations in a healthy condition at levels commensurate with available habitat on public and private land to provide a variety of recreational experiences, including hunting and general enjoyment by the public. FWP will emphasize managing for mature bull elk available for hunting and viewing in a backcountry setting.

HABITAT OBJECTIVES

1) Maintain the current distribution of elk over three million acres of habitat.
2) Increase private landowner tolerance for wintering elk and improve management of critical elk winter range to benefit elk.

HABITAT MANAGEMENT STRATEGIES

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

- Provide input and cooperate in the planning of timber sales, road management, recreational management, habitat projects, grazing, and enforcement across the entire EMU.
- Participate with Plum Creek Timber Company, other corporate interests, and state and federal agencies in perpetuating elk/wildlife habitat and traditional public uses of those lands.
- Use natural and prescribed fire on Wilderness and roadless public lands to improve elk habitat.
- Maintain elk habitat security and associated walk-in hunting opportunities (via enforcement of existing road closures and retention/recruitment of effective cover blocks) in selected areas of HDs 281 and 285.
- Complete ongoing 50th Anniversary Project to transfer some 7,800 acres of PCT inholdings within the Blackfoot-Clearwater WMA into public ownership.
- Cooperate as a landowner partner in the work of organized weed management groups in areas of FWP ownership, and continue to cooperate with the counties and other land managers in the development of integrated strategies to improve the prevention and control of exotic, invasive plants.
- Participate with PCT, community working groups, and other agencies in continuing talks to perpetuate elk/wildlife habitat and traditional public uses on PCT lands in the future.
- Review housing and other development proposals for potential impacts to elk and elk management and provide input where necessary to local government authorities responsible for development approval.
- Continue to monitor and evaluate range conditions on the Sun River WMA and develop appropriate management responses, which may include reduced elk numbers.
- Continue to pursue a prescribed burning program in HD 415 by the USFS to help open up dense stands of lodgepole pine and Douglas fir to provide additional year-round and winter elk habitat. Efforts to date have met considerable public resistance.
- Pursue development of a habitat management agreement between the USFS, Blackfeet Tribe, and FWP.

GAME DAMAGE STRATEGIES

FWP will pursue harvest strategies that help alleviate game depredation by reducing elk populations where chronic problems occur. Some of the strategies that may be utilized include:

- Help landowners and others in local communities with chronic game damage to work cooperatively on elk management goals and strategies that can be applied to the elk population unit across property boundaries.
- Prescribe and/or develop antlerless harvest pressure in excess of estimated calf recruitment rates.
- Apply strategies, such as the HD 298 regulation, that alleviate the legitimate concerns of private landowners with managing the general hunting public.

ACCESS STRATEGIES

- Non-motorized access for hunters must be maintained in the wilderness areas of this EMU by assuring trail access on public lands outside of these areas.
- Continue to cooperate and review USFS road management and travel plans to maintain reasonable and effective public hunting access.
- Identify important points of access to public lands and provide recommendations to the appropriate land management authority.
- Identify opportunities to provide points of access through private lands through the Access Montana program.
- In some HDs within the EMU, FWP will work with PCT and other affected landowners to reopen selected access roads in key locations (outside of designated elk security areas) to motorized access during the hunting season.
- Work with public and private entities to ensure hunting access when land exchanges and/or developments occur.
- Monitor and evaluate potential conflict between outfitted and non-outfitted hunters on public lands and assist in development of any USFS programs that might reduce conflict.

POPULATION OBJECTIVES

REGION ONE:

Due to heavily forested habitats associated with the Region 1 portion of the EMU, the majority of the HDs there have no elk population trend surveys associated with them. Aerial trend survey areas in HDs 140 and 150 account for only a portion of the available elk winter range in these districts and historically, counts have been highly variable. Counts from survey areas in Region 1 portions of the EMU must be interpreted over a long series of years rather than used to respond to year-to-year changes in observed numbers.

HDs 130, 140, and 141: Maintain an average (3-year) of 225 elk observed during post-season aerial surveys.

HDs 150 and 151: Maintain an average (3-year) of 400 elk observed during post-season aerial surveys.

