

**DRAFT
ENVIRONMENTAL ASSESSMENT**



**FLEECER WILDLIFE MANAGEMENT AREA
GRAZING LEASE RENEWAL
December 2018**

I. PROPOSED ACTION DESCRIPTION

1. Type of proposed state action: Montana Fish, Wildlife & Parks (FWP) proposes to maintain a coordinated grazing program on the Fleecer Wildlife Management Area (WMA) for a 4-year term to extend May 2019 through October 2022. The program, which began in 1982 and has been modified over the years to better suit habitat objectives, would consist of a spring grazing exchange agreement (up to 500 Animal Unit Months [AUMs]) with Fleecer Cattle Company (formerly Smith 6 Bar S Livestock) and a separate fall fee-grazing agreement (94 AUMs) with Fleecer Cattle Company and Russel Dupuis. Spring grazing would occur every other year as intensive grazing in a pasture dominated by smooth brome. Fall grazing would occur in a rest-rotation fashion on the remaining three pastures of Fleecer WMA. Fleecer Cattle Company would rest one pasture annually in exchange for spring grazing on the WMA.

This grazing program would involve 3,700 acres of FWP land, 875 acres of Montana Department of Natural Resources and Conservation (DNRC) land leased by FWP, 1,920 acres of Fleecer Cattle Company land, and 640 acres of DNRC land leased by Fleecer Cattle Company. In addition, it would dovetail with the adjacent Forest Service grazing system of 6,080 acres. Total acreage involved would be 13,215 acres.

The Fleecer WMA Coordinated Grazing System would provide landscape-level management of elk winter range across ownerships and demonstrates the compatibility of livestock production and wildlife/recreation-based values.

2. Agency authority for the proposed action:

FWP has the authority under Section 87-1-210, M.C.A. to protect, enhance, and regulate the use of Montana’s fish and wildlife resources for public benefit now and in the future. Any consideration of continued livestock grazing on the Fleecer WMA would have to be consistent with the management goals and objectives as outlined in the Fleecer WMA Management Plan (draft, 1992). FWP is additionally required to conduct an environmental assessment for all leases under the FWP Land Lease-Out Policy, in accordance with Section 87-1-303, M.C.A. FWP Commission must also approve all grazing leases on Wildlife Management Areas owned by FWP.

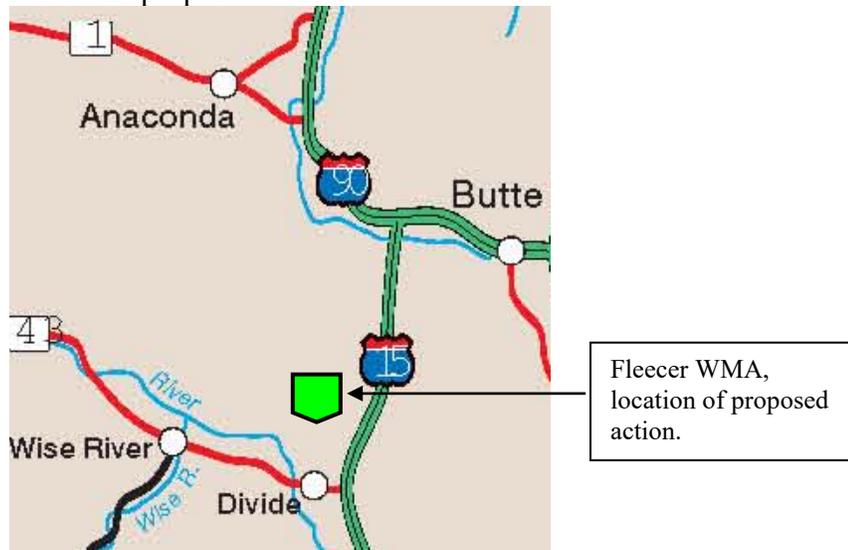
3. Anticipated Schedule:

Public Comment Period: December 28, 2018 through January 28, 2019
Presented to the FWP Commission for Approval: April 2019
Proposed Leases in Effect: May 2019

4. Location:

The Fleecer WMA is located in Silver Bow County in Southwestern Montana (Figure 1). It is situated on the southeastern face of Fleecer Mountain, approximately 20 miles southwest of Butte, Montana near the town of Divide. This WMA borders lands administered by the Beaverhead-Deerlodge National Forest (FS), Bureau of Land Management (BLM), DNRC, and private lands owned by Fleecer Cattle Company. The WMA encompasses parts of Township 1 South, Range 9 West and Township 1 North, Range 9 West.

Figure 1. General Location of the proposed action



5. Project size:	<u>Acres</u>		<u>Acres</u>
(a) Developed:		(d) Floodplain	__0
Residential	__0		
Industrial	__0	(e) Productive:	
(existing shop area)		Irrigated cropland	__0
(b) Open Space/Woodlands/ Recreation	__0	Dry cropland	__0
(c) Wetlands/Riparian Areas	<u>900</u>	Forestry	5,460
		Rangeland	<u>6,855</u>
		Other	__0

6. Costs and Jurisdictions:

- (a) Permits: Grazing lease with DNRC
- (b) Costs to FWP: \$25 Annual Pasturing Agreement fee to DNRC every 2 out of 3 years when cattle are in the pasture with DNRC land; anticipated 8 staff-days annually devoted to managing the Fleecer Coordinated Grazing Program.
- (c) Other Overlapping or Additional Jurisdictional Responsibilities: None

7. Need for Proposed Action:

Historical Background

In 1962, FWP acquired the Fleecer Wildlife Management Area in order to expand elk winter habitat provided by Forest Service (FS) lands that border the property to the west. Since the 1930's, the area had received intensive year-round grazing from domestic livestock including horses, cattle, and sheep. As a result, livestock grazing was excluded from the WMA from 1962 to 1982. The FS agreed to delay making any increases to livestock on the adjacent Fleecer allotment during this time until sufficient time could be given to study the needs of wildlife over the entire Fleecer elk winter range.

One of the goals for the management of the Fleecer WMA was to use coordinated resource management across ownerships to alleviate conflict between wildlife and agricultural land use. FWP, FS, and the neighboring Smith 6 Bar S Livestock ranch initiated a program in 1982 to address conflicts between elk and cattle on elk winter range. They combined research with sound range management principles in order to design a grazing system with the following six objectives:

1. Manage the entire elk winter range in the Fleecer area as one unit, regardless of ownership.
2. Increase elk populations to potential on public land ownerships.
3. Minimize impact of winter and spring use by elk on private land by providing adequate habitat on public lands.
4. Maintain soils, vegetation, and riparian zones in good or better condition on public and private lands.
5. Increase cattle grazing potential.
6. Maintain optimum level of livestock production on Smith 6 Bar S Livestock lands.

The Fleecer Coordinated Grazing Program was fully implemented in 1987 after some adjustments to the initial design and has been in use since. Decision Notices to maintain the grazing program were issued and approved by the FWP Commission in 1998, 2010 and 2013. Some changes have been made over the past 36 years to better manage range conditions.

The Fleecer Coordinated Grazing Program has demonstrated the compatibility of livestock production and wildlife/recreation-based economies. The designers of this program have been recognized at the state and national level for their abilities at mitigating wildlife and livestock conflicts through a sound grazing system design. The program is well known and has served as a template for other cooperative grazing systems on WMAs across the state.

The Fleecer Coordinated Grazing Program has followed rest-rotation grazing principles described by Hormay (1970). The complete grazing program originally consisted of 12 pastures: six on FS, three on FWP, and three on Fleecer Cattle Company land. Nine of the 12 pastures provide winter habitat for elk: three each on FWP, Fleecer Cattle Company, and FS lands. The remaining three FS pastures provide summer and fall elk habitat. For a complete description and maps of the Fleecer Coordinated Grazing Program, refer to Frisina and Morin (1991) in “Appendix A- Related Literature.”

