



Armells Creek Watershed

Environmental Assessment
MT060-00-17

Bureau of Land Management
Lewistown Field Office
Lewistown, Montana

September 29, 2000

FINDING OF NO SIGNIFICANT IMPACT AND DECISION RECORD

Armells Creek (Breaks portion) Watershed

Bureau of Land Management
Lewistown Field Office
Lewistown, MT

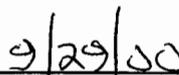
Decision: It is my decision to approve the proposed action of the Armells Creek Watershed Management Plan Environmental Assessment.

Finding of No Significant Impact: Based on an analysis of potential environmental impacts contained in the Armells Creek Watershed Environmental Assessment (MT-060-00-17), I have determined that impacts are not expected to be significant and an environmental impact statement is not required.

Rationale for Decision: The decision to approve the proposed action does not result in any undue or unnecessary environmental degradation and is in conformance with the Judith-Valley-Phillips Resource Management Plan (September, 1994).



David L. Mari
Lewistown Field Manager



Date

Armells Creek (Breaks Portion) Watershed Environmental Assessment
Lewistown Field Office
Lewistown, Montana
September 29, 2000

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Armells Creek (Breaks Portion) Watershed Environmental Assessment

Lewistown Field Office

Lewistown, Montana

CHAPTER 1 - Introduction and background

A. Location

The Armells Creek Watershed is in northern Fergus County, north of Roy and Hiiger and extending northeasterly to the Missouri River. This watershed plan encompasses the portion of Armells Creek watershed that is breaks topography. The major drainages in the watershed include Antelope Coulee, Armells Creek, Dry Armells Creek, Fargo Coulee, Murphy Coulee, Sawmill Coulee, and Thompson Coulee.

There are approximately 237,000 acres within the breaks portion of the Armells Creek watershed. There are approximately 50,800 acres of public lands (BLM) within the watershed of which 61% are public domain (PD) and 39% are land utilization (LU) acres. See map on page M2.

B. Background and Need for Proposed Action

The Judith-Vailey-Phillips Resource Management Plan (JVP RMP) (1994) specifies land use plan decisions and objectives to be implemented in the Armells Creek Watershed. The JVP RMP specifies that implementation of riparian/wetland decisions will be conducted on a watershed basis and will consider management of streams, water sources and uplands.

The watersheds administered by the Lewistown Field Office were prioritized for implementation of land use plan decisions based on multiple use criteria. The Armells Creek watershed was given a high priority for management and land use plan decision implementation.

Also, there is a need for environmental analysis when renewing 10 year grazing permits. This watershed analysis will review all the allotments in the Armells Creek Watershed for compliance with the standards for rangeland health and issuance of 10 year permits.

C. Direction from and Conformance with Land Use Plans

The JVP RMP sets forth the land use decisions and conditions guiding management of public land and minerals within the Armells Creek Watershed. All uses and activities within the area must conform with the decisions, terms and conditions described in this plan. Appendix A describes the guidance contained in the JVP RMP that is pertinent to the Armells Creek Watershed.

The JVP RMP was amended by the Standards for Rangeland Health and Guidelines for Livestock Grazing Management Environmental Impact Statement (May 9, 1997). Standards and guidelines for meeting these guidelines were then developed by the Lewistown Resource Advisory Council (Central Montana Resource Advisory Council) with the benefit of public participation.

There is currently a state-wide effort regarding off-highway vehicles (OHV). This decision is scheduled to be made in March 2001.

D. Issues and Objectives Specific to Armells Creek Watershed

Vegetation Management

Riparian Health

Issue: The riparian area standard established by the Central Montana Resource Advisory Council is not being met for some of the riparian areas on public lands. Livestock are a significant factor in some cases.

Short term objective: Maintain the 10.8 miles that are in proper functioning condition (PFC) and make significant progress toward achieving PFC on the 25.8 miles of riparian functioning at risk (FAR) and 12.9 miles of non-functioning (NF) riparian where livestock are a significant factor within the next grazing year.

Long term objective: Maintain or improve all riparian areas to PFC within 10 years where livestock are a significant factor.

Upland Health

Issue: The upland health standard established by the Central Montana Resource Advisory Council is not being met for some of the upland areas on public lands. Livestock are a significant factor in some cases.

Short term objective: Maintain the 16 allotments that are in proper functioning condition and make significant progress toward achieving PFC on the four allotments that are FAR where livestock are a significant factor within the next grazing year. Five allotments are FAR due to non-native rangelands and six allotments are unknown.

Long term objective: Maintain or improve all upland areas to PFC within 10 years where livestock are a significant factor.

Weeds

Issue: Noxious weed populations are present in limited amounts on public and private lands mostly in the south portion of the watershed. Most populations are associated with roads.

Objective: Continue annual control on the known noxious weed sites and any new infestations found.

Off Highway Vehicles

Issue: Off highway vehicle use, particularly during the hunting season, is impacting big game habitat, contributing to accelerated erosion, and contributing to the spread of weeds.

Objective: Minimize impacts to big game, decrease erosion, and decrease the spread of weeds by restricting motorized vehicular travel to designated routes within three years.

Access

Issue: There are significant blocks of BLM lands with inadequate or no public access.

Objective: Provide additional public access to 15,160 acres in Armells Creek area, 10,320 acres in Fargo Coulee area, and 10,420 acres in Sourdough Creek Area within 10 years. Provide new public access to 760 acres in the East Christina area, 2,040 acres in the Fergus area, and 1,240 in the Fergus Breaks area within 10 years. Please refer to the JVP RMP for location map.

Ground Water

Issue: There are a number of uncontrolled flowing wells that are potentially depleting the aquifer.

Objective: Control the flow, in accordance with Montana water laws, from five wells on BLM lands within the next five years.

Wildlife

Issue: Non-native rangelands and/or decadent sagebrush stands are limiting sagebrush dependent species, especially sage grouse.

Objective: Decrease non-native rangelands and/or decadent sagebrush stands and increase available sagebrush habitat by up to 3000 acres within 10 years.

Fisheries

Issue: Habitat for fisheries are of concern.

Objective: Maintain or improve the habitat for native fish species.

CHAPTER 2 - Proposed Action and Alternatives

Alternative 1 - Continuation of Current Management

Access: BLM would not pursue legal access. Access would continue at the discretion of private landowners.

Recreation (OHV): A travel plan would not be developed. Current OHV use would continue.

Livestock Management (riparian health, upland health and ground water): Grazing would remain consistent with the previous (current) permit. No new projects would be constructed to protect/enhance riparian or watershed values. The five flowing wells on public land would continue to flow uncontrolled year long.

Wildlife and Fisheries: Non-native vegetation would remain constant. Fisheries habitat in Armells Creek, Murphy Coulee, and surrounding drainages would remain as it currently exists. Elk habitat would remain at present conditions. Existing land uses would be allowed to continue in the area of the prairie dog town.

Weeds: BLM would continue with the current cooperative agreement with the permittee on Gilskey allotment.

Alternative 2 - Proposed Action

See map on page M3

Access: The proposed action would include pursuing additional legal access with willing landowners in the Armells Watershed. The options include obtaining permanent exclusive easements; working with Montana Department of Fish, Wildlife and Parks to develop block management areas; or acquiring access through land exchanges.

Recreation (OHV): Off highway vehicle use in the northern section of the watershed (T20N, T21N) would be limited seasonally to designated routes from September 1 to December 1. The existing roads identified on the map on page M4 would become the designated routes in the northern portion. Cross country travel would not be permitted during this seasonal limitation (see definition of motorized cross country travel in Appendix I). No roads would be closed seasonally or year long. If the area within the watershed currently designated open and open seasonally is changed through the BLM and Forest Service Tri-State OHV Environmental Impact Statement and Plan Amendment, motorized travel would be limited to the roads identified on page M4. If a Block Management Area were to be developed, travel management would be considered at that time.

Livestock Management (riparian health, upland health and ground water): Standards would be achieved and guidelines (see Appendix J) would be met through a variety of management techniques. These would include water developments, prescribed fire, riding, salt placement, season of use, etc. Ten year permits would be issued for all allotments. Permittees would be responsible for ensuring that livestock are managed according to the guidelines beginning with the 2001 grazing season.

The five flowing wells on public land would be equipped with controls allowing them to be shut off when not being used.

Two wells would be drilled and pipeline and tanks would be installed. One well would be located in T20N, R21E, section 3 and would provide water for the Sawmill, Armells, Armells Pasture and Mayberry allotments. The other well would be located in T20N, R23E, section 4 and would provide water for the West Indian Butte and Lower Fargo Coulee allotments. If adequate funding and workforce is available the BLM would drill the two wells and survey and design the accompanying pipelines. In the event of partial funding, the well in T20N, R21E, section 3 would be the first priority and the well in T20N, R23E, section 4 would be the second priority.

A pipeline with tanks would be installed on the Antelope Coulee and Dry Armells allotments originating from a well on private land. A pipeline with tanks would be installed on the West Indian Butte allotment originating from a well on private land and another pipeline with tanks would be installed originating from the Knox Ridge well. The BLM would also be responsible for survey and design of the pipeline originating from the Knox Ridge well. The survey and design of the remaining pipelines would be the responsibility of the permittees. Any right of ways required to cross private lands or state land would be the responsibility of the permittee.

The reservoir located in T20N, R23E, Section 5, SWNW would be eliminated.

All projects must be constructed to BLM standards.

Regardless of funding and range improvement projects, permittees must ensure that livestock are managed according to the guidelines in Appendix J beginning with the 2001 grazing season.

