MONTANA FISH, WILDLIFE AND PARKS
WILDLIFE DIVISION

ENVIRONMENTAL ASSESSMENT OF GRAZING LEASE ON PORTION OF BEARTOOTH WILDLIFE MANAGEMENT AREA

March 2006

In accordance with the Montana Environmental Policy Act, Montana Fish, Wildlife and Parks (FWP) is required to assess the impacts that any proposal or project might have on the natural and human environments. Further, FWP's land lease-out policy, as it pertains to the disposition of interest in Department lands (89-1-209) requires and Environmental Assessment (EA) to be written for all new grazing leases, lease extensions or lease renewals.

A. PROJECT LOCATION

The Beartooth Wildlife Management Area (BTWMA) was purchased by Montana Fish, Wildlife and Parks to provide: (1) year long resident elk and mule deer habitat (2) winter range for migratory elk and mule deer, and (3) public outdoor recreational opportunities, especially hunting. The area was purchased in 1970 from the Nature Conservancy who acquired the area from the Pierce Milton Estate. The purchase price was $738,250.00 (3/4 Pittman-Robertson funds, 1/4 State hunting license dollars). The BTWMA is second in size of the lands in the wildlife management area system. Total acreage of the BTWMA is 32,318 acres.

The BTWMA is located in the west-central portion of Montana in the western edge of the Big Belt Mountains. The largest portion of the BTWMA is situated in Lewis & Clark County; but lands do extend into Cascade County. Helena is approximately 24 air miles to the south-southwest and is 49 miles via roadways. The nearest town to the BTWMA is Wolf Creek, which is 14 miles from the headquarters. Project location within the BTWMA is located in an area called "Polloch Meadows" in the northwest corner of the BTWMA. Major drainage within the project area is Cottonwood Creek. A legal description of the BTWMA lands included in this proposal follows:

Lewis and Clark County:

T14N R02W
- Sect 9 (E ½ NE ¼ NE ¼)
- Sect 10 (N ½)
- Sect 11 (S ½ N ½)

B. PROJECT NEED

Various areas within the BTWMA were seeded to domestic grasses prior to FWP's acquisition of the management area. Domestic grass species included Timothy (*Phleum pratense*) and Smooth Brome (*Bromus inermis*). Currently, these grasses are palatable at certain growth stages but are unpalatable as winter forage for deer and elk. Several years of non-use by livestock and minimal use by elk has resulted in stands of rank,

minimally productive vegetation. The residual plant material that has built up over time now limits and/or delays annual growth. This residual vegetation may limit the amount of new (more succulent) plant growth available to deer and elk during spring and fall months. Elk utilize Polloch meadows throughout the year, especially during spring and fall months. Bulls utilize the area yearlong, especially during fall and winter months. By periodically manipulating these sites throughout livestock grazing, a range of habitat conditions can be maintained, while ensuring vegetation and soil health goals are met.

Livestock grazing is one management tool that can be utilized to address these surface litter conditions. Smooth brome can be manipulated through grazing practices to enhance forage conditions, which in turn improves palatability for elk. From 1987-1990, a grazing system in Polloch meadows was attempted, with some success (Table 1). The Polloch meadows area lost focus due to a 21,440 acre grazing system that was established in 1992 on the BTWMA and neighboring Sieben Live Stock lands. This 3 pasture, rest-rotation grazing system has greatly benefited both the BTWMA and the cooperator's lands involved. That system remains in place.

Table 1. Polloch meadows grazing program summary, 1987-1990.

Year	Practice	# AUMs	Cooperator	Cost/AUM	Total Cost
1987	Graze 8-1/9-15	269	Sieben Livestock	$1.35	$453.94
1988	Rest				
1989	Graze 8-1/8-31	316	Sieben Livestock	$1.86	$587.76
1990	Rest				

Proposals for grazing of domestic livestock under any circumstances must meet the goals and objectives for management of the BTWMA as listed above. Further, goals and objectives specific to the implementation of a grazing system must be developed and followed. The following are offered to meet those needs.