The three pastures on Fleecer WMA have allowed for full implementation of a rest-rotation system that is independent of but coordinated with the rotation on the Forest Service and Fleecer Cattle Company lands (Figure 2). In 2012, Pasture 3 was divided by using temporary electric fencing to create a fourth pasture known as the Pond Pasture. This allowed for targeted use of smooth brome that had been cultivated and hayed in this pasture prior to FWP ownership (Photo 1). Since this portion of the Pasture 3 is located at a higher elevation than the rest of the WMA, cattle typically would not graze the smooth brome during the spring as it was often still under snow and by fall, it was too cured to be palatable to cattle and elk. Elk generally avoided this area during the winter until FWP and the lessee began intensively grazing this area every third spring since 2012 to remove accumulated smooth brome thatch.

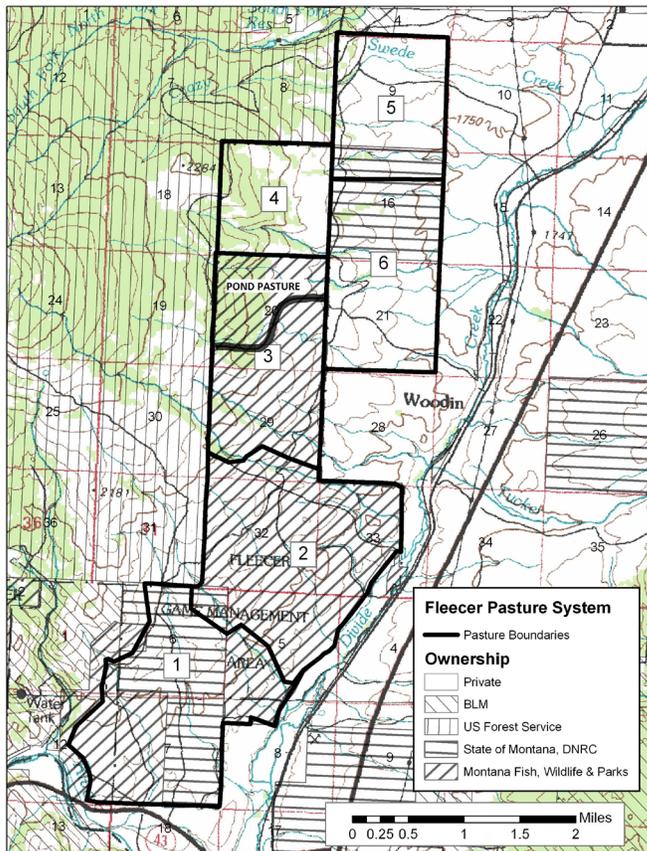
Photo 1: Hay harvested on Forrest Lindlief place circa 1930’s. This is the site of the present-day Pond Pasture on Fleecer WMA. Photo courtesy of Carol Harvey.



Separate contracts have governed spring and fall grazing treatments. The spring grazing contract has been an exchange of use with Fleecer Cattle Company and allowed for a maximum of 500 AUMs. Grazing took place from approximately mid-April to late May, or prior to the onset of rapid growth of Bluebunch Wheatgrass. In lieu of payment to FWP, Fleecer Cattle Company would rest from livestock grazing one of their three elk winter range pastures in an independent rest-rotation system. The spring grazing treatment was designed to promote removal of accumulated old growth by cattle and timed to provide maximum regrowth of native grasses and forbs that same growing season.

The fall grazing contracts have been with two lessees. A total of 94 AUMs is allowed and charged FWP's low rate (\$12.25 per AUM in 2018) since lessees are responsible for fence maintenance, with grazing occurring from October 1 through October 15. The fall grazing on the WMA allowed livestock to be moved off FS pastures located at higher elevations adjacent to the WMA thus allowing permittees to use the full grazing season while providing rest to a FS elk winter range pasture. The regrowth provided on the Fleecer WMA pasture used in the spring, along with the rested pasture on Fleecer Cattle Company land and the additional forage available on the other WMA and FS pastures, provide maximum production of winter forage for elk and other wildlife across land ownerships.

Figure 2: Map of FWP and private pastures in the Fleecer Coordinated Grazing Program.



Lessees have been responsible for maintaining WMA pasture fences during both the spring and fall grazing leases while FWP is responsible for providing materials and any fence replacement or construction. Interior pasture fences are single-strand electric fences which are taken down when not in use, reducing maintenance and impacts to wildlife movements. Operation costs incurred by the Fleecer WMA grazing program during the period of the last grazing lease (2013-2018) was \$100 for the DNRC annual pasture agreement fee (\$25 per year, 4 out of 6 years). On an annual basis 6-8 FWP staff days are devoted to the Fleecer WMA grazing program.

At least 14,892 AUM of spring livestock use and at least 2,305 AUM of fall use have been provided on the WMA since the inception of the Fleecer Coordinated Grazing Program in 1982. Fall grazing fees since 1982 total at least \$21,853.41 (data is missing for some years). Refer to “Appendix B - Stocking Rates on Fleecer WMA” for more details.

In 2018 an adjacent 200-acre parcel was purchased by FWP and added to the Fleecer WMA. This parcel contains two miles of Divide Creek and associated wetlands and riparian habitat. It also contains approximately 90 acres of uplands, the majority of which are hay fields of smooth brome and other tame grasses. This parcel is being managed in part under a separate grazing program through an exchange for services agreement.

Need for Proposed Action

The proposed action is to continue the Coordinated Grazing Program on the Fleecer WMA as described above. This would continue FWP’s involvement in a cooperative grazing system that spans elk winter range and land ownership and that for over 35 years has demonstrated the ability to improve elk winter habitat conditions in a way that is compatible with neighboring livestock interests.

Objectives for the Proposed Action:

- Continue to manage the entire elk winter range in the Fleecer area as one unit, regardless of ownership;
- Continue to provide high-quality vegetation for wintering elk and other wildlife through planned rest from grazing across multiple ownerships;
- Continue to maintain or improve soils, vegetation, and riparian zones through systematic grazing on the WMA;
- Continue to minimize impacts of winter and spring use by elk on private land by providing quality habitat on public lands;
- Continue to maintain optimum level of livestock production on Fleecer Cattle Company lands by minimizing elk depredation through a systematic grazing on the WMA.

8. Alternatives:

The following general proposed lease terms are common to both Alternatives A and B:

- 1) Lessees would be responsible for maintaining existing WMA pasture fencing while FWP would provide materials and be responsible for fence replacement and construction

- 2) Lessees' livestock must reside in the state for 30 days prior to being placed on the WMA to prevent the invasion of noxious weeds
- 3) Lessees are responsible for moving their cattle at the prescribed times and to the prescribed pasture.
- 4) Both the spring and fall grazing leases will be for a 4-year period, beginning in 2019 and ending in 2022.

Alternative A (Proposed Action): Renewal of both the spring and fall grazing leases on Fleecer WMA.

This alternative would continue the grazing system on Fleecer WMA with a spring grazing exchange agreement (up to 500 Animal Unit Months [AUMs]) with Fleecer Cattle Company (formerly Smith 6 Bar S Livestock) and a separate fall fee-grazing agreement (94 AUMs) with Fleecer Cattle Company and Russel Dupuis.

Spring grazing would occur every other year as intensive grazing in a pasture dominated by smooth brome, i.e. Pond Pasture (Table 1). Grazing would take place from approximately late April to early June, or prior to the onset of rapid plant growth, using bluebunch wheatgrass (*Agropyron spicatum*) as the trigger species for native range portion of the Pond Pasture. Payment would be complete rest from livestock grazing in one of three pastures each year on adjacent Fleecer Cattle Company lands (an independent rest-rotation system), which constitute elk winter range.

Fall grazing would occur in a rest-rotation fashion on the remaining three pastures of Fleecer WMA. The fall grazing contracts would be with two lessees, Fleecer Cattle Company and Russel Dupuis. A total of 94 AUMs (56 AUMs to Fleecer Cattle Company and 38 AUMs to Russel Dupuis) would be allowed and charged FWP's low rate. Grazing would occur from October 1 through October 15 annually.