Prescribed fires would be completed on Fergus Triangle and Lower Armells allotments as described below.

Fergus Triangle Allotment: The project area contains 2200 acres of which up to 40% (880 acres) would be treated with prescribed fire. The target species for removal by prescribed fire are the 1-3" diameter breast height (dbh) ponderosa pine and the horizontal juniper. Up to 75% of the treated acres could be treated with ground fire. Crown removal of mature trees (Douglas fir and ponderosa pine) would be limited to 10% of the treated area with individual polygons limited to five acres.

Treating the area with fire would reduce the fuel loading in the area; reduce the pine and juniper encroachment; and provide additional forage to improve livestock distribution. The burns would be accomplished within the next eight years and up to 400 acres could be treated at one time. The prescribed burning would be accomplished in the spring or fall depending on when vegetation and soil conditions are appropriate for removal of target species and enhancement of desired species. The livestock permittee would be responsible for resting the area for one year prior to burning if needed for build up of fine fuels and resting up to two years after the prescribed burn.

Lower Armells Allotment: The project area contains 1600 acres of which up to 25% (400 acres) would be treated with prescribed fire. The target species for removal by prescribed fire are the 1-3" dbh ponderosa pine and the horizontal juniper. The area would be burned in a mosaic with up to half of the treated area left unburned. Crown removal of mature trees (Douglas fir and ponderosa pine) would be limited to 10% of the treated area with individual polygons limited to five acres. Sagebrush removal would be limited to 10% of the treated area with individual polygons limited to 15 acres. There are no known sage grouse leks or antelope winter range in the project area.

Treating the area with fire would reduce the fuel loading in the area; reduce the pine and juniper encroachment; provide additional forage to improve livestock distribution; and increase and improve quality of mule deer and elk forage. The burns would be accomplished within the next 8 years and up to 400 acres could be treated at one time. The prescribed burning would be accomplished in the spring or fall depending on when vegetation and soil conditions are appropriate for removal of target species and enhancement of desired species. The livestock permittee would be responsible for resting the area for one year prior to burning if needed for buildup of fine fuels and resting up to 2 years after the prescribed burn.

Maintenance for all existing and proposed projects would be responsibility of the permittees.

Following are the proposed improvements by allotment:

<u>Allotment Number</u>	<u>Allotment Name</u>	<u>Proposed Improvements</u>
02006	Antelope Coulee Common	follow guidelines; achieve standards 1.5 miles pipeline 4 tanks control one artesian well reseed non-native rangelands
02007	Armells Pasture	follow guidelines; achieve standards 0.5 miles pipeline 1 tank reseed non-native rangelands
20037	Armells	follow guidelines; achieve standards well 1.5 miles pipeline 2 tanks control one artesian well reseed non-native rangelands
20008	Benes	follow guidelines; achieve standards
20028	Burn Shed Coulee	follow guidelines; achieve standards
02003	Cimrhakl	follow guidelines; achieve standards
02025	Dry Armells Common	follow guidelines; achieve standards 1.0 miles pipeline 2 tanks control two artesian wells reseed non-native rangelands
10023	East Christina	follow guidelines; achieve standards reseed non-native rangelands
02631	East Fork Armells Creek	follow guidelines; achieve standards
02005	Fergus Triangle	follow guidelines; achieve standards prescribed burn

02000	Fink Exchange of Use	follow guidelines; achieve standards
02026	Fritz Harri (pasture A) (pasture B)	follow guidelines; achieve standards
15103	Gilskey	follow guidelines; achieve standards weed control reseed non-native rangelands
02002	Harrison Home Pasture	follow guidelines; achieve standards
02015	Komarek Ranch	follow guidelines; achieve standards 1.0 miles pipeline 1 tank
02016	Komarek Place	follow guidelines; achieve standards
02021	Lower Armells	follow guidelines; achieve standards prescribed burn
02040	Lower Fargo Coulee	follow guidelines; achieve standards .75 miles pipeline 1 tank
02018	Mayberry Place	follow guidelines; achieve standards 1.6 miles pipeline 3 tanks
04836	Murphy Coulee	follow guidelines; achieve standards
20019	Murphy Place	follow guidelines; achieve standards
20072	Petranek	follow guidelines; achieve standards reseed non-native rangelands
20074	Popnoe	follow guidelines; achieve standards reseed non-native rangelands
02030	Rindal Common	follow guidelines; achieve standards
02032	Satterfield Place	follow guidelines; achieve standards
02024	Sawmill Coulee	follow guidelines; achieve standards 2.4 miles pipeline 4 tanks
15097	Suffolk	follow guidelines; achieve standards
02033	Taylor Ranch	follow guidelines; achieve standards
15107	Ward B Common	follow guidelines; achieve standards reseed non-native rangelands

02013	West Indian Butte (common)	follow guidelines; achieve standards well 8 miles pipeline 10 tanks fill in reservoir in T20N, R23E, sec 5 control one artesian well
02031	Willis Place	follow guidelines; achieve standards

Wildlife and Fisheries: This alternative would convert up to 300 acres per year for 10 years of non-native crested wheatgrass to native grass/shrub habitat through a combination of prescribed burning, herbicide treatments and mechanical treatment. These projects would be located on Land Utilization (LU) lands as close as possible to active sage grouse leks. A variety of native species including sagebrush, grasses and forbs would be planted (see Appendix H).

This alternative would maintain or improve condition on Murphy Coulee and Armells Creek for fish habitat. This would be accomplished through riparian condition improvements.

Weeds: This alternative would develop cooperative agreements with all permittees on allotments where noxious weeds presently exist or where noxious weeds are found in future years.

Alternative 3 - Minimal BLM Funding

Access: Same as Alternative 2

Recreation (OHV): Same as Alternative 2

Livestock Management (riparian health, upland health and ground water): Permittees would be responsible for achieving standards and meeting guidelines. Management of livestock would be according to the grazing guidelines. Any range improvement projects would be funded by the permittee. Any proposed projects in Alternative 2 could be constructed by the permittees but must be surveyed, designed and constructed to BLM standards. Ten year permits would be issued for all allotments.

BLM would put controls on the five flowing wells on public land. The reservoir located in T20N, R23E, Section 5, SWNW would be eliminated. Prescribed fires would be completed on Fergus Triangle and Lower Armells allotments as described in Alternative 2.

Wildlife and Fisheries: The improvement in wildlife and fisheries habitat would be accomplished by achieving standards and meeting guidelines throughout the watershed. Non-native rangeland could be converted to native species as discussed in Alternative 2.

Weeds: Same as Alternative 1.

Alternative 4 - No Action

Livestock Management (riparian health, upland health and ground water): Grazing permits would not be renewed and grazing would cease as permits expired.

CHAPTER 3 - Affected Environment

Introduction

The following critical elements of the human environment were considered and would not be affected by the proposed action or any of the alternatives and will not be discussed further:

- Air Quality
- Area of Critical Environmental Concerns (ACECs)
- Farmlands (Prime/Unique)
- Floodplains
- Native American Religious Concerns
- Wastes (Hazardous/Solid)
- Wild and Scenic Rivers
- Wilderness

No environmental justice issues were identified.

Noxious Plants

There are scattered infestations of leafy spurge, Russian knapweed and spotted knapweed. The known infestations on BLM lands are located in the southern portion of the watershed on the Gilskey allotment.

Upland Range

The primary native vegetation types that occur in the Armells watershed are grasslands, sagebrush grasslands, Ponderosa pine/juniper and Douglas fir/Ponderosa pine. Crested wheatgrass plantings (non-native) occur in the watershed on LU lands. Soils are mostly clays. Erosion occurs naturally on steep slopes or with degraded vegetation.

Allotments were reviewed for upland range health in 1999. Existing permanent study plots were evaluated for ecological site index, trend, upland range health and soil surface factor. Sixteen allotments were rated PFC. Nine allotments were rated FAR. Of these nine allotments, livestock is a significant factor in four allotments and presence of non-native rangelands (primarily crested wheatgrass) is a significant factor in five allotments. Six allotments were not rated. See Appendix D for a listing by allotment.

Livestock Grazing Management

In the Armells Creek watershed there are thirty-one livestock allotments permitted to thirty permittees. All permits are for cattle. There are five common allotments with two to seven permittees. Total BLM grazing preference is 7245 animal unit months (AUMs). See Appendix B for a listing by allotment.

Three allotments have allotment management plans: Fergus Triangle, Mayberry Place and Gilskey. There is a management plan for West Indian Butte but it has not been implemented. See Appendix C.

Fire Management

The history of fire occurrence in the Armells watershed indicates that there were 80 fires reported over the past 20 years on BLM administered lands burning a total of 2572 acres. Of

these fires reported 72 were small fires (1 to 40 acres in size) burning 386 acres, 4 fires (40 to 300 acres in size) burning 400 acres, and 4 fires (300 to 550 acres in size) burning 1786 acres. Most of these fires were in fuel models 1 and 2, which is open sagebrush/grasslands and open ponderosa pine stands. Indications from this information is that if fires are not caught at a small size during initial attack they have the potential to get large. This makes controlling of wildland fires very expensive with little resource values considered.

There have been several attempts to introduce prescribed fire in the Armells watershed to accomplish resource objectives. A modified suppression plan was in affect for the less populated breaks area from the mid 1970s to 1988. This allowed burning from wildland fire to occur to accomplish resource objectives. This was never put into use as the burning condition parameters were too restrictive. Two prescribed fires occurred in the 1980s within the Armells watershed. The first was a 3200 acre treatment unit. The second area was 320 acres of grasslands and juniper draws. Both of these prescribed fires were successful in accomplishing big game and other wildlife habitat improvement along with other resource values. Prescribed fire has been recommended for other allotments in the Armells watershed however for various reasons were never carried out. Fuel loading is a major concern with the potential of large high severity fires occurring.

