MONTANA FISH, WILDLIFE & PARKS

DRAFT ENVIRONMENTAL ASSESSMENT

EAR MOUNTAIN WILDLIFE MANAGEMENT AREA
GRAZING LEASE AGREEMENT RENEWAL
February 2019

I. PROPOSED ACTION DESCRIPTION

1. Type of proposed state action:

Montana Fish, Wildlife & Parks (FWP) Region 4 proposes to maintain a rest-rotation grazing system for cattle on Ear Mountain Wildlife Management Area (WMA). Since 1991, Ear Mountain WMA has been divided into two pastures, North – 960 acres and South – 2,120 acres (Figure 1), with two different lessees, which have been permitted to graze cattle in accordance with grazing lease stipulations. The proposed action would continue similar previous grazing lease terms and conditions (three-year rest/rotation cycle) for a six-year period. The proposed action would also continue to work under the primary objective of utilizing limited grazing as a management tool to enhance the quality of native forage for wildlife that inhabit the WMA.

2. Agency authority for the proposed action:

Montana Fish, Wildlife & Parks will be the agency authority for the proposed action. Under Section 87-1-210 of the Montana Code Annotated (MCA) authorizes FWP to protect, enhance, and regulate the use of Montana's fish and wildlife resources for public benefit now and in the future. Fish, Wildlife & Parks lease-out policy also requires and Environmental Analysis (EA) to be written for all new agricultural leases, lease extensions, or lease renewals (MCA, 89-1-209). Lastly, in accordance with the Montana Environmental Policy Act, FWP is required to assess the impacts that any proposal or project might have on the natural and human environments. The Fish and Wildlife commission must also approve all grazing leases on Wildlife Management Areas owned by MT FWP.

3. Name of project:

Ear Mountain Wildlife Management Area Grazing Agreement Lease.

4. Anticipated Schedule:

Public Comment Period:	March 1 – March 22, 2019
Decision Notice:	March/April, 2019
Fish & Wildlife Commission:	Final Consideration: April 25, 2019
Leases Begins:	June 1, 2020 (North Pasture); June 1, 2021 (South Pasture - 2020 would be a scheduled grazing 'rest' year)
Leases End:	December 31, 2025
Term of each Lease:	6-years (two full grazing rotation cycles)
Grazing Schedule:	3-year cycle focusing grazing during early (June) and late (August) periods. See Table 3 for the complete layout.

5. Location affected by proposed action (county, range and township):

The proposed action is located on the Ear Mountain WMA within Teton County, approximately 20 miles west of Choteau. The proposed grazing lease agreements divides the WMA into two pastures (North pasture – 960 acres; South pasture – 2,120 acres) and have been in place since 1991 (South Pasture) and 1992 (North Pasture). Legal descriptions of each pasture are as follows:

Table 1. Legal Description - North Pasture (960 Acres)

Teton County	
Township, Range	**Section**
T 24N, R 8W	S 4: SW1/4SE1/4; S1/2SW1/4
T 24N, R 8W	S 5: SE1/4SW1/4; S1/2SE1/4
T 24N, R 8W	S 8: E1/2NW1/4; NE1/4; N1/2SE1/4; SE1/4SE1/4 and portions north of the existing fence line in SW1/4SE1/4, SE1/4SW1/4 and NE1/4SW1/4
T 24N, R 8W	S 9: W1/2

Table 2. Legal Description - South Pasture (2,120 Acres)

Teton County	
Township, Range	**Section**
T 24N, R 8W	S 7: Lot 3 (NW ¼ SW ¼), Lot 4 (SW ¼ SW ¼), E ½ SW ¼, SE ¼
T 24N, R 8W	S 8: That portion that lies south of the existing fence line between the NW corner of government lot 1 in section 17 and the SE corner of the SW ¼ NW ¼ of said section 8.
T 24N, R 8W	S 17: Lot 1 (NE ¼ NE ¼), Lot 2 (SE ¼ NE ¼), Lot 3 (NE ¼ SE ¼), Lot 4 (SE ¼ SE ¼), W ½ E ½, W ½
T 24N, R 8W	S 18: E ½, E ½ NW ¼
T 24N, R 8W	S 19: E ½ NE ¼, NE ¼ SE ¼
T 24N, R 8W	S 20: Lot 1 (NE ¼ NE ¼), Lot 2 (NW ¼ NE ¼), Lot 3 (NE ¼ NW ¼), Lot 4 (SE ¼ NW ¼), Lot 5 (SW ¼ NE ¼), Lot 6 (SE ¼ NE ¼), Lot 7 (NE ¼ SW ¼), Lot 8 (SE ¼ SW ¼), W ½ W ½

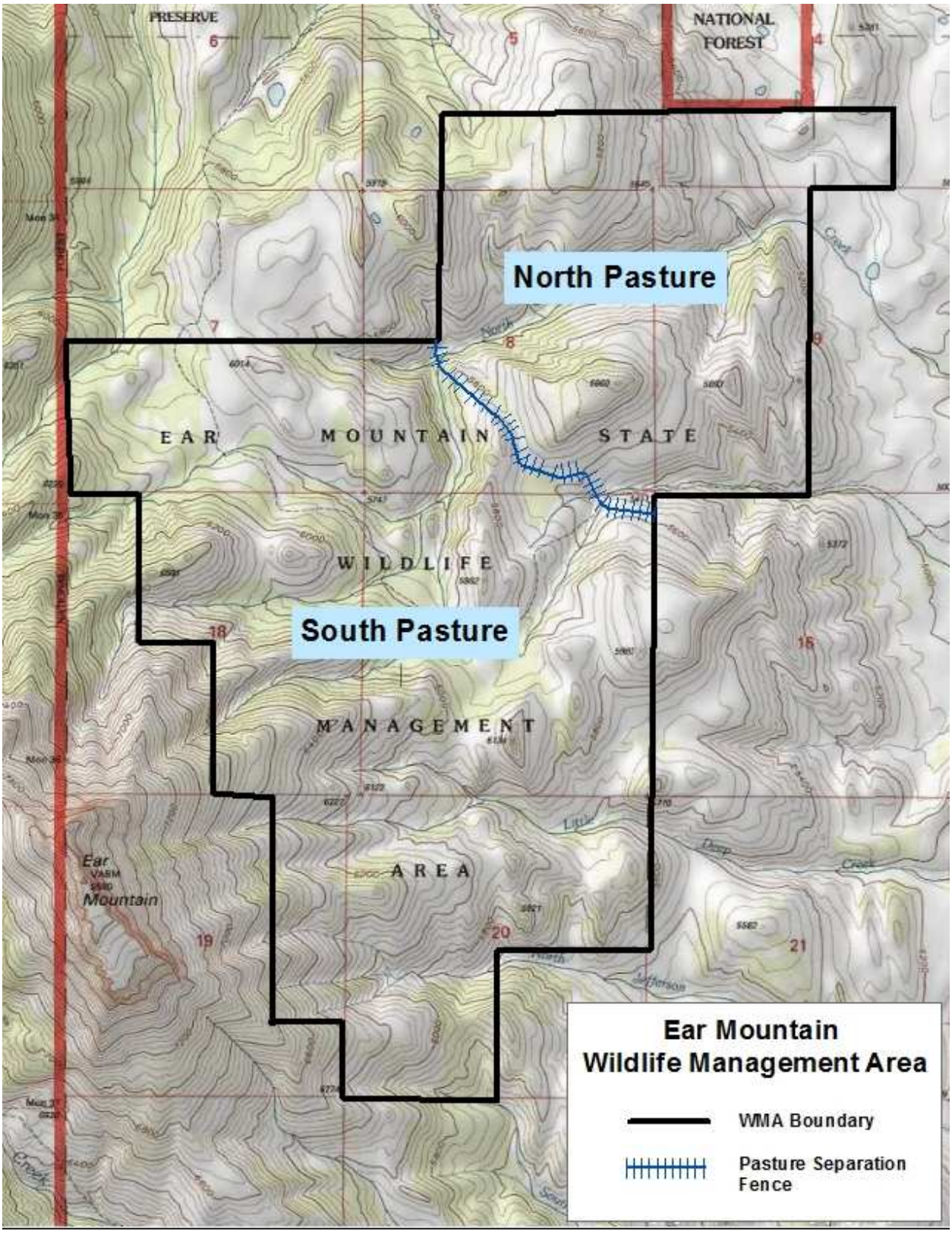


Figure 1. Ear Mountain WMA and associated grazing pastures.