Table 1: Projected grazing schedule for the FWP portion of the Fleecer Coordinated Grazing Program, 2019-2022. Spring = late April-early June, depending on forage availability; Late Fall = October 1-October 15; Rest = no use by livestock.

YEAR	PASTURE			
	South	Middle	North	Pond
2019	Rest	Rest	Late Fall	Rest
2020	Late Fall	Rest	Rest	Spring
2021	Rest	Late Fall	Rest	Rest
2022	Rest	Rest	Late Fall	Spring

Alternative B: Renewal of only the spring or only the fall grazing lease on Fleecer WMA.

This alternative would reduce the overall effectiveness of the Fleecer Coordinated Grazing System. Tolerance for wintering wildlife on adjacent private lands would be reduced if the spring grazing exchange of use agreement was eliminated, which would

lead to more game damage complaints. Carrying capacity of the winter range may be lowered in the absence of an available rested pasture on private land and removal of thatch on the smooth brome-dominated pasture. Forest Service winter range pastures may not receive current levels of rest if fall grazing was eliminated; winter range values would be diminished and AUMs may be reduced as a result.

Alternative C: Elimination of livestock grazing on the Fleecer WMA.

This alternative would completely eliminate livestock grazing on the Fleecer WMA. This would eliminate the Exchange of Use agreement with Fleecer Cattle Company and the rested pasture it provides. It may lead to increased use of the Forest Service winter range pastures that currently receive scheduled rest. It would shift FWP personnel time by a 4-6 days to maintain boundary fences that are currently being maintained by the lessees. Overall, loss of a coordinated management program across ownerships designed to mutually benefit wildlife and livestock would likely lead to less forage on elk winter range due to fewer rested pastures, increased livestock use on FS winter range pastures, reduction of available forage on smooth brome pasture, and less tolerance for elk on private land which would lead to an increase in game damage complaints.

II. EVALUATION OF IMPACTS ON THE PHYSICAL ENVIRONMENT

1. Vegetation

The Fleecer WMA ranges in elevation from approximately 5,500 feet to 7,000 feet and is predominantly nonforested, open rolling grasslands interspersed with shrubland and aspen stands. Rubber rabbit brush, big sagebrush, and mountain mahogany are the dominant shrubs and occur mainly on the lower elevations at the southern end of the WMA. Bluebunch wheatgrass and Idaho fescue grasslands are the predominant vegetation with some Douglas fir occurring along ridge tops and southerly aspects. Some rough fescue is also present. Aspen and willow stands are common along stream banks and in wet areas. A residual hayfield mainly comprised of smooth brome occurs at the north end of the WMA at the uppermost elevation. A 2-acre pond provides water in this area. In addition, two perennial streams (Water Gulch and Mitchell Gulch) flow across the WMA. Average annual precipitation varies from 14 to 18 inches. Mean annual precipitation at Divide is about 12 inches with 2.5 inches of rain occurring during June.

From the turn of the century to 1962 when FWP acquired the property, livestock grazing by cattle, horses and sheep occurred on the range from early June through late September under a continuous grazing strategy which significantly reduced forage for wintering wildlife. Livestock grazing was eliminated from the WMA for 20 years under FWP's ownership of the property until the rest-rotation Fleecer Coordinated Grazing Program was implemented between FWP, FS, and Smith 6 Bar S Livestock in 1982.

Long-term vegetation monitoring has occurred on Fleecer WMA since 1986. Nine permanent photo points, comprising a total of thirty-eight photos, were established on the WMA at that time. These are located in the grassland/shrubland, riparian, and wet meadow cover types. Since then nine more points have been added, including six in the Pond Pasture to monitor intensive grazing on the smooth brome. Photos are taken at all

photo points on an annual basis during mid- to late summer after the growing season has peaked.

Two vegetation exclosures measuring 330 feet by 330 feet were erected on the WMA in 1986 (Water Gulch and Mitchell Gulch Exclosures). The structures were designed to keep cattle out but allow entry to wildlife. The original exclosures were constructed of wooden jackleg and posts. Due to deterioration of the wood, cattle were getting into the Mitchell Gulch Exclosure during the period of 2000-2003. Both exclosures were replaced with a four-strand wire and post fence in 2003 and are fully functioning to keep out livestock. Monitoring at each exclosure includes four permanent transects within and four transects located outside each exclosure. These transects provide quantified Daubenmire canopy cover data and are read approximately every five years. Transects were last read in 2018.

A complete synopsis of the vegetation data gathered from 1986-2012 for the Fleecer WMA has been reported in “Vegetation Monitoring of Grazing Systems at Mount Haggin and Fleecer Mountain Wildlife Management Areas, Montana: A Historical Review and Assessment” (Horton and Boccadori, 2012). Habitat conditions as measured by the frequency and coverage of native vegetation on Fleecer WMA have responded positively under this grazing program and have visibly improved.

A study conducted on the Fleecer WMA in 2002 examined how stem height and girth of aspen influenced the selection of stems by ungulates (antelope, deer, elk, and cattle) for browsing, rubbing, and gnawing (Keigley and Frisina 2008). This research, based on the timing of occurrence and the stability of livestock numbers from 1986-2001, found that elk were primarily responsible for the observed impacts to aspen. The same time the wintering elk population on Fleecer was increasing, a significant amount of scarring of aspen stems caused by antler rubbing also occurred.

Another study conducted on the Fleecer WMA (Wambolt et al 1997) examined the effects of cattle grazing on the nutritive quality of bluebunch wheatgrass, an important forage plant for elk. The study found no significant difference in nutrient content from bluebunch wheatgrass that is grazed in the spring by cattle over that which is totally rested for one year or never grazed during the growing season. The amount of more desirable current year’s growth of bluebunch wheatgrass that is available to elk, however, is likely greater where cattle have grazed versus never grazed areas, due to the removal of residual forage. Frisina (1992) that during early summer Mount Haggin’s WMA elk use increased in pastures that had been grazed by cattle the previous year. Use switched however, during July and August when cow elk are rearing calves, to the rested pasture where more security cover and forage was available.

The WMA in general hosts a variety of desired native plants in desired amounts. Repeat photos and vegetation measurements suggest a stable to increasing trend in health and vigor of the plant communities with the implementation of the Fleecer Coordinated Grazing Program. Non-native plants are present on the WMA but in small amounts and are not causing a negative shift in plant composition. Noxious weeds that have been

identified on the WMA include spotted knapweed, Canadian thistle, leafy spurge, and white top. Ongoing weed management on the WMA has included both chemical herbicides and bio-control releases in compliance with FWP's Integrated Noxious Weed Management Plan.

Alternative A (Proposed Action): Renewal of both the spring and fall grazing leases on Fleecer WMA.

Some changes in the vegetation community are expected under the continuation of both the spring and fall grazing leases on the WMA. Spring grazing on the smooth brome hayfields in the Pond Pasture are timed for the removal of old-growth brome before the native grasses begin to grow. With intensive livestock grazing on the tame grass hayfields, thatch which could suppress growth of native vegetation would not accumulate, making more palatable vegetative growth of the year more available to wintering elk. Native vegetation in that pasture could be impacted by livestock use every other spring. However, this would be mitigated by the fact that this pasture is at higher elevation and plants mature slower in the spring as a result, and no livestock grazing would occur in the off-year. In addition, native vegetation would be monitored during years of spring grazing and rapid plant growth of bluebunch wheatgrass would be used as the trigger to remove cattle.

An additional benefit of the spring grazing lease is that as an Exchange of Use agreement, payment to FWP would be a one rested elk winter range pasture annually on the neighboring Fleecer Cattle Company land and their leased DNRC land.

The other three pastures of the WMA would not be grazed during the spring period and all four pastures would be rested during the growing season annually. Fall grazing would be a light stocking rate of 16 acres per AUM and occur in one pasture only.

This proposed grazing system would provide: 1) highest quality potential standing crop of vegetation for wintering wildlife on Fleecer WMA; 2) rest and a standing crop of available winter forage on adjacent Forest Service and private lands; and 3) improved plant vigor, plant health, and soil stability across elk winter range.