Watershed (Hydrology and Riparian Resources)

Riparian Areas - Riparian areas are defined as the "green zones" associated with lakes, reservoirs, estuaries, potholes, springs, bogs, wet meadows, and streams (ephemeral, intermittent, or perennial). The riparian zone occurs between the upland zone and the aquatic zone. Riparian areas are characterized by water tables at or near the soil surface, and by vegetation requiring high water tables. Appendix E lists the more common riparian vegetative species found in the watershed.

Armells Creek is the major stream in the watershed. Major tributaries include Dry Armells, Fargo Coulee, Antelope Coulee, Sawmill Coulee, and Murphy Coulee. They all are classified as riparian areas for all or part of their reaches within the watershed boundaries. BLM contracted the Riparian and Wetland Research Program at the University of Montana to inventory and assess health on 62.6 miles of riparian areas. Approximately 30 additional miles of riparian areas exist but were not inventoried. Appendix F lists the results of the inventory and health assessment. No inventories were conducted on state or private lands in the watershed. See map on page M5.

Surface Water - Armells Creek and its tributaries are intermittent streams, flowing in response to snow-melt and rainfall events. Pools persist throughout the year on Armells and its major tributaries while smaller tributaries are completely dry in the fall and winter months. Murphy Coulee may be perennial, flowing year long for the lower half of its reach. Armells Creek may have been perennial before the 1900's. The degradation of its riparian areas are impacting its ability to store runoff and release it slowly the remainder of the year.

Water quality during flow events is typically a hard, calcium bicarbonate type. Sodium and sulfate concentrations are also high. The surface water is suitable for livestock and wildlife but naturally too high in total dissolved solids (TDS) for domestic use. The pools that persist after runoff events can become too high in TDS for even livestock. None of the streams in this watershed are listed by the state as water quality impaired. Appendix G lists the surface water sources by allotment in the watershed.

Ground Water - Shallow ground water (within 500 feet of the surface) is absent except in the alluvium of the major creeks. Alluvial water is generally too poor in quality and quantity for domestic use but could be pumped for livestock or wildlife use. Deeper aquifers bearing water suitable for livestock and domestic use are the Judith River and Eagle sandstones. The Judith River sandstone is generally low yield (less than 10 gpm) and marginal for domestic use. The Eagle sandstone is artesian at the surface and can yield up to 200 gpm, suitable for both livestock and domestic use. Numerous wells completed in the Judith River sandstone are flowing uncontrolled year long and are locally depleting the aquifer. Appendix G lists the ground water sources by allotment in the watershed.

Recreation

The Armells Creek Watershed is located within the Judith Recreation Management Area (RMA MT060-07). This Extensive RMA was approved in the JVP-RMP (9/94) and allows for dispersed and unstructured recreational activities on the public land in this watershed. Participation in specific recreational activities on the BLM lands in this watershed consists of hunting (90%), wildlife viewing (25%), photography (5%), sightseeing (10%), and driving for pleasure (5%) with the majority of the use occurring in the late summer or during the fall hunting season.

Currently, the BLM has authorized four (4) Special Recreation Permits (SRPs) for commercial outfitting operations on the public lands in this watershed. These SRPs are issued to outfitters with a valid State of Montana outfitter license and are authorized at the discretion of the Lewistown Field Manager. These outfitters pay an annual fee of 3% of their adjusted gross revenue (minimum \$80) for the privilege of utilizing the public land in their commercial hunting business. The four entities are:

Mark Robbins	MT-060-208	Armells Creek Outfitters
Bill Brown	MT-060-116	Chase Hill Outfitters
Keith Meckling	MT-060-033	M&E Outfitters
Glen Nepil	MT-060-195	Double R Outfitters

No developed or undeveloped BLM recreation sites are established in this watershed.

Although there are 177 miles of existing roads and trails in the watershed, the limited public access to the BLM lands attributes to a low number of visits associated with sightseeing and driving for pleasure activities.

Off Highway Vehicles (OHV)

The BLM land in the southern half of the Armells Creek Watershed (T17N, T18N, T19N) (22,264 acres) is designated "OPEN" year-round to motorized travel. There are no restrictions in place as to the type of vehicle, where they may travel, or when they can travel (refer to Off Road Vehicle Travel Plan in the JVP-RMP, Map 4, side A). There are 130 miles of existing roads on BLM land in this segment.

The remaining BLM land in the northern section of the watershed (T20N, T21N) (28,536 acres) have a "LIMITED" designation in effect (refer to above map). There is a seasonal restriction in place that limits motorized travel to 47 miles of designated routes with no cross country travel allowed from September 1 to December 1 each year.

The BLM land within the Armells Creek Watershed has been assigned a Visual Resource Management (VRM) class based on a process that integrates scenic quality, sensitivity levels to changes in the landscape, and the distance zone. There are four VRM categories, ranging from Class I which is the most restrictive to Class IV which allows the most change in the characteristic landscape. Each VRM Class has management objectives which prescribe the level of acceptable change for each unit. Any proposed projects that fall within VRM Classes I, II, or III must have a contrast rating work sheet done to assess any impacts and recommend mitigating measures/guidelines.

There are three VRM classes designated for this watershed: II, III, & IV (see Visual Resource Management Map 1, side A, in the JVP-RMP). The majority of the BLM lands (87%), are categorized as VRM Class IV. This class allows for management activities which could create major modifications to the existing character of the landscape. Such activities may dominate the viewshed and be the major focus of attention. Even in this category, every attempt should be made to minimize the impact through careful location of the project, minimal surface disturbance, and repeating the four basic elements found in the visual zone: form, line, color, and texture.

Approximately 12% of the acreage is under the VRM Class III category. This class allows for a moderate level of change to the characteristic landscape. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the four basic elements found in the predominant natural features of the Armells Watershed.

An estimated 1% of the acreage of the Armells Creek Watershed is found in the VRM Class II category, the most restrictive of the three classes. This BLM land is located just northwest of Fergus along the headwaters of Dry Armells Creek. Management activities may be seen but should not attract the attention of the casual observer in this visual landscape.

Cultural-Prehistoric / Historic Resources

Cultural resources are broadly defined by BLM as any cultural property or traditional lifeway value. Cultural properties are definite locations of past human activity, occupation or use. Traditional lifeway values are the traditional systems of religious belief, cultural practice or social interaction that are not closely identified with definite locations.

The prehistoric period began around 14,000 years ago and ended around 1855 with the signing of the Blackfeet-Stevens Treaty. The inhabitants of this area were mostly hunters and gatherers utilizing the natural resources (plants and animals) for subsistence activities.

According to Ruebelmann (1983), prehistoric sites (properties) in the pine breaks are found on the tops of ridges, at the ends of fingers which extend out beyond the rims of major valleys, on valley terraces, and on erosional remnants such as hills, knolls, and buttes. Prehistoric site density is considered low and estimated at 2-3 sites per section (Ruebelmann, 1983-pg 48).

Later in the historic period, homesteading brought settlers into the planning area by the thousands. The region was quickly settled by Germans and Scandinavians from the Midwest, as well as by eastern European immigrants like Bohemians and Yugoslavs.

Historic period properties in the study area are primarily related to homesteading and ranching.

There are historic accounts of early explorers, traders and trappers using the area. However, specific locations with physical evidence of their use is lacking. Consequently, most historic period properties are related to the homesteading era or later.

BLM records indicate that BLM lands within the study area contain previously recorded sites. These sites include two prehistoric sites (24FR346 & 24FR721) and the remains of one homestead (24FR284/FR706).

Economic and Social Conditions

There are 31 allotments in the watershed. They vary considerably in size. Most of the ranches in the watershed are cow/calf operations. Total grazing preference on the public lands is 7245 animal unit months (AUMs).

Public lands provide a considerable amount of recreational opportunities such as camping, hunting, and sightseeing. Visitors attracted to the area by these opportunities spend money on goods and services such as food, lodging, transportation, clothing, and outfitter services.

Local residents and other public land users exhibit attitudes and values typical of a rural farm/ranch oriented society in the western United States (JVP RMP). Residents value the rural character of the area, wide open spaces, naturalness and solitude. Positive aspects of the area include the independence and industriousness of the local people, the lack of urban problems, relaxed pace and personal freedom. Residents have a strong sense of heritage. These people have grown with the area, have seen changes occur, and are extremely concerned about any management decisions that would potentially disrupt their lifestyles. Recreational opportunities represent a necessary portion of the local lifestyle.

Wildlife

The Missouri River Breaks offers outstanding big game hunting opportunities. Antelope, both species of deer (mule and white-tailed), and elk are common. Of greatest interest is the breaks elk herd, which is noted for producing large bulls and providing a significant number of hunting days, particularly for the archery hunter. Rifle hunting has been limited to permit by drawing only for many years because success rate in harvesting is high due to the nature of the terrain, existing roads, and sight ability. Archery hunting will also be limited to permit by draw starting in year 2000; these permits are unlimited for now. The draw for archery permits is an attempt by Montana Department of Fish Wildlife and Parks to identify how many archers are actually hunting in the different districts of the Missouri River Breaks Elk Management Unit.