REGION TWO:

HD 281:

1) Maintain 500-700 elk observed during post-season aerial surveys. Objectives by subunits: 200-300 elk in Ovando Mountain area from fixed-wing aerial surveys; 150-200 elk in Marcum-Kershaw area; and 150-200 elk in the Beaver-Keep Cool area.
2) Maintain less than 200 elk observed on private ranches in HD 281 during post-season aerial trend surveys.
3) Maintain at least 15 bulls:100 cows or 8% bulls among total elk observed during post-season aerial trend surveys.

HDs 282 and 285:

1) Maintain 900 - 1,100 elk observed during post-season aerial surveys.
2) Maintain less than 100 elk observed on private ranches during post-season aerial trend surveys in HD 285.
3) Maintain at least 20 bulls:100 cows observed during post-season aerial trend surveys.
4) Maintain the percent of bulls greater than 3-years-old (as indicated by antler size) observed during post-season aerial trend surveys in HD 282 at 25% or more.

REGION FOUR:

HDs 424, 425, and south half of 442:

1) Maintain the total number of elk observed during post-season aerial trend surveys within 10% of 2,500 elk (2,250-2,750 elk). No more than 2,000 observed elk should be on the SRWMA.
2) Maintain at least 200 brow-tined bulls observed during post-season aerial trend surveys.
3) Maintain 15% of harvested bulls at least 6-years-old (as measured at the Augusta check station).

North half of HD 442: see Teton EMU

HD 422:

1) Maintain the total number of elk observed during post-season aerial trend surveys within 10% of 500 elk (450-550 elk).
2) Maintain at least 5 bulls:100 cows observed in post-season aerial trend surveys.

HDs 415 and 441:

1) Maintain the total number of elk observed during post-season aerial trend surveys in HD 441 within 20% of 500 elk (400-600 elk) and maintain the number of elk observed in HD 415 within 20% of 200 elk (160-240 elk).
2) Maintain 15 bulls:100 cows observed during post-season aerial trend surveys in both HDs 415 and 441.

REGULATION PACKAGES

HDs 130, 140, and 141:

Six-week archery regulation for brow-tined bull/antlerless elk EXCEPT, see Restrictive Regulation for antlerless elk.

Antlerless:

The Standard Regulation is: brow-tined bull/antlerless regulation during the general season for **youth ages 12-14 ONLY**.

The Standard Regulation will be recommended if: the most recent 3-year running average for number of elk counted during the post-season aerial trend survey in HD 140 is at least 225 elk.

The Liberal Regulation is: limited antlerless permits for the 5-week general season AND, brow-tined bull/antlerless elk during the general season for **youth ages 12-14**.

The Liberal Regulation will be recommended if: the most recent 3-year running average for number of elk counted during the post-season aerial trend survey in HD 140 is at least 450 elk

The Restrictive Regulation is: NO archery or general season hunting for antlerless elk.

The Restrictive Regulation will be recommended if: the most recent 3-year running average for number of elk counted during the post-season aerial trend survey in HD 140 is less than 115 elk

Antlered:

A 5-week general season brow-tined bull regulation will be recommended for all packages.

HDs 150 and 151:

Antlerless:

The Standard Regulation is: 1-week, early September archery season (prior to 15 September) for brow-tined bull/antlerless elk AND, 5 days to 2 weeks of general season antlerless elk regulations.

The Standard Regulation will be recommended if: the most recent 3-year running average for number of elk counted during the post-season aerial trend survey in HD 150 is at least 400 elk AND, aerial trend counts on winter ranges surrounding the wilderness area (Regions 2 and 4) indicate stable to increasing populations.

The Liberal Regulation is: 1-week, early September archery season (prior to 15 September) for brow-tined bull/antlerless elk AND, more than 2 weeks of general season antlerless elk regulations.

The Liberal Regulation will be recommended if: the most recent 3-year running average for number of elk counted during the post-season aerial trend survey in HD 150 is at least 800 elk OR, trend counts on winter ranges surrounding the wilderness areas (Region 2 and 4) indicate a strongly increasing population, and FWP believes that increased antlerless harvest in the wilderness areas would help address objectives for those winter ranges.