Alternative B: Renewal of only the spring or only the fall grazing lease on Fleecer WMA.

If only the spring grazing lease were renewed, the benefits as described in Alternative A pertaining to spring grazing would still be realized. In the absence of a fall grazing lease on Fleecer WMA, annual livestock use would be decreased by two weeks (94 AUM).

If only the fall grazing lease were continued, livestock grazing on the WMA would be reduced by approximately 6 weeks (up to 500 AUM) every other spring. The benefits as described in Alternative A pertaining to spring grazing would not be realized. There would be no Exchange of Use agreement with the neighboring Fleecer Cattle Company, i.e. continuation of rest-rotation grazing on private land elk winter range pastures would be at the discretion of the landowner.

Loss of AUMs on the WMA would put additional pressure on either FS or private pastures in the Fleecer Coordinated Grazing Program, thereby reducing the overall benefits to habitat and wildlife across the Fleecer elk winter range.

Accumulation of vegetative matter from lack of spring or fall grazing would provide additional nesting cover and food source for certain species of small mammals and ground-nesting birds.

Alternative C: Elimination of livestock grazing on Fleecer WMA.

Elimination of livestock grazing on Fleecer WMA would allow residual vegetation to build up. In the short-term this would be a benefit to wildlife that use the WMA.

Overtime, however, this would likely cause a shift in grazing by elk onto other portions of the Fleecer winter range not owned by FWP, as occurred in the 1980's and was the impetus to engage in the Fleecer Coordinated Grazing System. Elimination of livestock grazing on Fleecer WMA would put additional pressure on either FS or private pastures in the Fleecer Coordinated Grazing Program, thereby reducing the overall benefits to habitat and wildlife across the Fleecer elk winter range by negatively impact the plant community as a whole.

2. Fisheries and Water Resources

The WMA contains portions of two intermittent streams, Water Gulch and Mitchell Gulch. There is a 2-acre pond in the Pond Pasture where the smooth brome hayfields occur. There are no known fisheries in any of these bodies of water. Photo points show some impact to riparian areas during the season when cattle are in that pasture and vegetation recovery during years of rest. Short-term negative impacts to riparian areas from livestock grazing are expected to be minor and mitigated by the light stocking rates and rest under Alternatives A and B. There would be no impacts to riparian areas under Alternative C.

3. Wildlife

Montana Fish, Wildlife & Parks acquired the Fleecer WMA in 1962, primarily as elk winter range. There was a wintering population of 200-400 elk found on and adjacent to the WMA at the time of FWP's acquisition. This herd grew to a high of over 1,400 elk during the late 1990's to early 2000's as part of the approximately 2,000 to 2,500 elk that wintered in the larger area (Hunting District 319). HD 319 is part of the Fleecer Elk Management Unit (EMU), along with HD 341, as stated in the Elk Management Plan (FWP 2005). The population objective for HD 319 is to maintain the number of elk observed during post-season aerial surveys between 812-1,100 with no more than 800 on the Fleecer winter range. Most recent survey results (January 2018) indicate that elk numbers are slightly above the population objective range (1,124) and the number of elk wintering on Fleecer (867).

Fleecer WMA supports a year-round population of mule deer and serves as a major winter range for deer that migrate from as far as the northern portions of the Pintler Range to the west. Trend surveys for HD 319 indicate an average population of 410 mule deer over the past 15 years, ranging from 206 to 670. During the most recent trend

survey, a count of 336 mule deer were observed. Typically, one-third of the deer counted are found on the Fleecer winter range. Most of the mule deer winter and spring use occurs at the southern end of the WMA where the majority of sagebrush and mountain mahogany occurs.

Fleecer WMA is part of Antelope Hunting District 319. The WMA supports year-round use from a resident herd of approximately 60 animals and also provides winter range to 140-180 additional animals that migrate from summer range located north of the WMA. Population trend counts for HD 319 indicate a 15-year average of 231 antelope, ranging from 127 to 409. Most recent count in 2017 was 409 antelope.

White-tailed deer and moose occur on the WMA in relatively low numbers. The WMA supports a population of less than 20 white-tailed deer, found mainly in the lower elevations along Divide Creek. Moose are mostly transitory on the WMA due to the lack of suitable habitat.

Mountain lions, bobcats, coyotes, and black bear have the potential to occur on Fleecer WMA, but because of their large home ranges only use the WMA in a transitory manner.

Wolves have re-occupied most of the mountains of southwest Montana and have been present in the Fleecer area for the last several years. Sightings have occurred on both public and private land. Since livestock are an integral part of the Fleecer landscape, not only from the Fleecer Cattle Grazing but from other producers in the area as well, wolf-livestock conflicts in the area have and will continue to impact wolves through depredation removals, whether or not livestock grazing occurs on the Fleecer WMA.

Blue grouse, Franklin grouse, ruffed grouse and Hungarian partridge occur on the WMA as well as a variety of small mammals and birds. A comprehensive bird survey was conducted in 2010 through 2011 and resulted in an updated species list including seasonal use data for the WMA. Small mammal surveys were completed in 2006 and in 2011 which contributed to the Montana Natural Heritage Program (MNHP) data base on species occurrence and distribution. A pygmy rabbit survey was conducted on Fleecer WMA during the winter of 2011. No evidence of occupation was found.

Alternative A (Proposed Action): Renewal of both the spring and fall grazing leases on Fleecer WMA.

Continuation of both the spring and fall grazing leases on the WMA as proposed is intended to be beneficial for wildlife across the Fleecer winter range, regardless of ownership. Spring grazing in the Pond Pasture every other year would remove residual smooth brome and prevent the build-up of thatch. Elk will benefit by having higher-quality more palatable new growth available for winter feed. This may hold them on the WMA longer, thereby minimizing use and game damage on neighboring Fleecer Cattle Company land. Small mammals and some species of ground-nesting songbirds will benefit from the every-other-year grazing regime by having a standing crop of dense vegetation available for nesting, cover, and winter habitat. Since no grazing will occur on the other three WMA pastures during the spring and summer growing periods, the WMA

would get maximum growth of vegetation that would provide cover and habitat for antelope and several species of songbirds that utilize Fleecer WMA during the fawning/nesting and summer periods.

Renewing the spring and fall grazing leases as proposed would continue the Fleecer Coordinated Grazing Program and the landscape-level benefits to wildlife on FWP, Forest Service and Fleecer Cattle Company lands it provides.

Alternative B: Renewal of only the spring or only the fall grazing lease on Fleecer WMA.

Elimination of either the spring or fall grazing lease on the WMA may have a long-term negative impact on elk, realized through a reduction in the quality and quantity of available habitat across the winter range and ownerships.

If the spring grazing Exchange of Use were eliminated, several negative impacts to elk would result: rest-rotation grazing on elk winter range pastures on Fleecer Cattle Company and their DNRC-leased lands would be at the discretion of the landowner; increased livestock use of private land would occur with the loss of up to 500 AUM on the WMA; reduced tolerance for elk on Fleecer Cattle Company land would result in functional loss of habitat on this private land portion of the Fleecer elk winter range; and an increase in game damage complaints and management actions on Fleecer Cattle Company land would put additional stress on wintering elk.

Elimination of fall grazing on the WMA would put additional pressure on either FS or private land elk winter range pastures in the Fleecer Coordinated Grazing Program to absorb the loss of 94 AUM. This would reduce the quality of feed on those lands for wintering elk which could cause them to seek feed on adjacent private lands and lead to game damage and management actions to address that.

Alternative C: Elimination of livestock grazing on Fleecer WMA.

Elimination of both the spring and fall grazing leases on Fleecer WMA would likely have negative impacts for wildlife, primarily wintering elk and antelope. There may be more forage available in the short-term. Over time, however, previous years' growth of grasses would accumulate across the WMA, especially in the smooth brome-dominated pasture. This would make it more difficult for grazing wildlife to access the more palatable current year growth underneath, causing elk to seek out grazed pastures on private land which could lead to an increase in game damage complaints and management actions. The cumulative effect of this would likely be a reduction in the number of elk over time.