Typical breaks habitats are made up of evergreen forests, mostly ponderosa pine and juniper or pine and Douglas fir mixed, areas of sagebrush bottoms or uplands, and native grasslands. The Armell's watershed is representative of the breaks and contains 32,607 acres of forest, 60,596 acres of sagebrush/mixed shrub grassland, and 125,786 acres of grassland. Riparian drainages wind their way from south to north into the Missouri River. There are 2,533 acres of herbaceous, shrub, and forested riparian habitat in the watershed.

No specific limiting factors for big game have surfaced for the Armell's watershed, however, maintenance of cover areas (forests) for both hiding cover and thermal cover in the winter is an important management goal for both elk and deer. Also, providing residual vegetation as winter forage is important.

The Montana Department of Fish, Wildlife and Parks (MFWP) has aerial surveyed the Armells and Two Calf watersheds during the winters of 1992, 95, 96, and 98. The 1998 data is fairly similar to the other year's data. In 1998, a total of 279 elk was counted in 24 different groups. Classifications found 44 calves per 100 cows, and 66 bulls per 100 cows. Of the elk observed, less than thirty per cent are usually found north of Knox Ridge road indicating the majority were in the Armells watershed (personal communication, T. Stivers, MFWP).

Also during this 1998 survey 233 mule deer were observed in 44 groups. The number of mule deer fawns per 100 adults was 25. Bucks per 100 does were 12.

Sagebrush habitat makes up much of the herbaceous/shrub layer in the watershed. This habitat type can be critical for both antelope and sage grouse if conditions warrant. Most recent years have been exceptionally warm and dependence on sagebrush for food and cover for these species has not been as important as during hard winters. Maintenance of this vegetation layer for these species is important. Many acres of LU land in this watershed were planted to crested wheatgrass as homesteads reverted back to the government. The subsequent monoculture of crested wheatgrass is not good habitat for sage grouse.

Sharp-tailed grouse is another game bird species that is found throughout the watershed. Heads of coulees containing shrub communities such as buffaloberry and snowberry are also preferred habitat. Other game birds known to exist in the watershed include ring-necked pheasants, Hungarian partridge, and morning dove.

One known prairie dog town of 116 acres exists on BLM land in this watershed. The prairie dog town is located in the SW of Section 21, T20N, R23E, and has very little opportunity for expansion onto BLM land. Prairie dogs are not an issue in this watershed and BLM will manage this town as directed by the multi-agency plan under development for the State of Montana. This single prairie dog town is approximately 20 air miles and on the opposite side of the Missouri River from the 7km complex black footed ferret reintroduction area in Phillips County. There is no known documentation of mountain plover in the area either.

This watershed contains a variety of raptor nesting habitat. Cliff nesters like the golden eagle and prairie falcon, tree nesters like the Swainson's hawk, red-tailed hawk, great-horned owl, and ground nesters like the burrowing owls, northern harrier, and ferruginous hawk all can be found in the watershed. Ferruginous hawks are a special status species and can be closely tied to prairie dog towns, ground squirrel colonies, or areas of high rabbit numbers.

Nongame bird species diversity is high within the watershed. Neotropical migratory birds are birds that summer in North America and utilize winter habitat south of the United States. Many of these species, including western meadowlark, lark bunting, loggerhead shrike, and western tanager breed and nest in the area. There is growing concern for the grassland bird species especially due to declines in grassland habitat. These species include loggerhead shrike, spragues pipit, bairds sparrow, mountain plover, and others which most likely nest in the watershed.

There are two threatened and endangered (T&E) bird species which could possibly occur in the watershed. These are the bald eagle and peregrine falcon and both are scheduled to be removed from the threatened and endangered species list. There are bald eagles nesting on the Missouri River but are not known to nest within the watershed boundary. Bald eagles could be in the area in the winter in association with concentrations of wintering big game. The peregrine falcon has not been documented in the watershed, however adults could be returning to the watershed after years of releasing young falcons in the Fergus County area. It would not

be unlikely to see peregrine falcons pass through the general area but nesting habitat and foraging opportunity is not prevalent for peregrines in this watershed.

There are six fish species known to live in the lower portion of Armells Creek. They are common carp, fathead minnow, flathead chub, juvenile sucker, plains minnow, and western silvery minnow. Plains minnow and western silvery minnow are on the watch list of sensitive species for the state of Montana. These two sensitive species were found during a survey conducted on CMR National Wildlife Refuge of Armells Creek during the fall of 1999. As of this date it is not known whether these species exist in the BLM portion of the Armells watershed or not.

Pallid sturgeons, a T&E fish species, is known to inhabit the Missouri River near the confluence with Armells Creek for part of the year. The BLM portion of Armells watershed is approximately 8 miles up stream from the confluence with the Missouri River.

Lands / Realty-Access

The current status of access in the Armells Watershed appears to be in question at this time. Bureau of Land Management records do not indicate that a right-of-way has been granted to Fergus County for a county road in this area, though many county roads fall under the authority of RS 2477 roads, which have yet to be recorded with the BLM. The BLM doesn't have any easements across the private land which would guarantee access to the public. However, landowners along Armells Creek have indicated that they consider the main road in the area to be a public road as it has been used by the public for many years. Should this not be the case, it is BLM's policy to acquire legal access to large blocks of public land whenever and wherever possible to ensure that public access is retained.

The Public Lands Access Association (PLAA) has been contacted to ascertain if they would be willing to research the main road through the Armells Watershed which has been used regularly by the public for many years. The PLAA was formed to research the status of existing roads on private lands which provide physical access to public lands, in order to guarantee continued public access to those public lands. The main road, which originates at Roy, is considered a county road for the first 14 miles or so at which point its status becomes nebulous. The road continues north and provides physical access across the West Indian Butte allotment and then joins Knox Ridge Road north of Armells Creek. The PLAA has agreed to conduct the necessary research and the outcome will determine whether the Bureau pursues additional access in the watershed area.

CHAPTER 4 - Environmental Consequences

This chapter describes the environmental consequences of implementing the alternatives. The impacts are discussed by resource for each alternative.

Noxious Plants

Alternative 1 - Current Management

Known infestations of weeds would continue to be controlled. There is always a chance of spread of weeds but BLM's response would not change with this alternative.

Alternative 2 - Proposed Action

Known and future infestations of weeds will be controlled. By restricting OHV use to designated routes the chance of weeds spreading is decreased but the potential for spread could be a problem along the roads.

Alternative 3 - Minimal BLM Funding

Same as Alternative 1.

Alternative 4 - No Action

BLM would need to provide labor and chemical to control noxious weeds.

Upland Range

Alternative 1 - Current Management

Upland range health would remain static. Areas that are properly functioning would remain so and areas that are functioning at risk would not see improvement.

Alternative 2 - Proposed Action

By grazing livestock according to the guidelines, upland health would remain in properly functioning condition or make significant progress toward PFC. Erosion should decrease due to improved conditions and limiting OHV use to designated roads and trails.

Alternative 3 - Minimal BLM Funding

Same as alternative 2.

Alternative 4 - No Action

In the short term, upland health would remain or improve to PFC. In the long term, upland health may be negatively impacted by the lack of grazing and wildfires may be more prevalent due to fine fuels.

Livestock Grazing Management

Alternative 1 - Current Management

There would be no change from the current permit, therefore livestock grazing management would not be impacted.

Alternative 2 - Proposed Action

Permittees would need to spend additional time managing their livestock to meet the grazing guidelines and achieve standards for healthy rangelands.

Alternative 3 - Minimal BLM Funding
Same as Alternative 2.

Alternative 4 - No Action

Current permittees would need to control their livestock so they don't graze the public lands. Due to the fragmented ownership this would be an increased workload to the private property owner.

Fire Management

Alternative 1 - Current Management

The current suppression strategy (aggressive initial attack to keep all fires as small as possible) has led to an increase in fuel loading and under story development in the timber stands located in the watershed. Over time this buildup has led to the risk of timber stand replacement fires and the loss of timber resources and wildlife cover. Under the current management practice, larger wild fires would result and more expensive fire control efforts would be needed to control wild fires.

Alternative 2 - Proposed Action

The proposed action would reduce the chance of a stand replacement fire in the two project areas by maintaining a healthy pine habitat due to reduction in ground and ladder fuel buildup. The potential for large fire and timber stand replacement fires would be reduced. The cost and number of suppression resources would be reduced.

Alternative 3 - Minimal BLM Funding

Same as Alternative 2.

Alternative 4 - No Action

With no grazing in the existing fine fuels (grasses) there would be the potential of large, high severity fires. Adding the increase in fine fuel loading to the large volume of heavier fuels that already exist would greatly increase suppression costs and resource damage. There could be an increase threat of fire leaving public land and impacting adjacent private lands.

Watershed (Hydrology and Riparian Resources)

Alternative 1 - Current Management

Riparian areas would remain static since no new projects or changes in grazing systems are proposed. The five flowing wells and the reservoir in the bottom of Fargo Coulee would continue to attract livestock to riparian areas, especially during the hot season.

The five wells flowing uncontrolled year long on public land and the approximately 20 wells on private lands would continue to waste water from the aquifer. These uncontrolled flowing wells would remain in non-compliance with Montana water law.

Alternative 2 - Proposed Action

The two proposed new wells would supply water to 18 stock tanks in the uplands. In addition, controls would be installed on the five flowing wells on public lands. The reservoir in the bottom of Fargo Coulee would be eliminated. These actions would attract livestock to the uplands away from the riparian areas. Degraded riparian areas would quickly respond with plant health and diversity once continual hot season livestock use is eliminated.

Installing controls on the five flowing wells would slightly improve aquifer conditions and bring them into compliance with Montana Water Law. However, the 20 wells on private lands also need to be controlled before significant improvements to the aquifer are achieved.