6. Project size -- *estimate* the number of acres that would be directly affected that are currently:

	Acres		Acres
(a) Developed:		(d) Floodplain	0
Residential	0		
Industrial	0	(e) Productive:	
(existing shop area)		Irrigated cropland	0
(b) Open Space/Woodlands/	0	Dry cropland	0
Recreation	0	Forestry	1,210
(c) Wetlands/Riparian Areas	90	Rangeland*	1,640
		Other	140

*includes shrubland, steppe, savannah and grassland habitat types

7. Listing of any other Local, State or Federal agency that has overlapping or additional jurisdiction.

(a) Permits: None required

(b) Funding:

Fencing – As part of the agreement, routine fence maintenance will be carried out by the lessee's and FWP personnel. Fish, Wildlife & Parks will provide materials for fence repairs. Fish, Wildlife & Parks will pay lessees at the hourly rate of $10.00 for time spent on fence maintenance. When the grazing rental payment is due from the lessee to FWP, the total cost of maintenance through each lessee (number of hours worked as well as any necessary materials provided) will be subtracted from the payment. Fence maintenance costs through the lessee will not exceed $500.00. The lessee will provide written documentation of maintenance performed to include date(s), hours worked, work description and location. Fish, Wildlife & Parks does not anticipate significant fence maintenance since most existing fences on the WMA are in good condition.

Rental Payment – The FWP standard grazing rate (cost/animal unit month - AUM) will be assessed for grazing on these pastures and is based upon the average annual grazing fees for Montana as reported by the National Agriculture Statistics Service in their annual report. For reference, the 2018 FWP standard grazing rate was $24.50/AUM.

(c) Other Overlapping or Additional Jurisdictional Responsibilities: None

8. Narrative summary of the proposed action or project including the benefits and purpose of the proposed action:

Location and Brief Description of Habitat and Wildlife Use:

Lying along the east slope of the Rocky Mountain Front, Ear Mountain WMA was purchased in 1976 by MT Fish, Wildlife & Parks (Fish and Game at the time) to provide public access to adjacent Federal lands, but also to set aside winter range for mule deer and bighorn sheep (among other year-round and seasonal wildlife use).

The WMA is very diverse topographically (Figure 1). Much of the landform consists of steep slopes. Sparsely timbered slopes with patches of limber pine (*Pinus flexilis*) characterize the eastern edge of the WMA. Dense stands of lodgepole pine (*Pinus Contorta*) and Douglas fir (*Pseudotsuga menziesii*) are interspersed with parks across the western half of the WMA. Clones of aspen (*Populus tremuloides*) occur along the margins of perennial streams and their tributaries. A variety of shrubs are dispersed throughout the open and forested rangeland types, while dense timbered habitat along with steep shale slopes (below Ear Mountain) is located in the western portion of the WMA. A wildfire (lighting strike) in September 2000 burned approximately 400 acres on the north end of the WMA.

The climax grassland type is rough fescue (*Festuca scabrella*). Other frequently occurring native grasses include Idaho fescue *(Festuca idahoensis*), bluebunch wheatgrass (*Agropyron spicatum*), and June grass (*Koeleria macrantha*). Other nonnative grasses are present on the WMA. *Balsamorhiza, Flox, Polygonum*, pasque flower, *Geranium, Antennaria*, and other forbs common to the Rocky Mountain Front are abundant on the WMA.

The WMA contains a diversity of wildlife inhabitants, large and small, game and non-game, resident and seasonal. As noted above, mule deer and bighorn sheep are two of the more focal species related to the value of the WMA. At least specific to the WMA, both species are below historic population levels with a variety of factors likely influencing productivity, survivorship and/or distribution (i.e., habitat diversity and productivity, predation influences, disease affects, annual/seasonal weather patterns, etc.). For mule deer, populations along the entire southern Rocky Mountain Front (RMF) continue to remain below historic levels observed during the 1980's. Appendix D presents spring mule deer survey data for the last 20 years for the trend area that includes portions of Ear Mtn. WMA (the trend area includes a good portion of the mountain foothill habitat type extending from the Sun River to the Teton River. This data portrays survey results dating back to the mid-1990's. Many of the observed deer in this trend area are found in the central and southern portions of the trend area (Sun River to the Deep Creek area).

Similarly, bighorn sheep also are well below historic levels, although disease is the primary influence in recent years. A die-off occurring during the 2010/2011 years had a significant impact on the bighorn sheep populations along the entire southern RMF area, to include this area. Appendix E presents survey results depicting this decline. Generally, populations appear to have stabilized along with improved lamb recruitment and in time, numbers will hopefully increase to their potential. Since the die-off period, *observed* sheep presence on the WMA primarily consists of winter/spring use of more northern portions of the WMA (large upland grass zones) along with some presence on the very southern and western portions of the area.

Historical Livestock Grazing Summary:

The WMA is managed for productive, diverse plant communities that will provide the quality forage and cover for native wildlife species, with emphasis on fall, winter and spring range habitat for mule deer and bighorn sheep. Over the last several years, utilizing a three-year rest/rotation grazing cycle as a management tool was directed at helping to maintain the vigor of vegetation on the WMA for the benefit of wildlife. Limited rest/rotation grazing on the WMA also provides local opportunity for ranch operators for good quality cattle grazing pasture. Year-round and seasonal forage for mule deer and bighorn sheep and other big game has been maintained.

Prior to acquisition from FWP in 1976, livestock grazing on the land was the length of the growing season, continuous from year to year. From 1976-1991, the WMA was not used as livestock (cattle) grazing pasture to allow vegetation reestablishment due to significant utilization prior to acquisition. In 1991, a rest-rotation grazing system was established for the 2,120-acre south pasture in order to address several sites on the WMA that portrayed limited vegetative cover due to wind and erosion along with accumulation of decadent material for bunchgrass species such as rough fescue (*Festuca scabrella*) (FWP, 1995). The intent of the grazing system was to increase vegetative cover while improving the vigor and production of bunchgrass stands on the area (FWP, 1995). Due to the same concerns, a grazing system was established for the 960-acre north pasture in 1992.

Both pastures have continued to follow a rest-rotation pattern to a varying degree with the adoption of the most current system coming from an evaluation of the system and vegetation in 1999 and 2000 (Frisina and Kujala, 1999; Frisina and Kujala, 2001). This system prescribed to grazing one month before seed ripe the first year (June), one month after seed ripe the following year (August) and a year of complete rest the third year. The use of grazing as a vegetative management tool on the WMA does come with some impacts, more specifically on pertinent browse species in some areas. To better understand these impacts, MT FWP completed a more comprehensive analysis of grazing and vegetative communities on these pastures in 1999 and 2001 (Frisina and Kujala, 1999, 2001). Based on this work and in order to reduce browsing intensity, browsing frequency, and increase the frequency of season-long rest treatments, cattle stocking rates were reduced beginning in 2000 for the South pasture from a maximum of 650 to 391 AUM's per one-month grazing period. Since this time, average actual use on this Pasture is 326 AUMs per period of use (range of 200 to 391 AUM's). The North pasture stocking rate was reduced from a maximum stocking rate of 260 AUM's (average = 219 AUM's) to a maximum of 70 AUM's beginning in 2001 for each one-month grazing period. Since this time, this pasture has typically seen maximum AUM use during each period of use. Both latter stocking rates have remained at this level since this time. The higher maximum annual AUM potential for the South pasture compared to the North pasture is in large part due to the higher availability of primary and secondary range. For further information on the Frisina and Kujala documents (1999, 2001) or to request a copy of these documents refer to Part V. of this EA (EA Preparation).