The ability to manage elk winter range across the landscape would be lost without FWP's participation in the Fleecer Coordinated Grazing Program.

Small mammals and birds may benefit from the increase in accumulated old growth of grasses that provide nesting and hiding cover.

4. Soil Resources

Soils in the area of the WMA are of granitic origin, ranging from slightly developed and very shallow on the steeper slopes to highly developed and deep in the stream bottoms. Geologic origin of the area and the soils are typical of unglaciated foothills. The U.S. Forest Service classified the soils as Ochrepts, Boralfs, and Borolls.

Some disturbance of soil would occur under the grazing system if Alternative A or B is selected. Such disturbance would be minor due to the design of the grazing system where the Pond Pasture would only be used every other year and the other remaining pastures would only be used once out of every three years. Some disturbance to the soil from livestock grazing in the fall is beneficial for seedling establishment through seed trampling (Hormay 1970). This would not occur if Alternative C were chosen.

III. EVALUATION OF IMPACTS ON THE HUMAN ENVIRONMENT

1. Access and Recreation

The WMA is located in deer/elk/antelope Hunting District 319. Recreation hunting in this district is very popular due to the healthy elk population, large proportion of accessible public land, reasonable access to private land, and the proximity to Butte and Anaconda. Over the past 15 years an average of 1,496 elk hunters spent 11,114 days afield during the fall hunting season. While some overlap occurs amongst these numbers, 477 deer hunters reported spending 3,389 days hunting mule deer in HD 319. Antelope hunting un HD 319 has provided an average of 81 hunters with 298 days afield.

The WMA also provides limited moose, black bear, mountain lion and mountain grouse hunting opportunities. Recreationists also enjoy camping, hiking, shed hunting, wildlife watching, and other forms of non-consumptive activities on Fleecer WMA.

Alternative A (Proposed Action): Renewal of both the spring and fall grazing leases on Fleecer WMA.

The presence of cattle would minimally restrict recreational use of the WMA, mainly in the form of opening and closing pasture gates. Cattle would only occupy the Pond Pasture for 4-6 weeks every other spring and one of the other three pastures for two weeks in the fall. The recreating public would be permitted full access and use of the WMA during the open period May 15-Dec 1 even in pastures occupied by livestock. Shed hunting is the main activity that occurs on the WMA in the spring after the WMA opens and the presence of livestock would not impede this recreational event. While fall grazing is concurrent with grouse and antelope hunting seasons, grazing occurs at low density and for a short period that it would not cause significant restrictions to hunting or other recreational opportunities on the WMA. Cattle would be removed from the WMA prior to the start of big game general season.

The proposed action would have an overall positive effect on the quality and quantity of recreation in the area. Fleecer Cattle Company land involved in the spring grazing exchange helps maintain the viability of big game populations by providing quality winter range. In addition, Fleecer Cattle Company (formerly Smith 6 Bar S Livestock) has participated in the Block Management Program for over 20 years.

Some members of the public may be impacted aesthetically depending on their level of tolerance for the presence of livestock on the WMA.

Alternative B: Renewal of only the spring or only the fall grazing lease on Fleecer WMA.

Elimination of livestock from either the spring or fall grazing period would not change public access and use of the WMA. The public would continue to have full access and use of the WMA from May 15 through Dec 1. Elimination of the spring grazing Exchange of Use would negatively impact range conditions on FWP winter range over time likely causing an increase of elk use on Fleecer Cattle Company lands during the fall, winter and spring and thereby reducing recreational opportunities to hunt or view elk on the WMA. Increased elk use on private lands would degrade that portion of winter range in addition to causing reduced tolerance to elk that may lead to loss of hunting opportunity on private land and an overall reduction in the elk population. Elimination of the fall grazing treatment could have the same effect.

Members of the public that find the presence of livestock on the WMA aesthetically unpleasant would be less negatively impacted with only one season of livestock grazing on the WMA.

Alternative C: Elimination of livestock grazing on Fleecer WMA.

Complete elimination of livestock use on the WMA would have both positive and negative impacts to the public. In the absence of a grazing system, interior pasture fences and gates would be removed, making human travel easier. Members of the public that find the presence of livestock on the WMA aesthetically unpleasant would not be impacted. The public would continue to have full access and use of the WMA from May 15 – Dec 1.

Complete elimination of livestock from the WMA in the short term may increase hunting and wildlife watching opportunities on Fleecer WMA. Over time elk forage quality on the WMA may trend downward, leading to a decrease of elk on the WMA during fall and winter. Decreased hunting, wildlife viewing, and shed-hunting opportunities would result. FWP would lose the cooperative working relationship with the adjacent landowner and could lead to a loss of public access. Elimination of the spring grazing Exchange of Use would have the same impacts as described in Alternative B.

2. Community Impacts and Land Use

Alternative A (Proposed Action): Renewal of both the spring and fall grazing leases on Fleecer WMA. Locally owned ranches would be allowed to utilize portions of the WMA for spring and fall livestock grazing. The proposed grazing treatments would have a positive influence on the productivity and economics of existing public and private land use in the area. Grazing the WMA in exchange for scheduled rest on adjacent FS and Fleecer Cattle Company lands in a cooperative system illustrates the compatibility of

livestock production and wildlife/recreation-based economies and the impacts this could have beyond WMA borders.

This alternative would allow up to 500 AUMs on the WMA every other spring and 94 AUMs annually in the fall.

Alternative B: Renewal of only the spring or only the fall grazing lease on Fleecer WMA. The total AUMs allowed to graze the WMA would be reduced by 500 every other year if spring grazing were discontinued or by 94 if fall grazing were discontinued. Elimination of either grazing treatment would negatively impact the current lessees since they would have to find other locations to feed their cattle during that time of year. Elk may also spend more time on the grazed pastures of the neighboring Fleecer Cattle Company land if livestock grazing were discontinued on the WMA for either season, causing game damage conflicts, financial hardship to local ranches, and intensifying forage use by both livestock and elk on private land.

Alternative C: Elimination of livestock grazing on Fleecer WMA.

Similar impacts as described in Alternative B except there would be livestock use on the WMA. FWP would continue to manage the WMA for the benefit of its natural resources (wildlife and vegetation) while providing for the public access to hunt and recreate.

3. Cultural and Historic Resources

The area of the Fleecer WMA is historically important for providing livestock grazing, habitat for wintering elk, and hunting-oriented recreation. Livestock grazing has been a practice on the properties incorporated in the Fleecer Coordinated Grazing Program at least since the 1930s. Two train car-loads of elk trapped in Yellowstone National Park were released near Divide, MT, in 1910 to augment a small herd of native elk in the Fleecer Mountain vicinity (Picton and Lonner 2008). The first open season for bulls-only hunting was held in 1939.

No impacts to the cultural or historic resources on Fleecer WMA are expected under Alternatives A, B or C.

4. Risk/Health Hazards

None of the alternatives are expected to result in increased risk or health hazards to humans or wildlife. Noxious weed control within the WMA would continue to occur under all alternatives and would continue to involve herbicides and/or biocontrol agents.

5. Public Services

Alternative A (Proposed Action): Renewal of both the spring and fall grazing leases on Fleecer WMA.

This alternative would result in a commitment of FWP funds for continuing oversight to maintain the Fleecer WMA grazing system, e.g. fence repair and replacement, as needed. No additional fencing would be required. Any maintenance expenses would be covered by the existing operations and maintenance budget for the WMA. Approximately 8 staff-days would be required to manage grazing related activities on Fleecer WMA annually.

This alternative would have a positive impact on state and local tax revenues through its contribution to maintaining a viable livestock operation and wildlife/recreation-based economy in the area. Direct revenue includes compensation at FWP's low rate (\$12.25 per AUM in 2018) for up to 94 AUMs for the fall grazing lease. Indirect compensation includes landowner tolerance for wintering elk and maintenance of winter range/open space through a viable livestock operation on adjacent private and public lands.