Alternative 3 - Minimal BLM Funding

Controlling the five flowing wells on public lands and eliminating the reservoir in Fargo Coulee would help reduce hot season livestock use in the riparian areas. However, no additional water sources in the uplands are planned in this alternative. Livestock use of the riparian areas during the hot season would not be totally eliminated. Improvements in riparian vegetation would not be as significant nor as rapid as in Alternative 2.

Controlling the five flowing wells would slightly improve pressures and volumes in the aquifer. BLM would be in compliance with Montana water law.

Alternative 4 - No Action

Eliminating grazing would allow degraded riparian areas to quickly recover. PFC would be achieved in less than ten years.

Installing controls on the five flowing wells would slightly improve pressures and volumes in the aquifer. BLM would be in compliance with Montana water law.

Recreation

Alternative 1 - Current Management

Very little change in recreational activities and visitor use numbers are anticipated under this alternative. The limiting factor continues to be lack of legal public access to BLM land. The large amount of land available for motorized cross country travel would be a positive impact for this type of recreational activity. The lack of improvement to wildlife habitat will be a negative impact for hunting opportunities on public land in the area. Additional special recreation permits (SRPs) for commercial outfitter hunting operations (currently there are four) or other activities could be authorized by BLM in this watershed.

Alternative 2 - Proposed Action

There would be a minor positive impact for recreational activities and an increase in visitor use numbers associated with any new opportunities for improved legal public access. Restraints on unlimited cross country motorized travel would decrease use tied to this recreational activity. The increased improvements to wildlife habitat would be positive impact for hunting opportunities. Additional SRPs that meet minimum BLM criteria would continue to be authorized for commercial recreational activities.

Alternative 3 - Minimal BLM Funding

Same as Alternative 2.

Off Highway Vehicles

Alternative 1 - Current Management

The entire watershed area would remain open to motorized cross country travel for nine months of the year (December through August). This includes 177 miles of existing roads & trails. This would create a negative impact to visual resources allowing new surface disturbing routes. This would create a negative impact for those hunting opportunities that utilize nonmotorized activities but a positive impact for those hunters that rely on use of motorized equipment to

pursue their recreational activity. There would be negative impact to the control of noxious weeds.

The northern segment of the watershed restricts motorized use to 47 miles of designated routes from September 1 to December 1. The no cross country motorized travel restriction would be a positive impact for visual resources as the majority of use on the BLM land occurs during this timeframe. This would be a positive impact for recreational activities such as hunting or wildlife viewing where walking, solitude, and undisturbed wildlife are important criteria. There would be a minor positive impact to the spread of noxious plants with motorized use restricted to designated routes. There would be less disturbance to grazing livestock during this time period also.

Alternative 2 - Proposed Action

With the use of motorized vehicles restricted to the 177 miles of existing routes within the watershed boundary, the impact to the visual resources would be positive as no new roads or trails would be created. Visitor use associated with nonmotorized activities such as hunting, wildlife viewing, and photography would realize a positive impact. There would be a positive impact for those who participate in road hunting. The visitor who relies on cross country travel to pursue recreation activities would be negatively impacted. The opportunity to control the spread of noxious weeds from indiscriminate driving would be a positive impact.

Alternative 3 - Minimal BLM Funding

Reduced signing opportunities and less law enforcement activities would create a negative impact.

Visual Resources

Alternative 1 - Current Management

The creation of new routes and increased surface disturbances associated with cross country motorized travel would create a negative impact to viewshed (visual scene) in the area. The continual spread of noxious weeds from OHV use would be a negative impact to the existing characteristic landscape found in the watershed. Heavily grazed areas such near the flowing wells would be a negative visual impact as it changes the existing scenic values.

Alternative 2 - Proposed Action

Restricting motorized vehicle travel to only designated roads and trails would be a positive impact. Focusing the additional use of the OHVs to certain routes would increase the chance of ruts and erosion on existing disturbed areas but would be a minimal negative impact. Controlling the spread of noxious plants by OHVs would be a positive impact. Livestock management developments would be a negative impact if they don't meet the mitigative visual standards set forth in the visual contrast rating evaluation. The two prescribed fire proposals would be a negative visual impact until the area has revegetated.

Alternative 3 - Minimal BLM Funding

Same as Alternative 2.

Cultural-Prehistoric/Historic Resources

Alternative 1 - Current Management

There would be no specific identifiable impacts to cultural resource management as a result of selecting this alternative. Cultural sites would continue to be managed in accordance with the

guidance provided by the JVP RMP and in conformance with applicable law and policy.

Alternative 2 - Proposed Action

There would be a minor positive impact to cultural resource management as a result of designating access and limiting off road vehicular traffic. This positive impact would result from the reduction of potential disturbance and erosion to cultural sites associated with off road vehicular travel.

Alternative 3 - Minimal BLM Funding

Same as Alternative 2.

Alternative 4 - No Action

See Missouri Breaks Grazing EIS.

Economic and Social Conditions

Alternative 1 - Current Management

The current economic situation would remain static. Socially, there may be pressure to achieve standards for healthy rangelands and this could impact the community.

Alternative 2 - Proposed Action

There would be additional costs to the permittees to manage their livestock in accordance with the grazing guidelines. Also, there would be costs associated with the proposed range improvements. Positive impacts would be realized by achieving healthy rangelands.

Recreationists who enjoy off-road travel would be negatively impacted when restricted to designated roads and trails.

Alternative 3 - Minimal BLM Funding

Same as Alternative 2.

Alternative 4 - No Action

The no action alternative was addressed in depth in the Missouri Breaks Environmental EIS as a no grazing alternative. Pages 8-12 through 8-15 are referenced as the analysis for this alternative. Under this alternative grazing on public lands in the watershed would be eliminated as the permits expire. This would result in decreased income and increased management costs for the permittees.

Wildlife

Alternative 1 - Current Management

Under current management, the riparian and upland health issues that have been identified would not improve. Poor distribution of livestock and consequent areas of heavy use would impact wildlife using the area. Some areas would have little residual vegetation for wintering elk and to meet the requirements for ground nesting birds. Other areas in the watershed would have abundant residual vegetation because the lack of livestock water has resulted in poor livestock distribution and can be considered a positive impact for wintering big game and ground nesting birds.

Improvement of riparian areas would be difficult and the health ratings would remain static or continue to degrade. The existing situation with the flowing wells in the drainages and no additional upland waters would continue to attract livestock to the riparian areas. Unhealthy

riparian areas would be a negative impact to most wildlife species. Vegetative diversity and structure that are associated with healthy riparian would not be available for cover, foraging and nesting areas for many species. No improvement would be made to the stream bank vegetation and consequently to the fisheries habitat in Murphy Coulee and Lower Armells Creek.

Non-native (crested wheatgrass) vegetation would remain constant on the LU lands within the watershed. This would continue to minimize the acres of BLM land that are available for sage grouse nesting and sage grouse and antelope winter range.

Alternative 2 - Proposed Action

When rangeland standards have been achieved in the watershed, the issue of depleted fisheries habitat should be nonexistent. Riparian areas in PFC would provide adequate stream bank vegetation and water storage to maintain fisheries habitat where it currently exists. Healthy riparian conditions would probably allow the fisheries habitat to expand beyond what exists now.

Reseeding areas that are currently homogenous stands of crested wheatgrass with native herbaceous and browse species would benefit many wildlife species that need sagebrush/grass habitat for nesting or winter forage. Providing additional nesting and brood rearing habitat for the sage grouse would be a positive impact for the entire Missouri River Breaks region particularly in light of the ever increasing concern about the general decline in sage grouse numbers west wide. Planting sagebrush into these previously cultivated areas would also provide some young rejuvenated stands of sage brush that are nearly nonexistent in this area.

This alternative includes the addition of new upland water sources and controls being placed on five existing artesian wells in the riparian bottoms. In each case the goal is to better distribute livestock away from the bottoms and improve the health of the riparian habitat to a proper functioning condition. Under this proposal the livestock operators would have the ability to make water available at each of these sites for a predetermined amount of time and during a particular time period. This would give them the flexibility to control the amount and timing of livestock use much closer.

There would be both negative and positive impacts to the wildlife resource associated with the increased distribution of livestock waters. Construction of pipelines and troughs would be a short term impact to wildlife and may result in displacement during the construction period. There would be minor vegetation removal and these areas will be reseeded. Development of additional water sources would draw livestock into areas of residual forage that have been ungrazed by livestock in the past. This would negatively impact wintering elk and species such as sharp-tailed and sage grouse that are dependent on residual vegetation for successful nesting. However, the improvement of livestock distribution throughout the entire watershed would be compensatory and these wildlife species would have new areas of ungrazed or lightly grazed grasses to meet their needs. Watering troughs on the proposed pipelines would be located at intervals and locations to minimize the impact to wintering elk and nesting birds. The subsequent improvement in the riparian habitat would provide increased vegetative diversity and structure that are important for nearly all wildlife species. Both grouse species and other birds, including many neotropical migrants, would take advantage of the increased insect and forb diversity associated with a riparian area in good condition.

The two prescribed burns that are proposed in Alternative 2 would also impact the wildlife resource both negatively and positively. The Fergus Triangle burn is proposed to reduce the heavy fuel load and remove excess young trees that are invading the surrounding grasslands

in and around an overgrown ponderosa pine stand. Both mule deer and elk are known to concentrate in this area during most winters. This treatment would encourage increased growth and sprouting of the grasses and the sprouting browse species such as chokecherry, serviceberry, rabbit brush, and silver sagebrush. Wyoming big sagebrush and horizontal juniper are non-sprouting species and would have to rely on seeds to become reestablished after the fire. Individual treatment areas would be small in size in order to accommodate seed dispersal into the treated areas from the non-sprouting browse species. A mosaic burn pattern would create more edge between habitat types and promote a higher diversity of both plant and animal life. Overstory removal would be kept to a minimum in the mature portion of the ponderosa stand to maintain adequate thermal cover for the wintering mule deer and elk.