Contemporary Livestock Grazing Summary

Based on the most recent more dedicated vegetation monitoring surveys, photo points (Appendix C), and other qualitative observations, browse plants continue to show overall fair to

good growth depending on the location. Annual vegetation growth obviously fluctuates some from year to year pending area conditions (i.e., moisture levels).

South Pasture: Monitored aspen and willow (*Salix* spp.) within the South pasture are showing signs of heavier browse in places. Some plants (the minority) are displaying arrested architectures when considering the height of the current year's growth (at the base) vs. top of the current year's growth. However, most plants are not being browsed to the point of being in the arrested phase, but with time, are able to grow through the browse zone (Appendix C). Grazing levels (AUMs) in this pasture are likely at a maximum with respect to long-term sustainability and impacts to vegetation. As has been the case in the most recent grazing agreements for this pasture, AUM allowances provide for *up to* 391 AUM's. This stocking rate allows for not more than that level of AUM use for a given grazing period and years like the 2018 grazing season, where AUM stocking rates were considerably below this level (277 AUM's), provides added relief, in addition to it being a strong vegetation production year given significant spring/early summer moisture during the primary growing season. As is noted above, average annual AUM levels since 2001 in this pasture is 326 AUM's. Broadly, grazing is serving its purpose to maintain quality of vegetation in this pasture.

North pasture: Most of this pasture sees relatively light grazing impacts and over utilization is of minimal concern. However, one primary area of some concern with respect to browse impacts is in the lower North Fork of Willow creek near the east boundary of the WMA. Observations show some chokecherry (*Prunus virginiana*) in this immediate area to be in the arrested phase due to browse pressure. It is important to note that this area constitutes a small percentage (<5%) of the entire pasture. This is typically more of a concern in the late summer grazing period than the early period. Cattle tend to disperse better in the early period due to preferred forage (green grass) and cooler weather conditions. For Cottonwood in this area, although the plants are seeing some browse impact, they are able to grow above the browse zone. Just as important, there also continues to be less than desired utilization of grass in the more upland grass zones of this pasture (Appendix C). Most notable is the large area north of the NF Willow creek drainage. Overall, bunchgrasses are in healthy condition (robust plants portraying true bunchgrass stature), however residual vegetation (grass) is quite prevalent throughout the area.

Given the status of these two pastures, and in order to address the latter concerns for the North pasture long-term, the Proposed Action (Alternative A) is being recommended at this time. This action would commit to similar practices as has been prescribed in recent years, although utilization of limited, temporary electric fence to shift cattle distribution out of the riparian areas and onto the upland areas would be present in the North pasture. The addition of one water tank development is also being proposed in this pasture for the same purpose. The primary intent of these modifications should help improve cattle distribution and hence, the productivity or availability and quality (nutritional value) of the more upland grass zone in the North pasture.

The lease terms are proposed for six-years to allow for two full grazing rotation cycles (Table 3). During this time, continued monitoring of vegetation production and utilization along with cattle distribution for these pastures would continue.

As part of the proposed action, the lessees would allow free public hunting with permission on their properties for the duration of the lease agreement. Public access to portions of their properties at certain times of the year could be denied due to the presence of livestock or other

ranch activities that might inhibit normal ranching operations. The lessees would regulate hunter numbers and timing and distribution of hunters on a first come, first served basis. Hunting would be allowed by permission only.

9. Description and analysis of reasonable alternatives (including the no action alternative) to the proposed action whenever alternatives are reasonably available and prudent to consider and a discussion of how the alternatives would be implemented:

Alternative A: Proposed Action – renewal of North and South pasture grazing leases.

Fish, Wildlife & Parks would implement the below described six-year rest/rotation grazing cycle on the WMA. The establishment and maintenance of the proposed grazing plan would continue to use cattle grazing as a management tool to maintain plant productivity by stimulating regrowth and palatability of native grasses and forbs for the benefit of wildlife. The lessees would benefit from the availability of additional early and late summer pasture for their cattle. Although Ear Mtn. WMA grazing systems are not formally part of a larger grazing management plan to include the lessee's properties and other adjacent lands (private and public), grazing on Ear Mtn. does, by default, assist in alleviating continuous grazing practices on other lands in the immediate area. The proposed action would promote and continue good relations with local ranchers/neighbors. Some segments of the public may disapprove of cattle grazing on the WMA. Free public hunting opportunity would be a requirement of the terms through the lessees' properties via permission only and on a first come, first serve basis.

Table 3. Proposed grazing schedule for the North and South pasture located on Ear Mtn. WMA, 2020-2025. Early = June; Late = August; Rest = no use by livestock.

	North Pasture			South Pasture		
Year	Early (June)	Late (August)	Rest	Early (June)	Late (August)	Rest
2020	X					X
2021		X		X		
2022			X		X	
2023	X					X
2024		X		X		
2025			X		X	

X's indicate the treatment type (grazing or rest) for the given year.

North Pasture: For those years in which grazing would occur, up to 102 AUM's would be allotted for this pasture. This stocking rate is taking into consideration forage availability based on topography and habitat types related to forage and water availability (primary and secondary range classifications), previous observations of cattle distribution, utilizing removeable electric fence and a proposed new water development (stock tank) to manipulate cattle distribution and previous stocking rates. Grazing emphasis will be placed on obtaining effective treatment on primarily the northern half of this pasture.

South Pasture: For those years in which grazing would occur, up to 391 AUM's would be allotted for this pasture (same as other recent grazing lease agreements). As is noted above, his stocking rate is also taking into consideration forage availability based on topography and habitat types related to forage and water availability (primary and secondary range classifications), previous observations of cattle distribution and previous stocking rates. Grazing emphasis will be placed on obtaining effective treatment dispersed through most of this pasture.

The FWP standard grazing rate (cost/animal unit month) is based on the average annual grazing fees for Montana as reported by the National Agricultural Statistics Survey (NASS) for Montana in their annual report. The proposed grazing plan for each pasture would be effective for six years, with contract renewal and/or modifications contingent on future management goals on WMA. Allowing for two full grazing rotation cycles would allow for better ability to measure the treatments given the reality of obtaining measurable changes that occur with respect to forage, vegetation and/or the general habitat in a relatively short period. See Appendix A and B for further information on the proposed grazing plan.

Cattle distribution will obviously not be completely even over the entire pasture system, although this is certainly viewed as a positive impact. Given the diversity of wildlife that reside year-round or seasonally on the WMA, having areas with little or no grazing only adds value to the habitat diversity for those species that may prefer more undisturbed habitat types.

Alternative B: Renewal of only the South or only the North grazing leases on Ear Mountain WMA.

This alternative would reduce the overall effectiveness of utilizing limited grazing management on Ear Mtn. WMA to maintain vegetative quality. Over time, pasture conditions (depending on which pasture was not being grazed) would be anticipated to return to pre-1992 levels and defeat the original intent of improving vegetative cover while improving the palatability of targeted species on the area (e.g., native bunchgrass spp.). One of the lessee's would be required to find additional grazing pasture elsewhere and would not be required to allow free public hunting access on their property.