The Restrictive Regulation is: NO hunting for antlerless elk.

The Restrictive Regulation will be recommended if: the most recent 3-year running average for number of elk counted during the post-season aerial trend survey in HD 150 is less than 200 elk.

Antlered:

The Standard Regulation is: 1-week, early September archery season (prior to 15 September) for brow-tined bull/antlerless elk and a 10-week season for brow-tined bulls beginning 15 September will be recommended for **all** packages. During many years hunting is effectively closed down by winter storms before the end of the 10-week period).

HD 280:

Antlerless:

The Standard Regulation is: 1-week, early September archery season (prior to 15 September) for brow-tined bull/antlerless elk AND, moderate numbers of general season antlerless permits (± 150).

The Standard Regulation will be recommended if: numbers of elk observed during post-season aerial trend surveys in HDs 281, 282, 285, and 422 are within their objective range (see objectives) AND, calf:100 cow ratios observed during post-season aerial trend surveys in HDs 281, 282, 285, and 422 are more than 20:100.

The Liberal Regulation is: 1-week, early September archery season (prior to 15 September) for brow-tined bull/antlerless elk AND, high numbers of general season antlerless permits (more than 200) OR, 1-week of general season antlerless elk regulations.

The Liberal Regulation will be recommended if: numbers of elk observed during post-season aerial trend surveys in HDs 281, 282, 285, and 422 are above their objective range or more than 20% above the point objective (see objectives) AND, calf:100 cow ratios observed during post-season aerial trend surveys in HDs 281, 282, 285, and 422 are more than 30:100 for 2 consecutive years.

The Restrictive Regulation is: 1-week, early September archery season (prior to 15 September) for brow-tined bull/antlerless elk AND, NO-to-low numbers of antlerless permits (less than 100).

The Restrictive Regulation will be recommended if: numbers of elk observed during post-season aerial trend surveys in HDs 281, 282, 285, and 422 are below their objective range or more than 20% below the point objective (see objectives) and restrictive regulations in those districts will not accomplish the objectives without a more restrictive regulation in HD 280 OR, calf:100 cow ratios observed during post-season aerial trend surveys in HDs 281, 282, 285, and 422 are less than 20:100 for 2 consecutive years.

Antlered:

The Standard Regulation is: 1-week, early September archery season (prior to 15 September) for brow-tined bull/antlerless elk and a 10-week season for brow-tined bulls beginning 15 September will be recommended for **all** packages. During many years hunting is effectively closed down by winter storms before the end of the 10-week period).

HD 281:

Antlerless:

The Standard Regulation is: 6-week archery regulation for brow-tined bull/antlerless elk and moderate numbers of general season antlerless permits (± 150).

The Standard Regulation will be recommended if: number of elk observed during post-season aerial trend surveys is between 500 and 700 elk AND, more than 20 calves:100 cows are observed during post-season aerial trend surveys.

The Liberal Regulation is: 6-week archery regulation for brow-tined bull/antlerless elk AND, high numbers of general season antlerless permits (more than 200) AND, unlimited numbers of A-7 antlerless licenses for private-land portions of districts with chronic, increasing game damage problems, and where impacts of high harvest rates on publicly accessible elk herd-units are minimized.

The Liberal Regulation will be recommended if: number of elk observed during post-season aerial trend surveys is more than 700 elk AND, more than 30 calves:100 cows are observed during post-season aerial trend surveys.

The Restrictive Regulation is: 6-week archery regulation for spike bull/antlerless elk and no or low numbers of general season antlerless permits (less than 100).

The Restrictive Regulation will be recommended if: number of elk observed during post-season aerial trend surveys is less than 500 elk OR less than 20 calves:100 cows are observed during post-season aerial trend surveys for 2 consecutive years.

Antlered:

The Standard Regulation is: 6-week archery regulation for brow-tined bull/antlerless elk and 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 15 bulls:100 cows or, bulls are at least 8% of total elk observed.

The Restrictive Regulation is: 6-week archery regulation for spike bull/antlerless elk and 5-week spike bull only general season regulation with limited permits for either-sex elk.