The Lower Armells burn is proposed to reduce heavy forested fuel load and rejuvenate isolated decadent browse stands. Many of the chokecherry stands in the heads of the coulees have been overcome by thick stands of horizontal juniper, ponderosa pine and Douglas fir. Running fire through the understory of this community would minimize competition from the young conifers and encourage sprouting and spread of the desired deciduous browse species. The Lower Armells area receives fairly heavy year around use by elk and moderate use by mule deer. Rejuvenated browse stands and subsequent increase in production of the desired browse species would favor both deer and elk. This area involves three narrow sagebrush grass ridges between the coulees. Sagebrush habitat would not be particularly targeted to burn but fire would likely come out of the coulees and burn some small areas of the ridge tops. The project area is several miles from the nearest sage grouse lek. No sage grouse occurrence has been documented to date on these isolated ridges.

OHV restriction would be beneficial to big game animals particularly during hunting season. This would not be a major benefit in this particular watershed due to the fact that only limited access is available. Most of the vehicular access to the public land in this watershed has to come through private land. Many of the permittees are very concerned about the creation of new roads and permit only walk in access. The best over all use of the wildlife resource in this watershed would be to obtain permanent public access to this popular area. If public access is ever obtained, a road management program would be essential to maximize the resource potential and protect the habitat.

The proposed action would not effect any T&E species or their associated habit. The three T&E species (bald eagle, peregrine falcon and pallid sturgeon) that are present in the Missouri River corridor would not be impacted by the actions in this proposal.

Alternative 3 - Minimal BLM Funding

Under Alternative 3, the riparian areas and associated fisheries habitat would eventually improve. Permittees would be responsible for achieving standards and meeting guidelines. The lack of BLM funding available for range improvements with this alternative is likely to slow this process down.

Wildlife would benefit from the off road restriction during the hunting season. The wildlife habitat improvements described in Alternative 2 from reseeding non-native rangelands and prescribed burning would likely not be realized with this alternative unless some unforeseen money became available.

Alternative 4 - No Action

Eliminating grazing would allow unhealthy riparian and upland areas to quickly recover. Water flow regimes and associated fisheries habitat should reach its maximum potential within just a few years. Herbaceous vegetation would be abundant for big game forage and ground cover

for nesting birds.

After a number of years of no livestock grazing some of the grasses would become over mature and less productive. This may eventually become a problem and necessitate the need for manual manipulation of the vegetation such as prescribed burning or mechanical treatment.

Lands/Realty-Access

Alternative 1 - Current Management

Access would continue to be allowed as it is now by landowner consent.

Alternative 2 - Proposed Action

The pursuit of a permanent, exclusive easement may or may not be successful and therefore, may or may not have an impact. If successful, it would result in guaranteed public access from Highway 191 at Roy north to where it joins with the Knox Ridge Road. This would enhance recreational opportunities in this area. Local landowners would no longer have the option of closing the road in muddy conditions; conflicts between the recreating public and local landowners could increase.

Access through the block management program would also result in enhanced recreational opportunities for the public. Since block management programs receive a great deal of input from the private landowner, conflicts with the public could be minimized.

Access acquired through land exchange with willing landowners would also enhance recreational opportunities, while minimizing potential conflicts between private landowners and the public; providing the public land boundaries are identified and respected. At this time, however, there are no identified land exchanges in this area that would improve public access.

Alternative 3 - Minimal BLM Funding

Same as Alternative 2.

Cumulative Impacts

Cumulative impacts were considered for the proposed action and the alternatives and were not found to be significant for any resource. Cumulative impacts were previously addressed in the JVP RMP.

Monitoring And Evaluation

see map on page M6

Key areas would be established for upland and riparian utilization. Existing upland study sites would continue to be used and additional sites may need to be established. Riparian study sites would need to be established. There should be a minimum of one upland and one riparian study site per pasture.

Monitoring would be collected by permittees and the BLM. Permittees would be responsible to constantly monitor livestock distribution, utilization levels, and stubble heights on their allotments to ensure that livestock grazing is consistent with established guidelines. Permittees would be responsible to send photos of each monitoring site yearly to BLM. The photos would be taken following grazing use. Photos would be reviewed and if there is concern about the site then the BLM would plan to monitor the site the next year.

BLM would monitor sites (riparian and upland) according to their present condition rating:
Proper Functioning Condition sites: every 5 years
Functioning At Risk sites: every 2-3 years
Non Functioning sites: every year

Actual use data would be collected on the following allotments: Antelope Coulee Common, Armells Pasture, Armells, Dry Armells Common, Fergus Triangle, Gilskey, Lower Armells, Mayberry Place, Sawmill Coulee, and West Indian Butte. Permittees will be responsible for submitting actual use reports to the BLM at the end of each grazing season.

First order fire effects would be monitored following the prescribed burns.

Evaluation of monitoring data would occur yearly. A watershed evaluation would need to be completed within 10 years for permit renewal.

The BLM interdisciplinary team which prepared the Armells Creek Watershed Environmental Assessment:

Vinita Shea	Rangeland Management Specialist (Team Leader)
Tad Day	Wildlife Biologist
Dan Frank	Cartographic Technician
Joe Frazier	Hydrologist
Sharon Gregory	Range Technician
Stanley Jaynes	Archaeologist
Tom Maxwell	Fuels Specialist
Loretta Park	Realty Specialist
Kaylene Patten	Facilitator
Fred Roberts	Wildlife Biologist
Clark Whitehead	Outdoor Recreation Planner

Other BLM employees who provided input:

Craig Flentie	Public Affairs Specialist
Tom Madsen	Law Enforcement Ranger
Jerry Majerus	NEPA Coordinator
Mitch Maycox	Fire Management Officer
Gene Miller	Associate Field Manager
Chuck Otto	Assistant Field Manager (Renewable Resources)
Bruce Reid	Forester
Gary Slagel	Assistant Field Manager (Non-Renewable Resources)
Gary Warfield	GIS Coordinator
Betty Westburg	Civil Engineering Technician

Permittees, landowners, and grazing district personnel that participated in the planning process:

Robert Fink	Melvin Rindal	John O'Reilly
Cathy Whitney	Edwin Hyem	John Gervais
Bud Grindheim	Rory Hala	Rod McClure
Delmer Harrison	John Gilpatrick	Arnie Duncan
Edith M. Komarek	Glen Rindal	Charles Yaeger
Chuck Yaeger	Steve Gilpatrick	Mark Robbins
Jeff Willmore	Sue Willmore	Perry Kalal
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Other agency personnel that participated in the planning process:

Ted Hawn	Natural Resource Conservation Service
Tom Stivers	Montana Dept. of Fish, Wildlife and Parks
Anne Tews	Montana Dept. of Fish, Wildlife and Parks
John Hunter	MT DNRC - Water Resources
Barney Smith	MT DNRC - State Lands
Bill Baumgartner	MT DNRC - State Lands
Bill Haglan	Charles M. Russell Wildlife Refuge, Fish and Wildlife Service
Larry Ulibarri	Charles M. Russell Wildlife Refuge, Fish and Wildlife Service
Joe Spika	Fergus County Commissioner
Vern Petersen	Fergus County Commissioner

A draft environmental assessment was sent to the watershed participants on July 1, 2000. The public comment period ended on August 1, 2000. The following three letters were received. The bold letters that have been added to the right column correspond to the BLM response which is on page 30.

A Comment on the Armells Water Shed Access

July 7, 2000
Robert Fink

RECEIVED

JUL 24 2000

BUR. OF LAND MGMT
LEWISTOWN FIELD OFFICE
LEWISTOWN, MONTANA

The road in question crosses private and public land for seven miles. It has provided access for 90 years. No attempt to close this road was ever made. Man has never closed this road however mother nature and her elements close this road for months at a time at the confluence of Fargo and Armells. Water fill the channels making the road impossible to cross. Also wet gumbo closes this road as the BLM personal can testify. Hunter and tourists don't realize the hazards of the gumbo and flooded crossings and for these reasons warning signs should be in place.

It is scary when the BLM wants legal access. What they really want is control. This will result in the taking of private lands. The status of this road is simple, It has been doing the job for 90 years and no PLAA can change that.

A

Sad to say many trails and roads have been closed by the BLM, USFW&P. Perhaps this is necessary to protect the resource, perhaps not.

Whether we have grass to measure depends on the amount of precipitation that falls on this good earth. 1952, 1961, 1983, 1956, 1985, 1988, and 2000 are years of short grass. Exceptions to the 4 inch stubble rule should be made.

B

When precipitation in March and April, May, and June total less than 6 inches the 4 inch stubble height should be waived.

JUL 25 2000

Comments to proposed action and alternatives to Armells water shed.

ALTERNATIVE 2

BUREAU OF LAND MANAGEMENT
LEWISTOWN FIELD OFFICE
LEWISTOWN, MONTANA

ISSUE: Access-I would like to see some of the access closed or limited. The public seems to want to drive where ever they want and make trails. This causes damage to the land and grass.

E

ISSUE: Recreation—Off highway vehicle use should be limited to permittee and BLM officials. The use of OHV has a very damaging effect on land erosion and grass damage during the time the grass is dormant.