Alternative C: No Action

Fish, Wildlife & Parks would not utilize the proposed grazing management plan on the WMA. Over time, like above, forage quality (palatability) for some wildlife species (i.e., big game – mule deer & bighorn sheep) species would decline. The lessees would be required to find additional grazing pasture elsewhere. The lessees would not be required to allow free public hunting access on their properties.

If Alternative's B or C were chosen, FWP would continue to manage Ear Mtn. WMA for the benefit of wildlife and public access. Current services and maintenance of the WMA would continue. No potential impacts to the environment or human resources would be expected to occur as a result of cattle presence since grazing would not occur.

PART II. ENVIRONMENTAL REVIEW CHECKLIST

1. **Evaluation of the impacts of the Proposed Action including secondary and cumulative impacts on the Physical and Human Environment.** Although alternative's B and C would have some level of impact on the natural environment of the WMA, only the proposed action was reviewed due to it's potential to have the largest impact to the WMA and given the Department's desire to implement this action. Certainly, if alternative's B or C were deemed most appropriate, further review and analysis may be warranted in the Final EA.

A. PHYSICAL ENVIRONMENT

1. LAND RESOURCES Will the proposed action result in:	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. **Soil instability or changes in geologic substructure?			X		No	1a
b. Disruption, displacement, erosion, compaction, moisture loss, or over-covering of soil, which would reduce productivity or fertility?			X		No	1b
c. **Destruction, covering or modification of any unique geologic or physical features?		X				
d. Changes in siltation, deposition or erosion patterns that may modify the channel of a river or stream or the bed or shore of a lake?		X				
e. Exposure of people or property to earthquakes, landslides, ground failure, or other natural hazard?		X				
f. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Resources (attach additional pages of narrative if needed):

1a and 1b. Cattle usage (up to 493 total AUM's/year) and the short grazing period will cause some measurable damage primarily where cattle develop trail systems and concentrate around water. Stocking levels prescribed in the proposed action are substantially reduced from historic levels which have helped minimize damage. The addition of utilization of temporary electric fence and one water tank in the north pasture should help to alleviate concerns related to unwanted concentration of livestock in portions of the lower North Fork of Willow creek.

* Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

*** Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

**** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

2. AIR **Will the proposed action result in:**	**IMPACT ***					
	Unknown	**None**	**Minor**	**Potentially Significant**	**Can Impact Be Mitigated**	**Comment Index**
a. **Emission of air pollutants or deterioration of ambient air quality? (Also see 13 (c).)		X				
b. Creation of objectionable odors?			X		No	2b
c. Alteration of air movement, moisture, or temperature patterns or any change in climate, either locally or regionally?		X				
d. Adverse effects on vegetation, including crops, due to increased emissions of pollutants?		X				
e. ***For P-R/D-J projects, will the project result in any discharge, which will conflict with federal or state air quality regs? (Also see 2a.)		X				
f. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Air Resources (attach additional pages of narrative if needed):

2b. The proposed action would have no effect on the ambient air quality, however, some individuals may find the smell of livestock grazing on the WMA objectionable.

* Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

*** Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

**** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

3. WATER Will the proposed action result in:	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. *Discharge into surface water or any alteration of surface water quality including but not limited to temperature, dissolved oxygen or turbidity?		X				
b. Changes in drainage patterns or the rate and amount of surface runoff?		X	x		No	3b
c. Alteration of the course or magnitude of floodwater or other flows?		X			No	3c
d. Changes in the amount of surface water in any water body or creation of a new water body?		X			No	3d
e. Exposure of people or property to water related hazards such as flooding?		X				
f. Changes in the quality of groundwater?		X				
g. Changes in the quantity of groundwater?		X			No	3g
h. Increase in risk of contamination of surface or groundwater?			X		No	3h
i. Effects on any existing water right or reservation?		X				
j. Effects on other water users as a result of any alteration in surface or groundwater quality?			X		Yes	3j
k. Effects on other users as a result of any alteration in surface or groundwater quantity?		X				
l. ****For P-R/D-J, will the project affect a designated floodplain? (Also see 3c.)		X				
m. ***For P-R/D-J, will the project result in any discharge that will affect federal or state water quality regulations? (Also see 3a.)		X				
n. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Water Resources (attach additional pages of narrative if needed):

3b, c, d and g. The addition of one water tank development will take advantage of a small natural spring located in the NE portion of this pasture. The spring will be developed, and water will be piped approximately 300 yards from the development to a water tank. This development will be made in accordance with FWP engineering designs and standards and constructed to only alter a portion of the water this direction as needed during the pertinent grazing period. No significant impacts to the environment are anticipated with this development.

3h and 3j. Presence of cattle grazing in/around riparian zones such as creek bottoms may result in some localized water quality concerns. At least during the grazing period, water users may need to take added caution in drinking water before the water is purified. However, water users should ideally be taking the necessary precautions anyway due to the existing potential of naturally occurring water-based pathogens (i.e., Giardia).

* Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

*** Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

**** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

4. VEGETATION Will the proposed action result in?	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Changes in the diversity, productivity or abundance of plant species (including trees, shrubs, grass, crops, and aquatic plants)?			X		No	4a
b. Alteration of a plant community?			X		No	4b
c. Adverse effects on any unique, rare, threatened, or endangered species?		X				
d. Reduction in acreage or productivity of any agricultural land?		X				
e. Establishment or spread of noxious weeds?		X			Yes	4e
f. ****For P-R/D-J, will the project affect wetlands, or prime and unique farmland?		X				
g. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Vegetation (attach additional pages of narrative if needed):

4a/b. The grazing system is designed to benefit wildlife by maintaining grass structure and palatability on the WMA. Some intended loss in grass biomass will occur as a result of grazing treatments. Past stocking rates and cattle distribution have resulted in maintaining more residual grass cover, especially in the north pasture, although proposed changes in this lease look to change this. Browse species impacts will also occur, however overall impacts are intended to be minimal long-term. Seasonal deferment and yearlong rest also provide habitats free of grazing over time. Further review and analysis of grazing system treatments as described in the Proposed Action will occur over the lease period.

4e. Currently, there are established clusters of spotted knapweed, houndstongue, and leafy spurge on some of the acreage included within the grazing plan. The grazing system is intended to enhance native plant productivity, which helps reduce weed infestations. The timing of early grazing coincides with the palatability of emerging weeds, which may also help reduce their vigor. In addition, FWP will continue to manage existing noxious weed infestations on its properties per the guidance of the FWP Integrated Noxious Weeds Management Plan.

* Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

*** Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

**** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

** 5. FISH/WILDLIFE Will the proposed action result in:	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Deterioration of critical fish or wildlife habitat?		X				5a
b. Changes in the diversity or abundance of game animals or bird species?			X		No	5b
c. Changes in the diversity or abundance of nongame species?		X				
d. Introduction of new species into an area?		X				
e. Creation of a barrier to the migration or movement of animals?			X		Yes	5e
f. Adverse effects on any unique, rare, threatened, or endangered species?		X				
g. Increase in conditions that stress wildlife populations or limit abundance (including harassment, legal or illegal harvest or other human activity)?			X		No	5g
h. ****For P-R/D-J, will the project be performed in any area in which T&E species are present, and will the project affect any T&E species or their habitat? (Also see 5f.)			X		No	5h
i. ***For P-R/D-J, will the project introduce or export any species not presently or historically occurring in the receiving location? (Also see 5d.)		X				
j. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Fish and Wildlife:

5a. The North Fork of Willow creek maintains a genetically pure population of Westslope Cutthroat trout. While no known negative impacts to local fish species is occurring in this area, the area fisheries biologist contends that the proposed utilization of temporary electric fence to further limit cattle presence in the North Fork Willow creek riparian bottom should only help any potential impacts to fish habitat in portions of that area.