Alternative B: Renewal of only the spring or only the fall grazing lease on Fleecer WMA. Same as Alternative A regarding fencing costs. The indirect revenue listed above would not be realized if the spring grazing lease is eliminated. The direct revenue and a portion of the indirect revenue will not be realized if the fall grazing lease is eliminated.

Alternative C: Elimination of livestock grazing on Fleecer WMA. Same as Alternatives A and B regarding fencing costs except that only boundary fences would need to be maintained. Neither the direct nor indirect revenue will be realized with total elimination of livestock grazing from the WMA.

IV. PUBLIC PARTICIPATION

1. Public involvement:

The public will be notified in the following manners to comment on this Environmental Assessment:

- Two public notices in each of these papers: *Butte Montana Standard*, *Anaconda Leader*, and *Dillon Tribune*
- One statewide press release
- Public notice on the Fish, Wildlife & Parks web page: <http://fwp.mt.gov>
- This EA will be distributed to neighboring landowners, local sportsmen's clubs, county commissioners, and other interested parties to ensure their knowledge of the proposed project.

2. Duration of comment period:

The public comment period will extend for (31) thirty-one days from December 28, 2018 through 5:00 p.m., January 28, 2019. Comments can be mailed to the address below:

Fleecer WMA Grazing Lease
Montana Fish, Wildlife & Parks
1820 Meadowlark Lane.
Butte, MT 59701

Or email comments to: vboccadori@mt.gov. Please put "Fleecer Grazing EA" in the subject line.

V. EA PREPARATION

1. Based on the significance criteria evaluated in this EA, is an EIS required? (YES/NO)? No.

Based upon the above assessment, which has identified a very limited number of minor impacts from the proposed action, most of which can be mitigated, an EIS is not required and an environmental assessment is the appropriate level of review.

2. Person responsible for preparing the EA:

Vanna Boccadori
Butte Area Wildlife Biologist
Montana Fish, Wildlife & Parks
1820 Meadowlark Lane.
Butte, MT 59701 Phone: (406) 494-2082

3. List of agencies or offices consulted during preparation of the EA:

Montana Fish, Wildlife & Parks: Fisheries and Wildlife Bureaus, Responsive Management Unit
Montana State Historical Preservation Office
US Forest Service, Beaverhead-Deerlodge National Forest, Butte Ranger District

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APPENDIX A: RELATED LITERATURE

Grazing Private and Public Land to Improve the Fleecer Elk Winter Range

Michael R. Frisina and Forest G. Morin

Competition for forage between elk and domestic livestock has generated controversy on both public and private lands. As a result, numerous studies documenting relationships between cattle and elk were conducted in Montana and other western states. In Montana, dietary comparisons and intraspecific competition on seasonal ranges have been evaluated by numerous studies. Range relationships between elk and cattle within "rotational" grazing systems were described by Campbell and Knowles (1978), Komberec (1975), Frisina (1986), and Gniadek (1987). Lyon et al. (1985) reported that elk generally avoid cattle-occupied areas, and Mackie (1978) described impacts of livestock grazing on wild ungulates.

Historically, most intense conflicts occur where domestic livestock and elk are competing for forage on elk winter ranges. Anderson and Scherzinger (1975) described a program of coordinated elk and cattle use on the Bridge Creek elk winter range in Oregon. However, practical solutions for resolving these conflicts on elk winter ranges are lacking. To address this issue, the Montana Department of Fish, Wildlife and Parks, United States Forest Service, and Smith 6 Bar S Livestock Company (6 Bar S) initiated a program in 1987 to combine existing research with sound range management principles to design a grazing system with the following six objectives:

- 1). Maintain soils, vegetation, and riparian zones in good or better condition on public and private lands.
- 2). Increase elk to potential on all land ownerships.
- 3). Increase cattle grazing potential.
- 4). Minimize impact of winter and spring use by elk on private land by providing adequate habitat on public lands.
- 5). Manage the entire elk winter range in the Fleecer area as one unit, regardless of land ownership.
- 6). Maintain optimum level of livestock production on 6 Bar S lands.

Description of Area

The Fleecer Coordinated Grazing Program is located on the southeast face of Mt. Fleecer, approximately 25 miles southwest of Butte, Montana. The area ranges in elevation from 5,500 feet to approximately 7,000 feet, and

Michael Frisina lives in Butte, Montana, where he is a Wildlife Biologist with the Montana Department of Fish, Wildlife, and Parks. He manages the Fleecer WMA and has worked with wildlife-livestock coordinated programs on Department lands since 1976.

Forest Morin is the Range Specialist on the Butte Ranger District on the Deerlodge National Forest, USDA Forest Service, Butte, Montana.

is mostly nonforested. Bluebunch wheatgrass and Idaho fescue grasslands are the predominant vegetation with some Douglas-fir occurring along ridgetops and southerly aspects. Some rough fescue is also present. Aspen and willow stands are common along stream banks and in wet areas. Average annual precipitation varies from 14 to 18 inches. Soils were classified as Ochrepts, Boralfs, and Borolls by the Forest Service.

The area in the grazing program is a combination of public and private lands. Approximately 9,920 acres are Forest Service, 4,160 acres are Montana Department of Fish, Wildlife and Parks, with 2,490 acres in private ownership by Smith 6 Bar S Livestock.

The area is historically important for providing livestock grazing, habitat for wintering elk, and hunting oriented recreation. Forest Service range surveys conducted in 1953 indicated range deterioration due to past heavy livestock use on a season-long basis (unpublished FS data 1970). These same records also indicate range condition has improved steadily since the 1953 survey. Livestock numbers were increased during the 1980's to a current level of 714 cattle or 1,342 animal months (AM's) (Figure 1). Recent history of the Fleecer elk herd began in

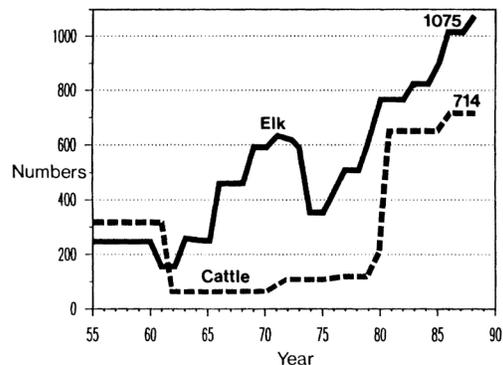


Fig. 1. Elk and cattle number trends for the Fleecer area.

1910 when 25 elk from Yellowstone Park were transplanted to augment a native remnant herd. The Fleecer Wildlife Management Area was purchased by Montana Department of Fish, Wildlife and Parks in 1962 to expand winter elk habitat provided by the Forest Service lands. Restrictive hunting seasons, improvements in habitat,

and additional use of 6 Bar S lands has enabled the elk herd to increase to its present wintering population of 1,100 with about 800 wintering in the Fleecer Coordinated Grazing Program (Figure 1). The Fleecer's are one of the most heavily hunted areas in Montana because of the large elk population, the large proportion of public land, and proximity to Butte (Frisina 1982).

Grazing Program

The Fleecer Coordinated Grazing Program was fully operational in 1988. It follows rest-rotation grazing principles described by Hormay (1970), and includes 9,730 acres of suitable livestock range. The program was implemented gradually from 1981 to the present as planning, range improvements, and necessary agreements were completed. With the exception of fall grazing on Montana Department of Fish, Wildlife and Parks lands, it was completed in 1987.