ISSUE: Livestock management—All permittees should have a grazing plan that is workable for their allotment. The plan should, allow for the years that are dry and grass production is down from the normal. There should be a plan to let the permittee reduce the amount of grass that is left in these dryer years. There should also be a plan to develop more water on the Fergus Triangle. Water would help in the distribution of cattle, which would help with forage production and ease the grazing on certain areas.

B

C

ISSUE: Fire—The proposed fire in the Fergus Triangle is an excellent idea. I think that some of the fire should be hot enough to burn all of trees in small blocks to allow for open cover and forage with protection close by. The fire should be hot enough to burn the pine needles and duff that is under the tree cover and also some of the taller trees so that light and moisture can get to the forage below. Fire has been a control of vegetation since time began. The control of fire to help increase vegetation, resulting in increased carrying capacity should be a priority for everyone.

D

ISSUE: Wildlife and Fisheries—The wildlife and the livestock need to be managed equally. The wildlife need forage year round and in the Fergus Triangle the use of fire and grass management would help accomplish this. The wildlife, especially the elk, is on the increase. The BLM and Fish and Game have to work together to help the permittee control the wildlife. Cattle are subsidized with hay during the winter so the need for winter feed is less. The cattle are not on this part of ranch during the winter months, the wildlife is on and off of this land year round.

ISSUE: Weeds—The problem with weeds is an ever-increasing situation. All vehicles that enter an area have potential of distributing weeds. The use of vehicle travel by non-permittees and BLM officials should be limited to certain areas. The public in general has no idea of how weeds can be spread, or even what weeds are dangerous and how expensive they are to control. We are left with what to do with the problem that is caused by their ability to be able to drive or do anything that they want to do on these lands.

E

The issue of prehistoric/historic resources is a concern, a project can be halted or canceled because of the finding of some arrowheads or flint. This country is loaded with these artifacts. A project should not be canceled just because of this. It should be based on how the project would benefit the area Vs the finding of these artifacts. If the project is going to harm something of historic value such as buildings, landmarks, etc., then the project should be reconsidered.

F

When a permittee has put money into a grazing permit, then he should have more control of what is being done on that grazing allotment. The additional cost that comes with a permit result in higher grazing fees. We try to manage these allotments as if it was our own land, because this is my livelihood that I am endangering if I ruin it.

I am in favor of the actions that are proposed in Alternative 2 with the exceptions that I have listed.



July 23, 2000

Vinita Shea
BLM Field Office
P.O. Box 1160
Airport Road
Lewistown, MT
59457

RECEIVED
JUL 31 2000
BUR. OF LAND MGMT
LEWISTOWN FIELD OFFICE
LEWISTOWN, MONTANA

Dear Vanita,

I'm writing this letter in response to the Draft of the Armells Creek Watershed Environmental Assessment. I've Spent the last few days reviewing the draft and found a few things disturbing.

On Page 3 of the Draft titled Off Highway Vehicles it states that OHV's contribute to the spread of weed's. By my experience 95% of the weeds in the country were introduced by people feeding hay in there allotments. What about people riding horses? Do these individuals feed there horses Certified weed free hay 48 hrs before riding there horse on BLM Land?

G
H

On Page 5 Titled Alternative 2 - Proposed Actions. It is proposed that recreation riding would limited in Township 20 & 21 to designated routes September 1 through December 1. The fall of the year is when I go out and look and see what the condition of my pasture is by doing this it denies me access to my allot ments. It sure hinders people with Land Use Exchange from viewing there allotments and helps the Guides.

I

On Page 6 of the Draft there is mention of controlling well flows, wells, tanks, drilling wells and tank installation. In allotment 2025 there are two wells in the bottom of Dry Armells Common one of the well has a cracked stem and/or casing and if shut off seeps around the well casing. You might talk to Tom Maxwell about this because 7 years ago or so it was mentioned about capping this well and drilling another in it place.

J

On Page 12 Titled Recreation it lists 4 individual guides who have Special Recreation Permits for Commercial Outfitters. I have an extreme problem with this matter! By doing this it entitles 4 individuals from September 1 through December 1 with exclusive right to travel when and were they want to. Mark Robbins in the past has hired a plane to fly elk off BLM land onto his Step fathers deeded land so he can have his pay fee hunters hunt Elk on there deeded ground .By my past experience does this give these people rights to cut fences so they can get to the Elk in other peoples allotments who's to stop them since there the only people that can ! I have Land Use Exchange for my AUM's in 3 Pastures by this I will have no rights to travel in my allotments during hunting season. By doing this deal with the Outfitters it basically gives them Township 20 North and Township 21 North as there exclusive private play ground. The AUM's that Mark Robbins currently rents from me will go out for bid in the fall of 2003.

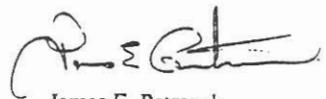
K

I

Every year I spend over \$100.00 purchasing Off Highway Use stickers for my 3- 4 wheelers. By this proposal 4 Guides are going to pay \$320.00 and have free reign of the BLM land from September 1 through December 1 every year. By doing this it means the closer of hunting on BLM land and transportation of game for us common peons.

If this Draft goes through as proposed it will leave me no option but to close all roads and trails that cross my deeded acreage including the Musselshell trail road. I will by my own discretion issue permittee and easements to people in the Agriculture community that are affected by this.

Sincerely,



James E. Petranek

Response to Comment Letters

- A)** Legal public access to public land has been a Bureau priority for the last several years in response to the needs of the recreating public and reduced recreational opportunities on private property. It continues to be the Bureau's policy to acquire public access from willing landowners to ensure public access in the future. We recognize and appreciate that the road in question has always been open to the public. As stated at the public meetings, the Bureau is not trying to force the private landowners to grant legal access. Easements are to be acquired only from willing landowners who will be paid the appraised fair market value for the easement. Easements do not involve a taking of private land.
- B)** Stubble height is a guideline. As indicated in Guideline 8 and the Montana, North Dakota and South Dakota BLM drought policy, the BLM will work with permittees during periods of drought to develop strategies for livestock use that protect rangeland resources while minimizing impacts to the permittee to the extent possible. If agreement cannot be reached, BLM has the responsibility and accountability for ensuring the public lands are not damaged by improper use.
- C)** While additional water would be desirable on Fergus Triangle, no viable projects were identified through this planning process.
- D)** Objectives for the desired outcome of the prescribed burn are discussed in the proposed action (page 6).
- E)** This document implements the JVP RMP which left the Fergus Triangle area open to OHV use. However, the statewide BLM and Forest Service OHV plan is considering prohibiting motorized cross-country travel on BLM land. That plan is scheduled for completion in April 2001.
- F)** All actions proposed in this Watershed Plan will be undertaken in conformance with federal regulation. Actions which may adversely impact significant prehistoric or historic resources must be considered prior to implementation as required by Section 106 of the National Historic Preservation Act. The law and its implementing regulations at 36CFR800 require the federal agency to consider alternatives to the destruction of significant cultural properties, but do not require cancellation of the project. In cases where a significant cultural site would be impacted and avoidance/mitigation is not possible, the federal agency must make a formal decision regarding the merits of the project versus the significant cultural site as suggested in your letter. However, in most cases avoidance of impacts is possible through simple project modification.
- G)** OHVs are just one of several factors contributing to the spread of noxious weeds. As noted in the weeds issue on page 3 most existing noxious weed populations are associated with roads.
- H)** The BLM requires the use of certified noxious weed seed-free forage on public lands (43 CFR 8365.1-6). The BLM does not have authority to control the forage used on private lands.
- I)** The JVP RMP allows off road travel on BLM land for administration of a grazing permit by the permittee (Approved Judith Resource Area RMP, September 1994, page 21).
- J)** Our goal is to install a flow control valve below any current leaks in the casing. If this is not possible, we will re-examine our options at that time.
- K)** Individual outfitters and guides must adhere to the same OHV restrictions as the public. Their permit is a privilege that only authorizes commercial activity (hunting) on public land and shall not interfere with other valid uses of the BLM land by other users.

APPENDIX A - Land Use Plan Guidance

- **Energy Mineral Resources** - No surface occupancy restrictions will be used to protect critical paleontology sites and archaeology sites. Seasonal and distance restrictions will be included in oil and gas leases to mitigate impacts to wildlife habitat.
- **Non-energy Mineral Resources** - Federal minerals are available for exploration and development unless withdrawn.
- **Paleontology** - Major paleontological resources of scientific interest will be protected.
- **Soils** - Soil productivity will be maintained or improved by increasing vegetation cover and reducing erosion.
- **Water Resource Management** - Surface and groundwater quality will be maintained to meet or exceed state and federal water quality standards.
- **Vegetation Management** - The ecological status will be improved or maintained to achieve a plant community of good (late seral) to excellent (potential natural community) on 80% of the BLM lands within 15 years of implementation of activity plans.

About 40% of the vegetation will continue to be allocated to livestock grazing and about 60% will continue to be allocated to watershed protection and wildlife forage and cover.

The quality and quantity of summer wildlife forage will be improved by improving the reproduction and availability of palatable forbs for deer and antelope. Deer and antelope winter range (especially woody species) will be maintained and/or improved. Existing sagebrush stands will be maintained at a canopy cover of 15 to 50% with an effective height over 12 inches.

The quality and quantity of nesting, brood rearing and winter habitat for upland game birds and waterfowl nesting habitat will be improved by providing residual upland grass and forb cover.