5b. The grazing system anticipates overall maintenance of the quality habitat for wildlife.

5e. Perimeter and interior fences are already established for this pasture system. To mitigate their impact, wildlife friendly fence designs have been employed so that wildlife can either pass above or below barbed wire strands.

5g. Some resident game and nongame species, to include mule deer, black and grizzly bear, elk, mountain grouse, small mammals and nongame birds could be affected by cattle presence and congestion for a limited time. These species may avoid the heavy use areas but should return to the area when cattle presence is diminished.

5h. Grizzly and black bears are present on and around the WMA during the spring, summer, and fall periods. Bear presence is recognized by the cooperating landowners involved with these proposed actions. Livestock distribution is monitored and assessed to avoid direct conflict with these bears. In the event a conflict occurs, all measures will be made to favor the continued presence of bears on the WMA.

* Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

*** Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

**** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

B. HUMAN ENVIRONMENT

6. NOISE/ELECTRICAL EFFECTS **Will the proposed action result in:**	**IMPACT ***					
	Unknown	**None**	**Minor**	**Potentially Significant**	**Can Impact Be Mitigated**	**Comment Index**
a. Increases in existing noise levels?		X				
b. Exposure of people to serve or nuisance noise levels?		X				
c. Creation of electrostatic or electromagnetic effects that could be detrimental to human health or property?		X				
d. Interference with radio or television reception and operation?		X				
e. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Noise/Electrical Effects (attach additional pages of narrative if needed):

* Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

*** Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

**** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

7. LAND USE Will the proposed action result in:	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Alteration of or interference with the productivity or profitability of the existing land use of an area?		X				7a
b. Conflicted with a designated natural area or area of unusual scientific or educational importance?		X				
c. Conflict with any existing land use whose presence would constrain or potentially prohibit the proposed action?		X				7c
d. Adverse effects on or relocation of residences?		X				
e. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Use (attach additional pages of narrative if needed):

7a/c. Grazing activity would occur outside the time frame of pertinent big game or game bird hunting seasons that could be associated with this habitat.

* Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

*** Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

**** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

8. RISK/HEALTH HAZARDS Will the proposed action result in:	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Risk of an explosion or release of hazardous substances (including, but not limited to oil, pesticides, chemicals, or radiation) in the event of an accident or other forms of disruption?		X				
b. Affect an existing emergency response or emergency evacuation plan, or create a need for a new plan?		X				
c. Creation of any human health hazard or potential hazard?			X			8c
d. ***For P-R/D-J, will any chemical toxicants be used? (Also see 8a)		X				
e. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Risk/Health Hazards (attach additional pages of narrative if needed):

8c. Chemical spraying is part of FWP's integrated weed management program to manage noxious weeds. Certified professionals will utilize permitted chemicals in accordance with product labels and as provided for under state law.

* Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

*** Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

**** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

9. COMMUNITY IMPACT Will the proposed action result in:	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Alteration of the location, distribution, density, or growth rate of the human population of an area?		X				
b. Alteration of the social structure of a community?		X				
c. Alteration of the level or distribution of employment or community or personal income?		X				
d. Changes in industrial or commercial activity?		X				
e. Increased traffic hazards or effects on existing transportation facilities or patterns of movement of people and goods?		X				
f. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Community Impact (attach additional pages of narrative if needed):

* Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

*** Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

**** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

10. PUBLIC SERVICES/TAXES/UTILITIES Will the proposed action result in:	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Will the proposed action have an effect upon or result in a need for new or altered governmental services in any of the following areas: fire or police protection, schools, parks/recreational facilities, roads or other public maintenance, water supply, sewer or septic systems, solid waste disposal, health, or other governmental services? If any, specify:		X				
b. Will the proposed action have an effect upon the local or state tax base and revenues?		X				
c. Will the proposed action result in a need for new facilities or substantial alterations of any of the following utilities: electric power, natural gas, other fuel supply or distribution systems, or communications?		X				
d. Will the proposed action result in increased use of any energy source?		X				
e. **Define projected revenue sources			X			10e
f. **Define projected maintenance costs.			X			10f
g. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Public Services/Taxes/Utilities (attach additional pages of narrative if needed):

10e. The FWP standard grazing rate (cost/animal unit month) is based on the average annual grazing fees for Montana as reported by the National Agricultural Statistics Service in their annual report. The exact amount would depend upon the number of AUM's grazed X the annual grazing rate. Fish, Wildlife & Parks will be paid at the standard rate through each lessee (minus reimbursement to lessee for fence maintenance).

10f. Fish, Wildlife & Parks anticipates minimal maintenance costs for existing fences. Any future maintenance costs would be absorbed into the regular operation and maintenance accounts for the WMA.

* Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

*** Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

**** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

** 11. AESTHETICS/RECREATION Will the proposed action result in:	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Alteration of any scenic vista or creation of an aesthetically offensive site or effect that is open to public view?			X		No	11a
b. Alteration of the aesthetic character of a community or neighborhood?		X				
c. **Alteration of the quality or quantity of recreational/tourism opportunities and settings? (Attach Tourism Report.)		X				
d. ***For P-R/D-J, will any designated or proposed wild or scenic rivers, trails or wilderness areas be impacted? (Also see 11a, 11c.)		X				
e. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Aesthetics/Recreation (attach additional pages of narrative if needed):

11a. Historically, these pastures have been grazed by cattle. Cattle will be present for short periods of time each of the two successive years this agreement is proposed to be in place. The WMA is in a rural setting and the presence of cattle will not be something new for the public. Public presence on the WMA during the grazing periods will be allowed. The grazing plan is designed so that no cattle will be present on the WMA after the beginning of September so there are no concerns related to hunter activity and cattle presence.

* Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

*** Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

**** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

12. CULTURAL/HISTORICAL RESOURCES Will the proposed action result in:	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. **Destruction or alteration of any site, structure or object of prehistoric historic, or paleontological importance?		X				12a-d
b. Physical change that would affect unique cultural values?		X				12a-d
c. Effects on existing religious or sacred uses of a site or area?		X				12a-d
d. ****For P-R/D-J, will the project affect historic or cultural resources? Attach SHPO letter of clearance. (Also see 12.a.)		X				12a-d
e. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Cultural/Historical Resources (attach additional pages of narrative if needed):

12a-d. FWP believes the proposed action would not have significant impact to any potential cultural or historic resources. Native large mammal grazing (mule and white-tailed deer, elk, bighorn sheep, presumably bison) has consistently occurred before and in concurrence (except bison) with more recent livestock presence. Fish, Wildlife and Parks has been using grazing on the WMA in a manner that is sustainable to the native vegetation and does not provide substantial impacts to wildlife, soils or water. The proposed action does involve development of one spring and placement of one stock tank, but disturbance related to this is minimal and no known cultural/historical resources occur on the area (see below).

Renewing a grazing lease such as is described (does not involve any substantial ground disturbance) does not require a cultural resource review. In consultation with SHPO, FWP has adopted rules under MCA 22-3-424 (1) for the "preservation of heritage properties and paleontological remains on lands owned by the state to avoid, whenever feasible, state actions or state assisted or licensed actions that substantially alter heritage properties or paleontological remains on lands owned by the state and avoid, whenever feasible, state actions or state assisted or licensed actions that substantially alter the properties…" FWP's cultural resource policy, ARM 12.8.503, requires that the department initiate "reviews and studies required by this part prior to initiating any undertaking which may result in significant changes to the surface structures, or other character of the land." A grazing lease or grazing in general does not substantially alter heritage properties (MCA) nor does it change surface structures or the character of the land (ARM). Although one small water development is also being proposed, no impacts to cultural/historical resources are expected, especially considering there are no known such resources present. We also believe in terms of other cultural concerns, our leasing activities on Ear Mountain WMA do not have a significant negative impact on the land (e.g., we are not restricting public uses of the property, be they recreation or cultural).