The Restrictive Regulation will be recommended if: the bull:100 cow ratio observed during post-season aerial trend surveys is less than 15 bulls:100 cows or, bulls are less than 8% of total elk observed for 2 consecutive years.

HDS 282 and 285:

Antlerless:

The Standard Regulation is: 6-week archery season for either-sex elk and moderate numbers of general season antlerless permits or A-7 licenses in HDs 282 (75-125) and 285 (150-200).

The Standard Regulation will be recommended if: number of elk observed during post-season aerial trend surveys in HD 282 is between 900-1,100 elk AND, more than 20 calves:100 cows are observed during post-season aerial trend surveys in HD 282.

The Liberal Regulation is: 6-week archery regulation for either-sex elk and high numbers of A-7 licenses in HD 282 (more than 125) and antlerless or either-sex permits in HD 285 (more than 200), possibly valid for groups of hunting districts including HD 285 AND, unlimited numbers of A-7 antlerless licenses for private-land portions of districts with chronic, increasing game damage problems, and where impacts of high harvest rates on publicly accessible elk herd-units are minimized.

The Liberal Regulation will be recommended if: number of elk observed during post-season aerial trend surveys in HD 282 is more than 1,100 elk.

The Restrictive Regulation is: 6-week archery regulation for brow-tined bull/antlerless elk and no or low numbers of general season antlerless permits or A-7 licenses (less than 75 permits in HD 282 and less than 150 permits in HD 285).

The Restrictive Regulation will be recommended if: number of elk observed during post-season aerial trend surveys in HD 282 is less than 900 elk OR, if less than 1,000 elk are observed during the post-season survey AND, less than 20 calves:100 cows are observed during post-season aerial trend surveys in HD 282 for 2 consecutive years.

Antlered:

The Standard Regulation is: 6-week archery regulation for either-sex elk and 5-week general season antlered bull regulation in HD 285 AND, 1-3 either-sex permits in HD 282.

The Standard Regulation will be recommended if: the bull:100 cow ratio observed during post-season aerial trend surveys is at least 20 bulls:100 cows. Either-sex permits in HD 282 will be recommended if, additionally, at least 25% of the bulls observed during post-season aerial surveys are classified as 3-years-old or older.

The Restrictive Regulation is: 6-week archery regulation for brow-tined bull/antlerless elk and 5-week general season brow-tined bull regulation in HD 285. No general season hunting for bulls in HD 282.

The Restrictive Regulation will be recommended if: the bull:100 cow ratio observed during post-season aerial trend surveys is less than 20 bulls:100 cows for 2 consecutive years.

HD 422:

Antlerless:

The Standard Regulation is: 6-week either-sex archery regulation and 5-week general season either-sex regulation AND, limited antlerless permits valid from the end of the general season to 15 February.

The Standard Regulation will be recommended if: number of elk observed during post-season aerial trend surveys is within 10% of 500 elk (450-550 elk).

The Liberal Regulation is: 6-week either-sex archery regulation and **1.)** 5-week general season either-sex regulation AND, limited antlerless permits valid from the end of the general season to 15 February AND, unlimited, over-the-counter A-9/B-12 antlerless licenses (B-tags) valid on

private and DNRC lands during archery and the general season and also when paired with limited late permits OR; **2.)** 5-week antlerless elk ONLY AND, limited antlerless permits valid from the end of the general season to 15 February AND, unlimited, over-the-counter A-9/B-12 antlerless licenses (B-tags) valid on private and DNRC lands during archery and the general season and also when paired with limited late permits.

Liberal Regulation **1.) (above)** will be recommended if: number of elk observed during post-season aerial trend surveys is more than 550 elk.

Liberal Regulation **2.) (above)** will be recommended if: number of elk observed during post-season aerial trend surveys remains above 550 elk despite 2 consecutive years of liberal antlerless harvest package 1.) (above).

The Restrictive Regulation is: 6-week brow-tined bull/antlerless archery regulation and 5-week general season brow-tined bull/antlerless regulation.

The Restrictive Regulation will be recommended if: number of elk observed during post-season aerial trend surveys is less than 450 elk for 2 consecutive years.