GOAL:
To provide maximum vegetative cover (abundance) and quality plant composition (nutrition/palatability) as related to wildlife needs and soil/watershed protection on elk seasonal ranges associated with the Beartooth Wildlife Management Area.

OBJECTIVES:

* Remove residual plant litter from Polloch Meadows area to encourage big game usage of plant re-growth, especially during spring and fall months.

* Promote maximum plant production, vigor and nutrient content.

* Increase the attractiveness of late fall and spring forage to elk, thereby influencing distribution and potentially minimizing depredation to other private lands.

C. PROJECT SCOPE

A single pasture system six-year lease is planned for the approximate 450 acres involved (see Exhibit A and Table 2). Dates of grazing use will be dictated by 1) plant phenology to include spring green-up and plant availability and 2) forage consumption in the active pasture and 3) hunting and recreational demands upon the area. It is expected that general season dates for these events will approximate the following: May 15 – July 1 for early season grazing and July 20 – August 31 for post seed ripe grazing (Table 2). The lessee will provide labor to install approximately 2.5 miles of single strand electric fence on the south and west pasture boundaries to implement the system. The lessee will be responsible for fence maintenance during active grazing seasons. The lessee may only access the site via motorized travel through neighboring private lands. After each spring and post seed ripe grazing rotation (years 2006, 2007, 2009 and 2010), the lessee will be

required to remove the electric fence each of those years. The electric fence and materials must be removed within 5 days after cattle are removed from the area. Grazing rates charged to the lessee will be $7.50 per AUM, providing the lessee supplies labor for fence construction and removal. An average monthly stocking rate of approximately 400 AUM's is indicated based on available forage and water supplies, pasture size and layout, desired grazing effectiveness and previously observed effectiveness of livestock grazing abilities in the immediate area.

Table 2. BTWMA Polloch Meadows Grazing Treatments (2006-2011).

Year	Treatment
2006	A
2007	B
2008	C
2009	A
2010	B
2011	C

Grazing Treatments:
A = Spring Grazing (May 15-July 1)
B = Post Seed Ripe Grazing (July 20-August 31)
C = Complete Rest

D. ENVIRONMENTAL CHECKLIST

POTENTIAL IMPACTS ON PHYSICAL ENVIRONMENT

ITEM	MAJOR	MOD.	MINOR	NONE	UNK.	COMMENTS ON ATTACHED PAGES
Terrestrial & Aquatic Life & Habitats			X			X
Water Quality, Quantity & Distribution			X			X
Geology & Soil Quality, Stability & Moisture			X			X
Vegetation Cover, Quality, & Quantity			X			X
Aesthetics			X			X
Air Quality				X		
Demands on Environmental Resources of Land, Water, Air, & Energy				X		

E. EXPLANATION OF IMPACTS TO THE PHYSICAL ENVIRONMENT

TERRESTRIAL & AQUATIC LIFE AND HABITATS

While grazing livestock will reduce the amount of forage in the area during the grazing lease period, it is expected that the project will have a positive long-term impact on elk habitat. In addition, the project is expected to have a long-term positive impact on the habitat of elk, mule deer, whitetail deer and many non-game species of wildlife. The expected positive impact is the result of decadent residual vegetation being removed, which should enhance both fall or spring green-up conditions. Green-up vegetative conditions provide more palatable and attractive vegetation conditions for grazing wildlife. Sufficient forage is available to big game on the remainder of the WMA and the surrounding landscapes to offset any short-term loss of forage due to livestock use. Due to the time period and duration of the proposed grazing lease, impacts to any non-game wildlife in the area should be minimal, although, the reduction in residual cover could have a negative impact on ground nesting birds during dates of use. Two consecutive growing seasons of rest following a grazing treatment will greatly benefit these species in the long-term.

WATER QUALITY, QUANTITY, AND DISTRIBUTION

Cottonwood Creek is the only drainage potentially effected by the proposed grazing treatment. Although the riparian vegetation within the treatment area will have some minor impacts during the 4-6 weeks of livestock usage, there should be no long-term effects. Hoof action from livestock grazing should provide a positive benefit to riparian soil quality by helping to break down old residual vegetative material, thereby, returning nutrients to the soil. Impacts on Cottonwood Creek water quality, quantity and distribution will be minimal at best.