PASTURES	LIVESTOCK ROTATION BY YEAR			SEASONAL RANGE USE	
	1988	1989	1990	ELK	CATTLE
1-MFWP	REST	SPRING	LATE FALL	WINTER	SPRING & FALL (LATE)
2-MFWP	LATE FALL	REST	SPRING	WINTER	SPRING & FALL (LATE)
3-MFWP	SPRING	LATE FALL	REST	WINTER	SPRING & FALL (LATE)
4-6 BAR S	SUMMER	FALL	REST	WINTER	SUMMER & FALL
5-6 BAR S	REST	SUMMER	FALL	WINTER	SUMMER & FALL
6-6 BAR S	FALL	REST	SUMMER	WINTER	SUMMER & FALL
7-FS	EARLY SUMMER	REST	REST	WINTER	SUMMER (EARLY)
8-FS	REST	EARLY SUMMER	REST	WINTER	SUMMER (EARLY)
9-FS	REST	REST	EARLY SUMMER	WINTER	SUMMER (EARLY)
10-FS	FALL	REST	SUMMER	SUMMER	SUMMER & FALL
11-FS	SUMMER	FALL	REST	SUMMER	SUMMER & FALL
12-FS	REST	SUMMER	FALL	SUMMER	SUMMER & FALL

LEGEND: Rest - Non use by livestock
 Early Summer - June 1 to Mid July
 Fall - Mid August to October 1
 Spring - Mid April to Late May
 Summer - Mid July to Mid August
 Late Fall - October 1 to Mid October

Note: AFTER THREE YEARS THE LIVESTOCK ROTATION IS REPEATED.
 ON 6 BAR S LANDS SUMMER CATTLE USE CONSISTS OF EARLY SUMMER AND SUMMER COMBINED. FALL CATTLE USE EQUALS FALL AND LATE FALL COMBINED.

Fig. 2. Livestock grazing formula by year and pasture showing seasonal elk and cattle use within the Fleecer Coordinated Grazing Program.

The grazing program consists of 12 pastures with the rotation of livestock, pasture ownership, and seasonal use by cattle and elk (Figures 2 and 3). There are nine pastures providing winter habitat for elk: three each of Montana Department of Fish, Wildlife and Parks; 6 Bar S; and Forest Service lands. The remaining three pastures on Forest Service land are used by elk during summer and fall. Each year, seven of the 12 pastures are used by cattle

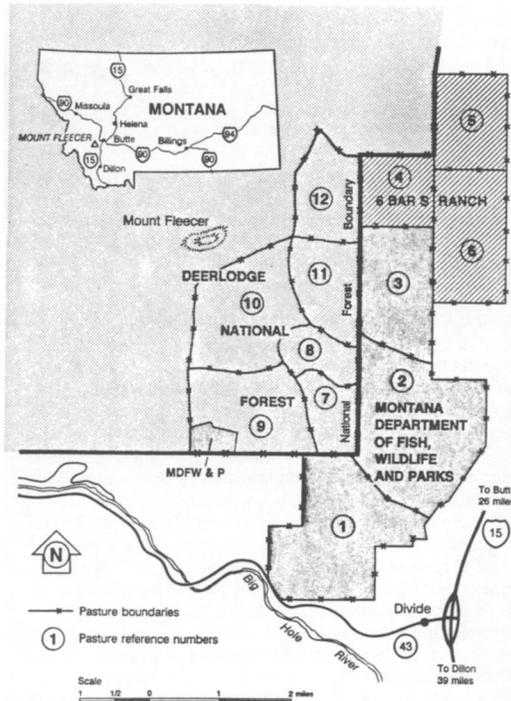


Fig. 3. Schematic showing pasture location and ownership within the Fleecer Coordinated Grazing Program. Pasture numbers correspond to those on Figure 2.

during summer and fall, and the other five pastures are rested from livestock use. One of three Montana Department of Fish, Wildlife and Parks pastures provides spring use (April to May) for livestock each year.

At the start of the cattle grazing season (mid April), 500 head of livestock owned by 6 Bar S are placed in one of the three Montana Department of Fish, Wildlife and Parks pastures (Figures 2 and 3). They remain in this pasture until rapid growth of vegetation occurs (late May). Cattle are then removed, thereby allowing maximum regrowth to occur. On June 1, 187 cattle owned by Forest Service permittees are moved to one of the three Forest Service elk winter range pastures. They remain there until mid July, then they are moved to one of the three Forest Service elk summer range pastures. The remaining two Forest Service elk winter range pastures are rested from livestock use all year (Figures 2 and 3). Cattle remain in one of the Forest Service elk summer pastures until seed ripe time (mid August), then are moved to a second Forest Service elk summer pasture where they remain until September 30.

The third Forest Service elk summer pasture is rested

from livestock use all year. On October 1, the livestock are moved to one of the Montana Department of Fish, Wildlife and Parks elk winter pastures for 15 days. On October 15, cattle are removed from the grazing program area for the winter.

The three pastures owned by 6 Bar S provide summer-fall grazing for 200 livestock, and are all elk winter range pastures. One of these pastures is rested from livestock use annually to provide forage for wintering elk. Forage from these elk winter pastures is payment to Montana Department of Fish, Wildlife and Parks for providing 6 Bar S with 500 AM's of spring livestock grazing. After three years the cattle rotation is repeated.

Discussion

The Fleecer Coordinated Grazing Program meets the stated objectives of coordinated livestock and elk management as follows:

Objective 1. Our application of rest-rotation grazing principles described by Hormay (1970) is designed to maintain an upward trend in vegetation and soil conditions. Forest Service monitoring data indicate rangeland and soil conditions are improving (unpublished FS data 1988).

Objective 2. Elk trend count data in Figure 1 demonstrates elk numbers are increasing. This is a result of habitat provided on lands in the grazing program. General observation of elk density on the winter range and amount of forage utilized indicates the elk population is at or near habitat potential.

Two of the three elk winter range pastures on Forest Service lands are rested from livestock use each year to provide forage for elk. Prior to this arrangement, two of the pastures were grazed under a deferred system. The third was reserved for wildlife and received no cattle use for over 20 years. By incorporating the non-use pasture into the system, more rest to improve plant vigor is provided for the formerly deferred pastures. In the formerly non-use pasture, accumulated old growth is periodically removed by cattle to improve the quality of forage for wintering elk (Anderson & Scherzinger 1975 and Jourdonnais 1985). After each of these Forest Service elk winter range pastures is grazed by cattle, it is rested from livestock use for two consecutive years, thus providing substantial forage for elk.

All three pastures on Montana Department of Fish, Wildlife and Parks lands provide winter habitat for elk. Each year one pasture is rested from livestock use and provides a full growing season of plant growth for winter elk forage.

All three pastures on Montana Department of Fish, Wildlife and Parks lands provide winter habitat for elk. Each year one pasture is rested from livestock use and provides a full growing season of plant growth for winter elk forage.

A second pasture is grazed during early spring, and cattle are removed during late May to allow a maximum amount of plant regrowth to occur. The second pasture provides almost as much forage as the one rested from

livestock grazing. The third pasture is deferred from use until late fall, when about 100 AM's of cattle grazing are permitted. This light use leaves a substantial amount of forage in the pasture for wintering elk.

The arrangement between Montana Department of Fish, Wildlife and Parks and 6 Bar S through the grazing program provided an increase in the total amount of available winter habitat for elk. Prior to this program, 6 Bar S was receiving winter elk use at an increasing rate and notified the Montana Department of Fish, Wildlife and Parks that the elk population should be controlled, as it was negatively affecting their livestock operation. Incorporating 6 Bar S lands into the grazing program eliminated this conflict. All pastures are available for wintering elk use, including one pasture which is rested from livestock use. The additional winter habitat has allowed for an increase of about 300 elk beyond the previous potential.

In addition to elk winter habitat, the Forest Service elk and cattle summer range pastures are managed according to a three pasture rest-rotation grazing formula with benefits similar to those reported by Frisina (1986).

Objective 3. The number of cattle and AM's provided has gradually increased towards potential during the 1980's (Figure 1).

Objective 4. Recent research by Frisina (1986) and Grover and Thompson (1986) indicate elk prefer to forage during late winter or early spring in pastures grazed the previous growing season by domestic livestock. Abundant green growth is readily available in these pastures during spring.

Also, periodic grazing by cattle on the elk winter range pastures improves the nutritional value of forage plants by removing accumulated old growth and improves forage quality (Anderson & Scherzinger 1975 and Jourdonnais 1985). Management of the Fleecer Coordinated Grazing Program incorporates these facts to make public lands as attractive as possible to elk.

Objective 5. Incorporating 6 Bar S lands into the grazing program has allowed management of the entire elk winter range as a single unit.