Antlered:

The Standard Regulation is: 6-week either-sex archery regulation and 5-week either-sex general season regulation.

The Standard Regulation will be recommended if: the bull:100 cow ratio observed during post-season aerial surveys is at least 5 bulls:100 cows.

The Restrictive Regulation is: 6-week brow-tined bull/antlerless archery regulation and 5-week general season brow-tined bull/antlerless regulation.

The Restrictive Regulation will be recommended if: the bull:100 cow ratio observed during post-season aerial surveys is less than 5 bulls:100 cows for 2 consecutive years.

HDs 424 and 442:

Antlerless:

The Standard Regulation is: 6-week brow-tined bull/antlerless archery regulation and antlerless elk ONLY during the first 4 days of the general season. THEN, brow-tined bull/antlerless regulation until quotas for all elk harvested on a general license in HDs 424 and/or HD 442 (intended to maintain population size) are checked through the Augusta check station. NO harvest of antlerless elk after respective quota(s) are reached in either or both hunting district(s). Brow-tined bulls remain legal from quota closure to the end of the general season. Standard quotas have been about 50 elk in HD 424 & 400 elk in HD 442. A-9/B-12 antlerless licenses (B-

tags) valid during the archery and general seasons on private and state DNRC lands may also be recommended.

The Standard Regulation will be recommended if: number of elk observed during post-season surveys in HDs 424, 425 and 442 is between 2,250 and 2,750 elk.

The Liberal Regulation is: 6-week brow-tined bull/antlerless archery regulation and antlerless elk ONLY during the first 4 days of the general season. THEN, brow-tined bull/antlerless elk until increased quotas (intended to reduce population size) of all elk harvested on a general license in HDs 424 and/or HD 442 are checked through the Augusta check station. NO harvest of antlerless elk after respective quota(s) reached in either or both hunting district(s). Brow-tined bulls remain legal from quota closure to the end of the general season. A-9/B-12 antlerless licenses (B-tags) valid during the archery and general seasons on private and state DNRC lands may be recommended.

The Liberal Regulation will be recommended if: number of elk observed during post-season surveys in HDs 424, 425 and 442 is greater than 2,750 elk.

The Restrictive Regulation is: 6-week brow-tined bull/antlerless archery regulation and antlerless elk ONLY during the first 4 days of the general season. THEN, brow-tined bull/antlerless elk until reduced quotas (intended to foster population growth) of all elk harvested on a general license in HDs 424 and/or HD 442 are checked through the Augusta check station. NO harvest of antlerless elk after respective quota(s) reached in either or both hunting district(s). Brow-tined bulls remain legal from quota closure to the end of the general season.

The Restrictive Regulation is will be recommended if: number of elk observed during post-season surveys in HDs 424, 425 and 442 is less than 2,250 elk for 2 consecutive years.

Antlered:

The Standard Regulation is**:** 6-week brow-tined bull/antlerless archery regulation and antlerless elk ONLY during the first 4 days of the general season. THEN, brow-tined bull/antlerless elk until quotas of all elk harvested on a general license in HDs 424 and/or HD 442 are checked through the Augusta check station. NO harvest of antlerless elk after respective quota(s) reached in either or both hunting district(s). Brow-tined bulls remain legal from quota closure to the end of the general season.

The Standard Regulation will be recommended if: at least 200 brow-tined bulls are observed during post-season aerial surveys and at least 15% of harvested bulls are at least 6 years old.

Restrictive Regulation is: 3-week brow-tined bull/antlerless archery regulation and antlerless elk ONLY during the first 4 days of the general season. THEN, brow-tined bull/antlerless elk until quotas of all elk harvested on a general license in HDs 424 and/or HD 442 are checked through

the Augusta check station. All elk harvest will close after respective quota(s) reached in either or both hunting district(s).

The Restrictive Regulation will be recommended if: less than 200 brow-tined bulls are observed during post-season surveys OR, less than 15% of harvested bulls are at least 6 years old for 2 consecutive years.

HD 425:

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

Antlerless:

The Standard Regulation is: 5-week general season antlerless regulation (Sun River WMA excluded) AND, limited antlerless permits valid throughout the HD for the week before the general season and the first two weeks of the general season (3 sets of permits, each set valid for one week—permit levels intended to maintain population).