GEOLOGY AND SOIL QUALITY, STABILITY, AND MOISTURE

Some impacts to soil conditions may occur due to trampling, trailing or grazing in localized, high use areas, especially around water tanks. The grazing capacity estimate is believed to be a conservative estimate, so the risk of overgrazing induced erosion should be minimal. Hoof action from livestock grazing should provide a positive benefit to soil quality by helping to break down old residual vegetative material, thereby, returning nutrients to the soil.

VEGETATION COVER, QUALITY, AND QUANTITY

While vegetation cover and quantity will be decreased while livestock are grazing the area. Vegetation quality should dramatically increase following grazing treatment as a result of removing residual decadent plant material, allowing for two consecutive growing seasons of rest (Table 2). Plant and soil disturbance as the result of grazing may enhance seed placement, germination, and seedling establishment for both desirable and undesirable plant species.

AESTHETICS

Domestic livestock and signs of livestock use on the BTWMA may be objectionable to some segments of the public. This pasture of the BTWMA generally receives minimal public use during the time period when livestock would be in the pasture because of its location being 5 miles from the nearest public access point. In addition, livestock grazing on other portions of the BTWMA is a common practice, having a rest-rotation grazing system in place with a neighboring landowner since 1996. Cattle will only be in this particular pasture approximately 4-6 weeks during late spring and early fall two out of every three years (Table 2).

F. ENVIRONMENTAL CHECKLIST

POTENTIAL IMPACTS ON THE HUMAN ENVIROMENT

ITEM	MAJOR	MOD.	MINOR	NONE	UNK.	COMMENTS ON ATTACHED SHEETS
Social Structures and Mores				X		
Cultural Uniqueness and Diversity				X		
Local and State Tax Base and Tax Revenue				X		
Agricultural or Industrial Production				X		
Human Health				X		
Access to & Quality of Recreational and Wilderness Activities			X			X
Quantity and Distribution of Employment				X		
Distribution and Density of Population and Housing				X		
Demands for Energy				X		
Locally Adopted Environmental Plans and Goals				X		
Transportation Network and Traffic Flows				X		

G. EXPLANATION OF IMPACTS TO THE HUMAN ENVIRONMENT

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES

Livestock and livestock sign on FWP Wildlife Management Areas may seem out of place for some segments of the public. However, this area was grazed 1987-1990, and livestock grazing on other portions of the BTWMA is a common practice. Most WMA's in the state have grazing systems in place to improve habitat quality, quantity and conditions for wildlife species, with great success. In addition, the proposed area to be leased for grazing receives minimal public use during the summer, and livestock will be removed prior to the hunting season.

H. DISCUSSION AND EVALUATION OF REASONABLE ALTERNATIVES

1. No action (no grazing lease) alternative:
    - Decadent residual vegetation will remain, and the area will remain unattractive to elk and other big game species.
    - Elk will likely continue to utilize adjacent private land in large numbers during the winter and spring time period.

2. Proposed action (provide grazing lease) alternative:
    - Reduction in decadent residual vegetation, which in turn improves forage conditions and availability in the long term.
    - Soil and plant disturbance that will benefit seedling establishment of both desirable and possibly undesirable plant species.
    - Provide for better fall and/or spring green-up vegetation for elk and other wildlife species, thereby reducing elk usage of adjacent private property during the winter and spring.
    - Promote maximum plant production, vigor and nutrient content.

I. ENVIRONMENTAL ASSESSMENT CONCLUSION

- It has been determined that no significant impacts to the physical and human environment will result due to the proposed action alternative, therefore an Environmental Impact Statement is not required.