According to the *EA Report for Development on the Ear Mountain Game Range (MT FWP, project number: W-124-D)* when the WMA was initially purchased in 1976, "No historic sites are known to exist on the property. Archeological sites may be present in light of the use of the Rocky Mountain foot hills as a hunting ground by native Americans, however, to date no sites have been located."

* Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

*** Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

**** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

SIGNIFICANCE CRITERIA

13. SUMMARY EVALUATION OF SIGNIFICANCE Will the proposed action, considered as a whole:	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Have impacts that are individually limited, but cumulatively considerable? (A project or program may result in impacts on two or more separate resources that create a significant effect when considered together or in total.)		X				
b. Involve potential risks or adverse effects, which are uncertain but extremely hazardous if they were to occur?		X				
c. Potentially conflict with the substantive requirements of any local, state, or federal law, regulation, standard or formal plan?		X				
d. Establish a precedent or likelihood that future actions with significant environmental impacts will be proposed?		X				
e. Generate substantial debate or controversy about the nature of the impacts that would be created?		X				
f. ***For P-R/D-J, is the project expected to have organized opposition or generate substantial public controversy? (Also see 13e.)		X				
g. ****For P-R/D-J, list any federal or state permits required.		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Significance Criteria (attach additional pages of narrative if needed):

The proposed project would not conflict with any local, state, or federal regulations. Furthermore, no substantial controversy or public debate is expected by continuation of the grazing plan since no adverse effects are anticipated and the grazing would generally benefit local wildlife populations and their habitat.

* Include a narrative explanation under Part III describing the scope and level of impact. If the impact is unknown, explain why the unknown impact has not or cannot be evaluated.

** Include a narrative description addressing the items identified in 12.8.604-1a (ARM).

*** Determine whether the described impact may result and respond on the checklist. Describe any minor or potentially significant impacts.

**** Include a discussion about the issue in the EA narrative and include documentation if it will be useful.

2. Evaluation and listing of mitigation, stipulation, or other control measures enforceable by the agency or another government agency:

Two separate grazing lease agreements signed by each party would be the guiding documents for the duration of the grazing plan on the WMA. The agreements would be valid for six years (2020-2025). Fish, Wildlife and Parks would continue to monitor vegetative quality and quantity on both pastures throughout this time period. Additional discussion and communication (internally and externally) would also occur with respect to reviewing options for any necessary future improvements to grazing system plans that will benefit the WMA. At the end of the six-year period a decision would be made on how to move forward with respect to future Ear Mtn. WMA grazing plans.

PART III. NARRATIVE EVALUATION AND COMMENT

The proposed grazing management plan between FWP and the Salmond and Gollehon Ranches would support maintaining productive habitat conditions on Ear Mtn. WMA. Livestock would be used in a limited six-year rest-rotation grazing system to maintain and/or improve vegetative conditions for wildlife.

The components of this project would not have significant impacts on the physical environment (i.e. geological features, fish and wildlife, and water resources) or the human environment (i.e. land use, recreation, and utilities). Most impacts identified in the previous pages are minor and would be of short duration. As previously discussed, anticipated long-term consequences from the implementation of past, current and potential future grazing plans would be to maintain forage and cover conditions for wildlife.

PART IV. PUBLIC PARTICIPATION

1. Public Involvement:

The public will be notified in the following manners to comment on this EA, the proposed action and alternatives:

- Public notice submitted to each of these 'local' newspapers: *Choteau Acantha, Fairfield Sun Times, and the Great Falls Tribune.*
- One statewide press release;
- Direct mailing or email notification to landowners and interested parties (individuals, groups, agencies).
- Public notice on the Fish, Wildlife & Parks web page: http://fwp.mt.gov where comments can be submitted.

Copies of this draft environmental assessment are available by mail from Region 4 FWP at 4600 Giant Springs Road, Great Falls, 59405; by phoning 406-467-2488; by emailing blonner@mt.gov; or by viewing FWP's website - http://fwp.mt.gov/home/publicComments.html

This level of public notice and participation is appropriate for a project of this scope having limited impacts, many of which can be mitigated.

2. Duration of comment period:

Commenting is available online on the EA's webpage or by mail to the FWP address above or by email to blonner@mt.gov. Comments will be accepted to FWP no later than 5:00 pm on March 22, 2019.

Given the local focus and relative simplicity of the proposed action, a minimum 21-day public comment period and subsequent Commission action is appropriate.

PART V. EA PREPARATION

1. Based on the significance criteria evaluated in this EA, is an EIS required? (YES/NO)? No. If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action.

Based upon the above assessment, which has identified a limited number of minor impacts from the proposed action, it has been determined that no significant impacts to the physical and human environment would result due to the proposed action alternative. It has also been determined that no significant public controversy would incur over the proposed action alternative. Therefore, an EIS is not required and an environmental assessment is the appropriate level of review.

2. Name, title, address and phone number of the person(s) responsible for preparing the EA:

Brent Lonner
FWP Wildlife Biologist
PO Box 488
Fairfield, MT 59436
406-467-2488

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

Montana Fish, Wildlife & Parks: Wildlife Division

Literature Cited:

Frisina, M.R. and Q. Kujala. 1999. South Pasture-Ear Mountain Wildlife Management Area livestock grazing analysis. Montana Fish, Wildlife & Parks, Helena, MT.

Frisina, M.R. and Q. Kujala. 2001. North Pasture-Ear Mountain Wildlife Management Area livestock grazing analysis. Montana Fish, Wildlife & Parks, Helena, MT.

Montana Fish, Wildlife & Parks. 1995. Ear Mountain Wildlife Management Area grazing lease No. 4073. Montana Fish, Wildlife & Parks, Region 4, Great Falls; 9 pages.

APPENDIX A

South Pasture Grazing Plan

Proposed grazing schedule for the South pasture located on Ear Mtn. WMA, 2020-2025.
Early = June; Late = August; Rest = no use by livestock.
X's indicate the treatment type (grazing or rest) for the given year.

	South Pasture		
Year	Early (June)	Late (August)	Rest
2020			X
2021	X		
2022		X	
2023			X
2024	X		
2025		X	

Only cattle may be grazed on this pasture. Up to 391 AUM's is the allowable stocking rate per grazing period. Fence maintenance prior to cattle entry and while cattle are present will be the responsibility of the lessee. Fish, Wildlife & Parks will provide necessary materials for maintenance as/if requested. Fish, Wildlife & Parks will pay lessees at the hourly rate of $10.00 for time spent on fence maintenance. Salt or mineral is the responsibility of the lessee at approved sites. The grazing rate (cost/AUM) will be based upon the average annual grazing fees for Montana as reported by the National Agriculture Statistics Service in their annual report. A single annual payment shall be made to the Department no later than November 1 of each calendar year (when grazing occurs). The total cost of maintenance through each lessee (number of hours worked times hourly rate) will be subtracted from the payment. The lessee will need to provide written documentation of maintenance performed to include date(s), hours worked, work description and location. Fence maintenance costs (hours worked) through the lessee will not exceed $500.00.

Browse and herbaceous forage conditions will be assessed during and after the grazing seasons. Any adjustments to the grazing prescription will be made at the end of the lease term with the option of renewing a new grazing lease agreement.

These grazing schemes conform to conclusions and prescriptions in the March 1999 "South Pasture-Ear Mountain WMA Livestock Grazing Analysis" by Frisina and Kujala.