Objective 6. The optimum level of livestock production is maintained on 6 Bar S lands. The exchange of use agreement with Montana Department of Fish, Wildlife and Parks has allowed 6 Bar S to provide more rest from livestock grazing on lands used for cattle production, thus helping maintain maximum plant vigor and forage production.

Management Implications

The Fleecer Coordinated Grazing Program is a practical solution to resolving elk and cattle conflicts on elk winter ranges in the West. Cattle are used to actually enhance forage quality and quantity by applying early spring cattle grazing, rest-rotation grazing principles, and integrated management of various land ownerships. Coordinated management resulted in substantially increased cattle and elk numbers, while resolving a landowner tolerance problem.

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Note: A video presentation of this grazing system was shown at the 1989 National SRM meeting in Billings, Montana. It is available upon request from: U.S. Forest Service, Butte Ranger District, Butte, Montana 59701. Telephone: (406) 494-2147.

Run, Antelope! Run!

Run, Antelope! Run! Run! Run!
 Save your life from the hunter's gun.
 Hunter's in a jeep, wheels driving fast,
 Fifty yards behind you; can your slim legs last?
 Sage brush and prairie lie ahead,
 Outrun the jeep or you'll be dead!
 Run, Antelope! Run! Run! Run!
 Lose that man with the jeep and gun.
 We cheer and pray for your strength and speed,
 But the jeep is cutting down your lead.
 Run, Antelope! Run! Run! Run!
 You've a right to live in the prairie sun.
 Ahead lies a gully, wide and deep—
 You clear that chasm in one full leap!
 The jeep driver brakes and drives away.
 Antelope, you outran death today!

Vernette L. Palmer



**APPENDIX B:
STOCKING RATES ON FLEECER WMA**

<u>SPRING GRAZING</u> EXCHANGE on FLEECER WMA				
grazing year	turn-on date	removal date	AUMs	pasture
1982	12-Apr-82	05-May-82	213	Sect. 7, 8, 4, 33 (south)
1984	24-Apr-84	22-May-84	343	north 1/2
	29-Apr-84	22-May-84	59	north 1/2
1986	10-Apr-86	18-May-86	547	north 1/2
	01-May-86	18-May-86	2	north 1/2
	10-May-86	18-May-86	2	north 1/2
1987	14-Apr-87	16-May-87		south 1/2
1988	16-May-88	11-Jun-88	407	
1989	14-Apr-89	20-May-89	536	
1990	07-Apr-90	21-May-90	528	2
	20-Apr-90	21-May-90	136	2
1991	15-May-91	07-Jun-91	348	3
1992	13-Apr-92	13-May-92	387	1
	05-May-92	13-May-92	27	1
1993	09-Apr-93	12-May-93	553	2
1994	14-May-94	09-Jun-94	218	3
	14-May-94	17-Jun-94	194	3
1995	10-Apr-95	11-May-95	275	1
	10-Apr-95	20-May-95	175	1
1996	15-Apr-96	19-May-96	562	2
1997	24-May-97	05-Jul-97	302	3
1998	14-Apr-98	21-May-98	564	1
1999	17-Apr-99	23-May-99	501	2

2000	03-May-00	20-Jun-00	406	3
2001	17-Apr-01	16-May-01	470	1
2002	16-Apr-02	24-May-02	532	2
2003	17-May-03	23-Jun-03	339	3
2004	07-Apr-04	04-May-04	454	1
2005	12-Apr-05	13-May-05	584	2
2006	13-May-06	20-Jun-06	319	3
2007	07-Apr-07	14-May-07	210	1
	10-Apr-07	14-May-07	354	1
2008	8-Apr-08	16-Apr-08	53	2
	26-Apr-08	23-May-08	333	2
2009	04-May-09	02-Jun-09	403	3
2010	09-Apr-10	19-May-10	552	1
2011	14-Apr-11	14-May-11	458	2
2012	14-Apr-12	01-Jun-12	713 ¹	3
2013	12 Apr 2013	16 May 2013	519	1
2014 ²	No grazing			
2015	25 Apr 2015	10 June 2015	447	3+Pond
2016	11 April 2016	7 May 2016	316	1
2017	12 April 2017	5 May 2017	321	2
2018	6 May 2018	2 June 2018	~230	3+Pond

¹We experimented with using temporary fencing to force cattle onto the upper reaches of Pasture 3 for the purpose of removing an abundance of decadent smooth brome that the elk won't feed on in the winter. Two weeks of intensive grazing by cattle removed much of it. Preliminary observations this winter show a herd of ~700 elk now making use of this area.

²No grazing occurred on Fleeceer WMA this spring. It had been an extremely hard winter and elk had consumed most of the residual vegetation.

³Approximate number of AUM's since frequent snow fall kept pushing the cattle back to the ranch.

TOTAL AUM: >14,892

FALL GRAZING - FLEECER WMA						
grazing year	turn-on date	removal date	AUM used	pasture	AUM price	Fee Collected
1982-1987	NR					
1988	01-Oct-88	15-Oct-88	94	middle	\$7.94	\$746.36
1989	01-Oct-89	15-Oct-89	94	3	\$9.79	\$920.26
1990	01-Oct-90	15-Oct-90	94	1	\$8.04	\$755.76
1991	01-Oct-91	15-Oct-91	94	2	\$9.61	\$903.34
1992	01-Oct-92	15-Oct-92	94	3	\$10.58	\$994.52
1993	01-Oct-93	15-Oct-93	94	1	\$8.06	\$757.64
1994	01-Oct-94	15-Oct-94	94	2	\$11.40	\$1,071.60
1995	01-Oct-95	15-Oct-95	52	3	\$11.80	\$613.60
1996	01-Oct-96	15-Oct-96	45	1	\$9.06	\$407.70
1997	01-Oct-97	15-Oct-97	43	2	\$11.80	\$507.40
1998	01-Oct-98	15-Oct-98	43	3	\$12.30	\$528.90
1999	01-Oct-99	15-Oct-99	51	1	\$12.60	\$642.60
2000	01-Oct-00	15-Oct-00	48	2	\$13.20	\$633.60
2001	01-Oct-01	15-Oct-01	52	3	\$4.94	\$256.88
2002	01-Oct-02	15-Oct-02	89	1	\$6.20	\$551.80
2003 ¹	Not grazed					
2004	01-Oct-04	15-Oct-04	67	3	\$5.48	\$367.16
2005 ²	No record					
2006	01-Oct-06	15-Oct-06	94	2	\$6.22	\$584.68
2007	01-Oct-07	15-Oct-07	94	3	\$7.87	\$739.78
2008	01-Oct-08	15-Oct-08	94	1	\$6.94	\$652.36
2009	01-Oct-09	15-Oct-09	94	2	\$6.97	\$655.18
2010	01-Oct-10	15-Oct-10	94	3	\$6.12	\$575.28
2011	01-Oct-11	15-Oct-11	94	1	\$6.23	\$585.62
2012	01-Oct-12	15-Oct-12	94	2	\$7.90	\$742.60
2013	01-Oct-13	15-Oct-13	94	3	\$9.94	\$934.36
2014 ³	01-Oct-14	23-Oct-14	141	1+2	\$11.41	\$1,608.81
2015	01-Oct-15	15-Oct-15	94	2	\$14.41	\$1,354.54
2016	01-Oct-16	15-Oct-16	94	3	\$19.57	\$1,839.58
2017 ⁴	01-Oct-17	15-Oct-17	38	1	\$12.00	\$456.00
2018 ⁴	01-Oct-18	15-Oct-18	38	2	\$12.25	\$465.50

¹Not grazed due to drought concern.

²No record of use or payment for this year.

³As compensation for no spring grazing this year due to elk consumption of forage, Smith 6 Bar S Livestock was allowed an additional week of fall grazing and the use of 2 pastures.

⁴Smith 6 Bar S Livestock elected not to utilize the fall grazing during these years.

TOTAL AUM: >2,305

TOTAL INCOME: \$21,853.41