The Standard Regulation will be recommended if: number of elk observed during post-season surveys in HDs 424, 425 and 442 is between 2,250 and 2,750 elk.

The Liberal Regulation is: 5-week general season antlerless regulation (Sun River WMA excluded) AND limited antlerless permits valid throughout the HD (including the Sun River WMA) for the week before the general season and the first two weeks of the general season (3 sets of permits, each set valid for one week—permit levels intended to reduce the elk population). Limited A-9/B-12 antlerless licenses (B-tags) valid during the archery and general seasons on private and state DNRC lands may also be recommended.

The Liberal Regulation will be recommended if: number of elk observed during post-season surveys in HDs 424, 425 and 442 is above 2,750 elk.

The Restrictive Regulation is: 5-week general season antlerless regulation (Sun River WMA excluded) AND, limited antlerless permits throughout the district for the week before the general season and the first two weeks of the general season (3 sets of permits, each set valid for one week—reduced permit levels intended to foster population growth).

The Restrictive Regulation will be recommended if: number of elk observed during post-season surveys in HDs 424, 425 and 442 is below 2,250 elk for 2 consecutive years.

Antlered:

The Standard Regulation is: limited either-sex permits valid for weekly intervals during the general season (not valid on the Sun River WMA).

The Standard Regulation will be recommended if: at least 200 brow-tined bulls are observed during post-season surveys and at least 15% of harvested bulls are at least 6 years old (as measured at the Augusta check station).

The Restrictive Regulation is: no general season opportunity for bulls.

The Restrictive Regulation will be recommended if: less than 200 brow-tined bulls are observed during post-season surveys OR, less than 15% of harvested bulls are at least 6 years old for 2 consecutive years.

HD 415:

Six-week either-sex archery regulation.

Antlerless:

The Standard Regulation is: first week of the general season either-sex regulation, remainder of season any bull regulation.

The Standard Regulation will be recommended if: the number of elk observed during post-season aerial trend surveys is within 20% of 200 elk (160-240 elk).

The Liberal Regulation is: first 2-weeks (up to the full 5-weeks) of general season either-sex regulation.

The Liberal Regulation will be recommended if: the number of elk observed during post-season aerial trend surveys is more than 240 elk.

The Restrictive Regulation is: limited antlerless permits.

The Restrictive Regulation will be recommended if: the number of elk observed during post-season aerial trend surveys is less than 160 elk for 2 consecutive years.

Antlered:

The Standard Regulation is: first week of the general season either-sex regulation, remainder of season any bull regulation.

The Standard Regulation will be recommended if: at least 15 bulls:100 cows are observed during post-season aerial trend surveys.

The Restrictive Regulation is: limited permits for antlered bulls.

The Restrictive Regulation will be recommended if: less than 15 bulls:100 cows are observed during post-season aerial trend surveys for 2 consecutive years.

HD 441:

Six-week either-sex archery regulation.

Antlerless:

The Standard Regulation is: limited antlerless permits (± 150).

The Standard Regulation will be recommended if: the number of elk observed during post-season aerial trend surveys is within 20% of 500 elk (400-600 elk).
The Liberal Regulation is: either-sex regulation for a portion of the general season (up to the full 5-weeks).

The Liberal Regulation will be recommended if: the number of elk observed during post-season aerial trend surveys is more than 600 elk.

The Restrictive Regulation is: few limited antlerless permits (less than 100).

The Restrictive Regulation will be recommended if: the number of elk observed during post-season aerial trend surveys is less than 400 elk for 2 consecutive years.

Antlered:

The Standard Regulation is: an antlered bull regulation for wilderness portion of the HD and limited permits for antlered bulls in the remainder of the HD.

The Standard Regulation will be recommended if: at least 15 bulls:100 cows are observed during post-season aerial trend surveys.

The Restrictive Regulation is: limited permits for antlered bulls in the entire HD.

The Restrictive Regulation will be recommended if: less than 15 bulls:100 cows are observed during post-season aerial trend surveys for 2 consecutive years.