APPENDIX B

North Pasture Grazing Plan

Proposed grazing schedule for the North pasture located on Ear Mtn. WMA, 2020-2025.
Early = June; Late = August; Rest = no use by livestock.
X's indicate the treatment type (grazing or rest) for the given year.

	North Pasture		
Year	Early (June)	Late (August)	Rest
2020	X		
2021		X	
2022			X
2023	X		
2024		X	
2025			X

Only cattle may be grazed on this pasture. Up to 102 AUM's is the allowable stocking rate per grazing period. Fence maintenance prior to cattle entry and while cattle are present will be the responsibility of the lessee. Fish, Wildlife & Parks will provide necessary materials for maintenance as/if requested. Fish, Wildlife & Parks will pay lessees at the hourly rate of $10.00 for time spent on fence maintenance. Salt or mineral is the responsibility of the lessee at approved sites. The grazing rate (cost/AUM) will be based upon the average annual grazing fees for Montana as reported by the National Agriculture Statistics Service in their annual report. A single annual payment shall be made to the Department no later than November 1 of each calendar year (when grazing occurs). The total cost of maintenance through each lessee (number of hours worked times hourly rate) will be subtracted from the payment. The lessee will need to provide written documentation of maintenance performed to include date(s), hours worked, work description and location. Fence maintenance costs (hours worked) through the lessee will not exceed $500.00.

Browse and herbaceous forage conditions will be assessed during and after the grazing seasons. Any adjustments to the grazing prescription will be made at the end of the lease term with the option of renewing a new grazing lease agreement.

These grazing schemes conform to conclusions and prescriptions in the July 2001 "North Pasture-Ear Mountain WMA Livestock Grazing Analysis" by Frisina and Kujala.

APPENDIX C

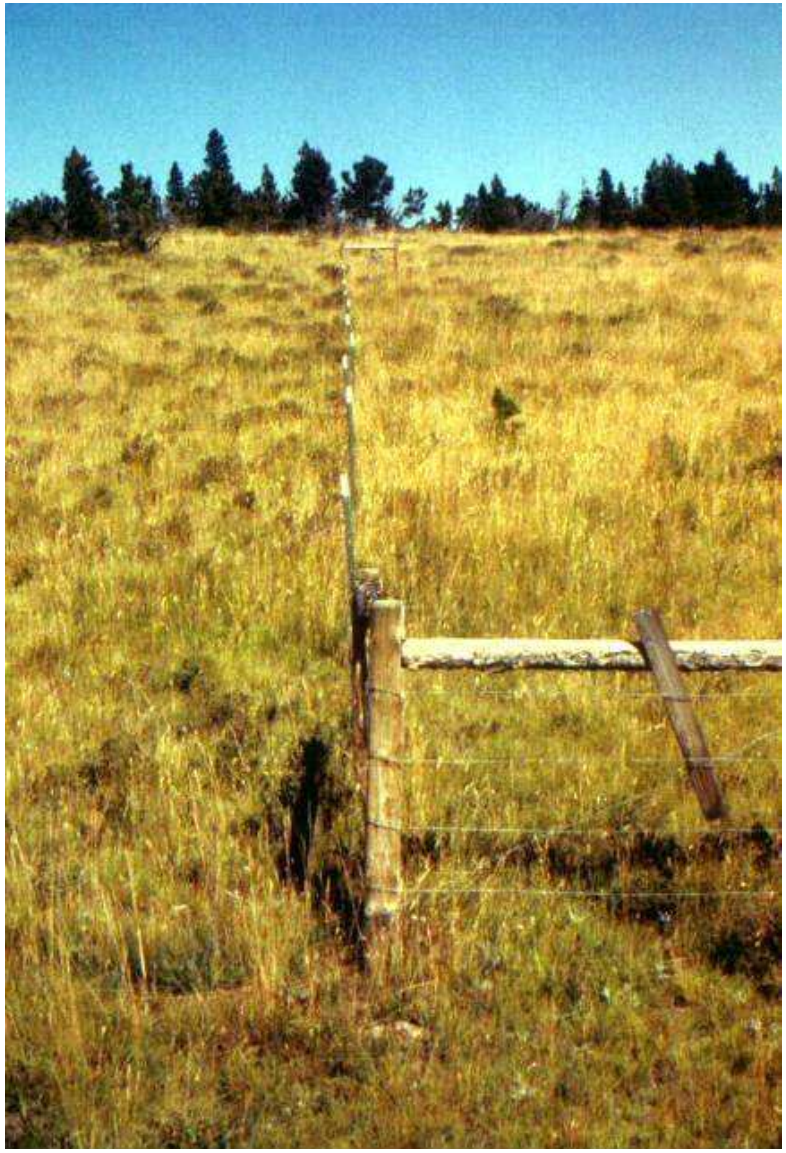
Photo point comparisons on Ear Mtn. WMA (1998 – 2018).

Spring 1998

Aspen stand located in the South pasture. Due in part to heavy grazing pressure, browse impacts on aspen suckers was evident 20 years ago. Since this time, young aspen appear to be able to grow above the browse zone showing productivity in the understory. Some of the older, mature aspen trees have thinned out over time.

August 2009

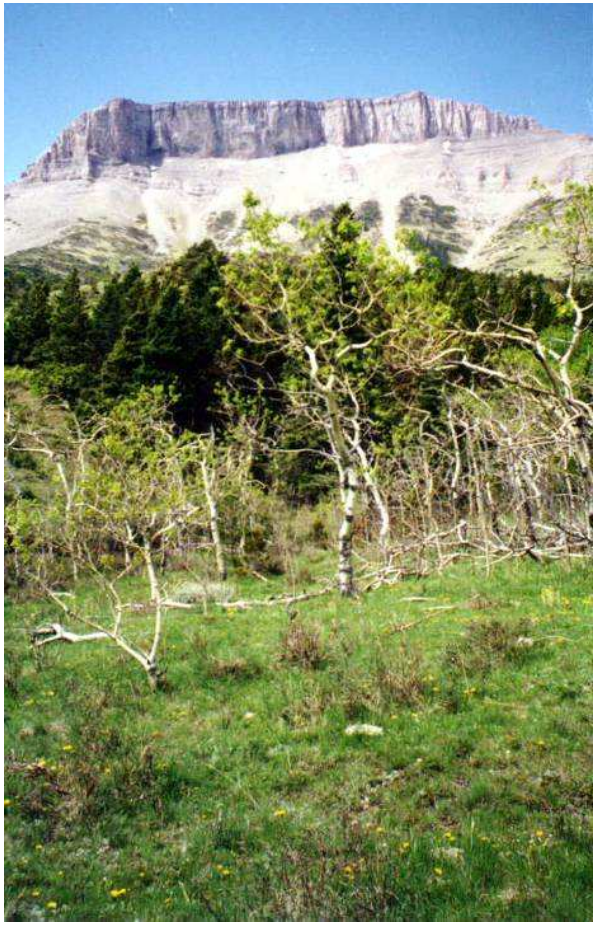
September 2018



Summer 1998

September 2018

Vegetation exclosure in the South pasture. Perennial and annual plants are being maintainted as is evident when comparing plant production from within and immediately outside the exclosure. The 1998 photo was taken during a non-grazing period while the 2018 photo was taken after a grazing period (hence the reduction in grass).