J. SCHEDULED PUBLIC INVOLVEMENT

A public comment period will begin 1 April, 2006 and end 30 April, 2006. Duration for the comment period for the Environmental Assessment is 30 days. A public hearing is not scheduled. Written comment should be delivered to the following address(es):

Montana Fish, Wildlife and Parks
Wildlife Division
% Beartooth WMA
4600 Giant Springs Road
Great Falls, MT 59405

Or,

E-Mail: fwprg42@mt.gov (Include Beartooth WMA in Subject Heading)
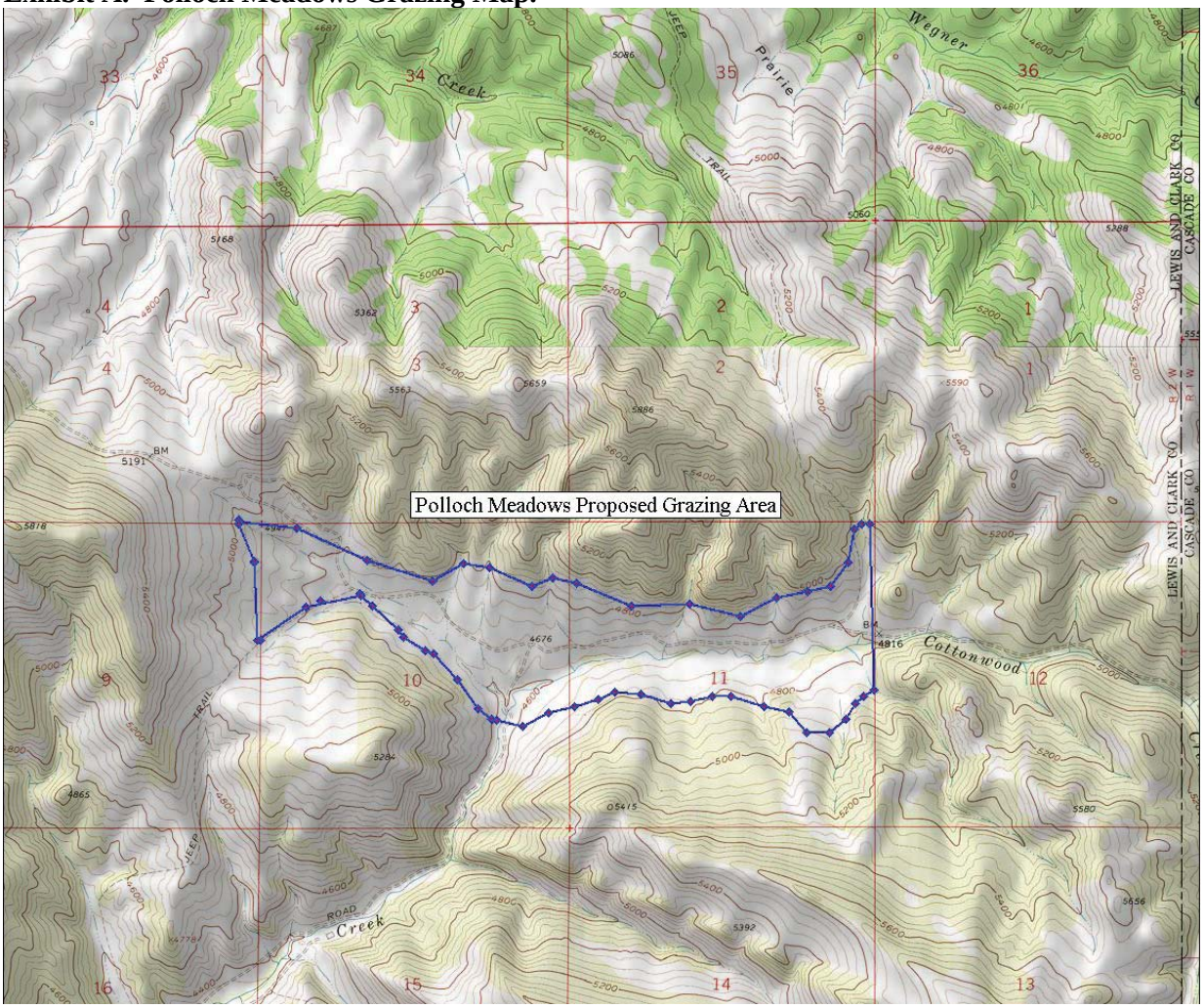
Exhibit A. Polloch Meadows Grazing Map.