Spring 1998

August 2009

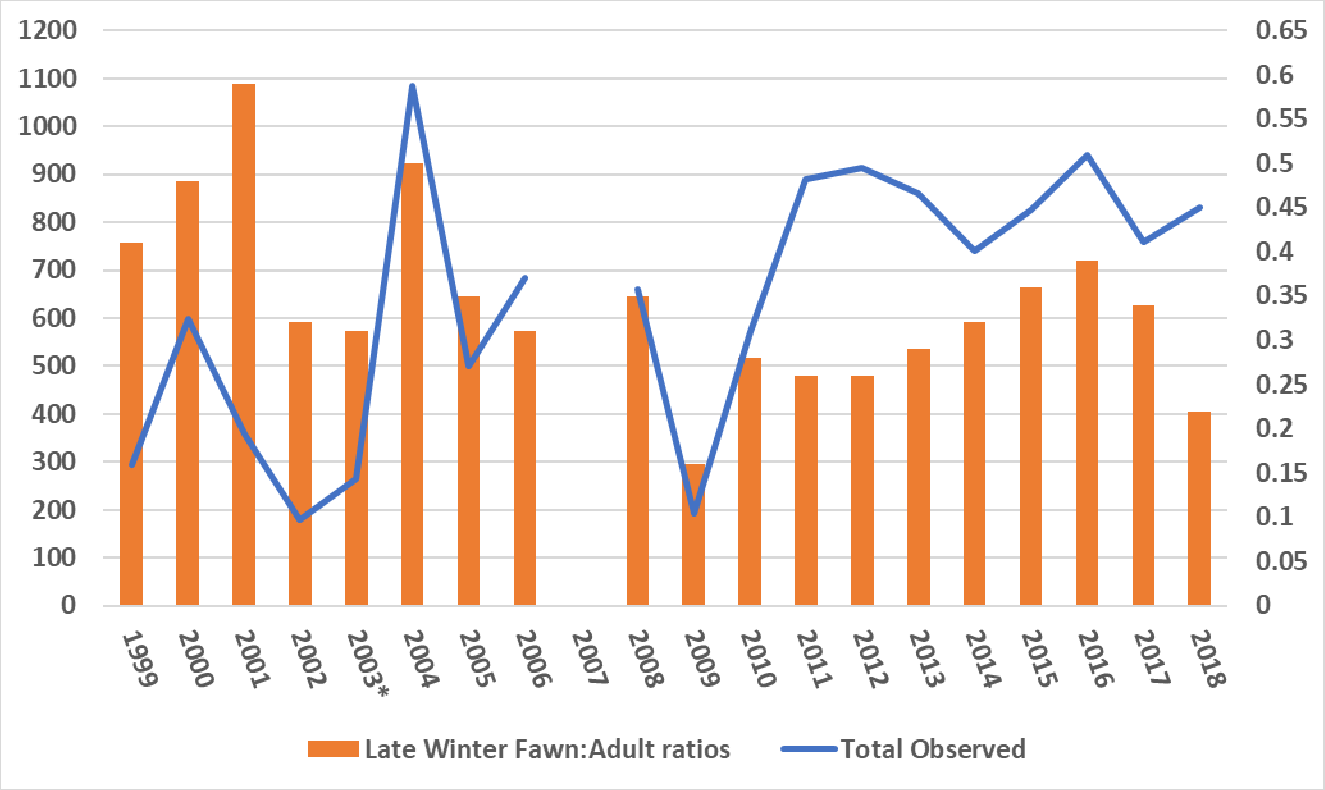
September 2018

Aspen and conifer stand located in the South pasture. The dead douglass fir trees shown in the 2009 photo are due to beetle kill. Estimates of beetle killed trees on the WMA were approximately 10%. Red leaved aspen in the 2018 photo are due to fall color changes and not trees dieing. Aspen production in this immediate area has declined, but has also rebounded as shown in the photos. An adjacent stand of aspen located just to the right of the photo in 2018 (outside the frame) is demonstrating positive young growth of trees.

Photo taken in July 2017 from within the North pasture (looking north). An example of heavy amounts of residual grass present in certain locations within the pasture. Proposed modifications to the grazing system in this pasture hopes to help better address improved cattle utilization of areas like this.

APPENDIX D

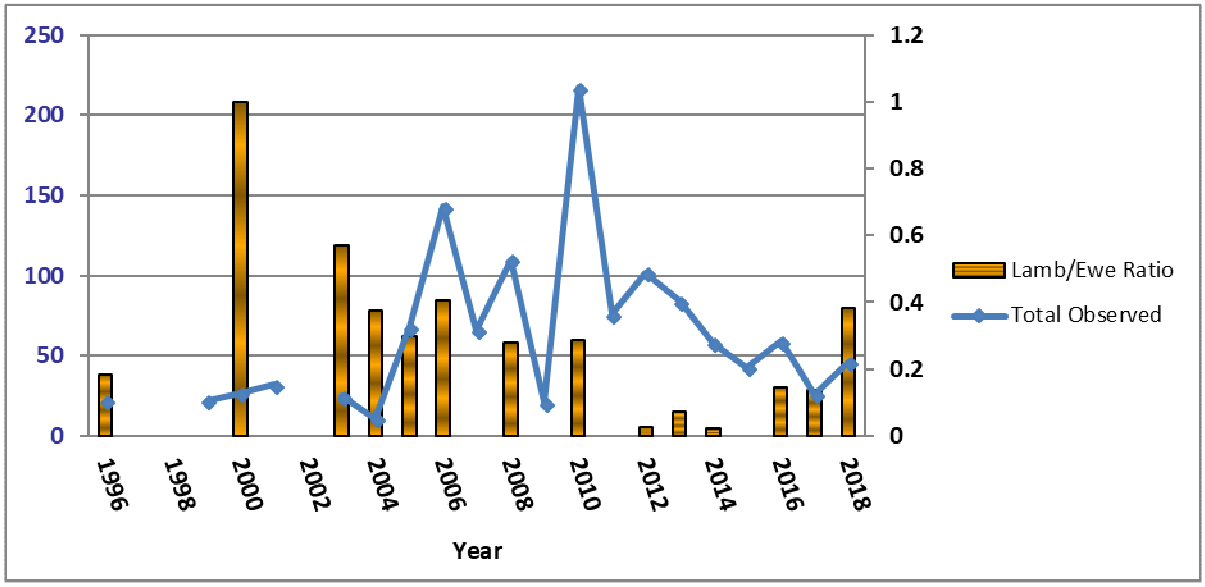
Hunting District 442/450 Spring Mule Deer Surveys (Sun River to Teton River), 1999-2018.



Hunting District 442/450 (Sun River to Teton River) spring Mule Deer observations 1999-2018. The left Y axis is associated with the total count for that survey effort (**blue** line). The right Y axis is associated with the fawn / adult ratio calculated based on observations and classifications made during the survey (**orange** columns). Depending on survey conditions (weather and/or ground conditions), overall totals and classifications at times can vary somewhat significantly from year to year. No surveys were completed in 2007. This survey primarily gives perspective to mule deer status within the trend area as a whole (to include Ear Mtn. WMA). Many of the observed deer are traditionally observed further south in the Sun River to Deep creek area.

APPENDIX E

Hunting District 421 Spring Bighorn Sheep Surveys (Deep creek to Ear Mtn. WMA area), 1996-2018.



Hunting District 421 (Deep Creek to Ear Mtn. WMA) spring Bighorn Sheep observations 1996-2018. The left Y axis is associated with the total count for that survey effort (**blue** line). The right Y axis is associated with the lamb / 100 ewe ratio calculated based on observations and classifications made during the survey (**orange** columns). Due to the nature of the survey method (ground or aerial survey depending on the year), overall totals and classifications at times can vary somewhat significantly from year to year. The 2010 survey proved to be ideal conditions, hence the strong number of sheep observed. The subsequent surveys reflect the die-off that occurred beginning in the 2010 summer period. Note improved lamb recruitment since the initial die-off period (hopefully a reflection of improved numbers in time).