Land will be managed for succulent vegetation production, including a variety of forbs, and big and silver sagebrush will be maintained on sage grouse wintering and nesting areas with a canopy coverage of 15 to 50% and an effective height of 12 inches. Woody vegetation will be maintained or improved for sharp-tailed grouse cover.

- **Riparian and Wetland Management** - Riparian-wetland areas will be maintained or improved based on proper functioning condition and desired plant community. Riparian-wetland objectives will be initially accomplished through livestock grazing methods at current stocking levels. If grazing methods are not successful in meeting management objectives, necessary actions will be taken to meet those objectives.
- **Land Treatments** - Land treatments will be used to meet watershed, grazing management and wildlife objectives but will be applied only where grazing management alone will not accomplish the desired result.

- **Noxious Plants** - Noxious plants will be controlled or eradicated through integrated pest management in order to maintain native rangelands.
- **Wildlife and Fisheries Management** - Suitable habitat for all wildlife species will be maintained or enhanced. The emphasis for habitat maintenance and development will be on present and potential habitat for sensitive, threatened and/or endangered species, nesting waterfowl, crucial wildlife winter ranges, non-game habitat and fisheries.
- **Prairie Dog Management** - Prairie dog towns will be maintained or managed based on the values or problems encountered.
- **Elk and Bighorn Sheep Management** - Habitat will be provided for elk in the Missouri Breaks consistent with the MT Dept of FWP Elk Management Plan. Habitat will be provided to maintain and expand (where suitable forage is available) bighorn sheep in the Missouri Breaks.
- **Recreation** - The recreational quality of BLM land and resources will be maintained and/or enhanced to ensure enjoyable recreational experiences. Recreation emphasis will be to develop and maintain opportunities for dispersed recreational activities such as hunting, scenic and wildlife viewing and driving for pleasure.
- **Off-Road Vehicle Use** - BLM will restrict ORV use on BLM land year-long or seasonally to designated roads and trails or close specific areas to protect resource values, i.e., protect vegetation and soils to maintain watersheds and water quality, reduce user conflicts, and reduce harassment of wildlife and provide habitat security.

The Missouri Breaks area will be restricted seasonally to protect fragile soils, reduce user conflicts, and maintain and improve water quality.

- **Visual Resource Management** - Activities will be managed to comply with VRM policies.
- **Cultural** - Cultural resources will be properly managed through a systematic program of identification and evaluation. The level of conflict between cultural resources and other land and resource uses will be reduced in compliance with existing laws/regulations.
- **Fire Management** - Fire will be managed in the manner most cost effective and responsive to resource management objectives.

Prescribed fire will be utilized only under specific conditions and may be administered on an individual basis in grassland, sagebrush and/or conifer types to improve wildlife habitat and vegetation production.

Intensive suppression of wildfire will be applied to areas with high resource values, improvements, recreation sites, administrative sites, sagebrush and juniper, fire sensitive woody riparian species, and/or cultural values and may also be used to prevent fire from spreading to adjoining private property and structures.

Conditional suppression will be applied to areas with low resource values or to areas not warranting intensive suppression actions and costs. Conditional suppression actions will be used in grass/shrub fuel types, Missouri Breaks fuel types and mountain timber fuel types.

- **Forest Management** - Minor forest products may be harvested from the Missouri Breaks on a selected sustained yield basis with wildlife habitat objectives in mind.
- **Lands** - Resource values will be protected or enhanced when considering applications for rights-of-ways, leases and permits. Acquisitions will be pursued as opportunities arise through exchange or purchase with willing proponents or sellers.
- **Access to BLM Land** - Access will be pursued to BLM land where no legal public access exists or where additional access to major blocks of BLM land is needed.
- **Signing** - Appropriate signs and posters will be used to promote safety and convenience for visitors and users, define boundaries, identify management practices, provide information about geographic and historic features and protect vulnerable land areas and resources from misuse.

APPE

Allotment Number	Allotment Name	Permittee	Number of Cattle	Dates of Use	% Public Land	Animal Unit Months
02000	Fink Exchange of Use	Fink, Robert	28	07/12-08/25	100	0 (41 eou)*
02002	Harrison Home Pasture	Harrison, Delmer	19	05/01-10/15	90	0 (94 eou)*
02003	Cimrhaki	McClure, Rodney and Doreen	23	03/01-02/28	100	270
02005	Fergus Triangle	Gervais, John and Marilyn	9 132	03/01-02/28 05/16-10/15	100 40	111 267
02006	Antelope Coulee Common	Harrison, Delmer	59	05/01-10/31	100	0 (357eou)*
02007	Armells Pasture	Harrison, Delmer and Robbins, Mark	70	06/16-11/30	100	0 (387eou)*
02013	West Indian Butte (common)	Harrison, Delmer	55	05/01-10/15	61	0 (185eou)*
		Willmore, Jeff and Susan	13	05/16-11/15	95	76
		Willmore, Jeff and Susan	4	05/16-11/15	100	22
		Fink, Robert and Kathie	53	05/01-11/15	61	210
		Edith Komarek, POA	38	05/16-11/15	100	231
		David Murray, POA	102	05/16-11/15	42	260
		Salmela, Ray	17	08/01-10/31	100	0 (51 eou)*
		Kalal, Perry and Marjorie	25	06/01-10/31	100	125
		McClure, Rodney and Doreen	84	07/01-10/31	48	163
	CMR Pasture	McClure, Rodney and Doreen	16	07/01-10/31	100	65
02015	Komarek Ranch	Willmore, Jeff and Susan	2	03/01-02/28	100	19
02016	Komarek Place	Willmore, Ralph and Shelly	8	03/01-02/28	100	102

Allotment Number	Allotment Name	Permittee	Number of Cattle	Dates of Use	% Public Land	Animal Unit Months
02018	Mayberry Place	Hyem, Edwin and Linda	135	05/01-11/01	48	393
02021	Lower Armells	David Murray, POA	91	11/16-04/15	84	386
02024	Sawmill Coulee	Montgomery, John and Marcelyn	142	05/01-10/31	66	567
02025	Dry Armells Common	Petranek, David	1	03/01-02/28	100	7
			49	07/01-10/31	36	71
02026	Fritz Harri	Petranek, Charles	52	07/01-10-31	63	133
		Harrison, Delmer and Robbins, Mark	118	05/16-11/30	100	0 (772eou)*
		Petranek, David (Pasture A)	5	03/01-02/28	100	60
02030	Rindal Common	Petranek, Charles (Pasture B)	1	03/01-02/28	100	15
		Rindal, Don and Glen	123	06/01-09/15	44	190
02031	Willis Place	Rindal, Melvin	41	06/01-10/15	44	43
		Klessens, Gary and Rita	12	03/01-02/28	100	148
			4	03/01-02/28	100	46
			5	03/01-02/28	100	62
02032	Satterfield Place		66	12/01-02/28	66	129
		Moseman, Dan and Curt	4	03/01-02/28	100	42
02033	Taylor Ranch		181	06/01-10/16	53	435
		Taylor, James	1	03/01-02/28	100	5
02040	Lower Fargo Coulee	Edith Komarek, POA (George Komarek Estate)	63	05/01-06/30	93	118
			64	11/15-02/28	93	207
02631	East Fork Armells Creek	Hala, Charles	9	03/01-02/28	100	106
04836	Murphy Coulee	Wherley, Dennis and Betty	2	03/01-02/28	100	16

Allotment Number	Allotment Name	Permittee	Number of Cattle	Dates of Use	% Public Land	Animal Unit Months
10023	East Christina	Arntzen Keith and Kristine	75	05/08-09/30	75	268
15097	Suffolk	Heggem, Judith and Ron	10	03/01-02/28	100	119
15103	Gilskey	Vogl, Glenn and Louise	56 36	05/16-10/31 05/16-10/31	69 48	215 96
15107	Ward B Common	Boyce, Cleo, Dan et al	38	03/01-02/28	100	452
20008	Benes	Stands, Larry	7	03/01-02/28	100	88
20019	Murphy Place	Butcher, Edward	8	03/01-02/28	100	98
20028	Burn Shed Coulee	Stands, Larry	2 22	04/01-11/30 04/01-11/30	100 100	19 176
20037	Armells	Harrison, Delmer	121	05/15-10/15	62	378
20072	Petranek	Petranek, Charles	13	03/01-02/28	100	192
20074	Popnoe	Popnoe, Howard	4	03/01-02/28	100	44

* Exchange of Use

APPENDIX C - Allotment Management Plans

Allotment Number	Allotment Name	Grazing System
02005	Fergus Triangle	2 pasture deferred rotation
02018	Mayberry Place	3 pasture rest rotation
15103	Gilskey	2 pasture
02013	West Indian Butte	3 pasture rotation (not implemented)

APPENDIX D - Upland Range

Allotment Number	Allotment Name	Plots	Eco-logical Site Index	Trend	Upland Range Health (Factor)	Soil Surface Factor
02006	Antelope Coulee Common	T1	55	static	PFC	stable
02007	Armells Pasture				FAR (livestock)	
20037	Armells	T1	35	down	FAR	
		T3	40	down	FAR (livestock)	slight
20008	Benes					
20028	Burn Shed Coulee					
02003	Cimrhaki	T1	55	upward	PFC	stable
02025	Dry Armells Common	T2				
		T3	55	static	FAR (livestock)	slight
		PP1				
10023	East Christina	T1		static	FAR	
		PP1				
		PP2		static	FAR	
		PP3		static	FAR (non-native rangelands)	
02631	East Fork Armells Creek					
02005	Fergus Triangle	T1	65	static	PFC	stable
		T2	36	static	FAR (livestock)	stable
		PP1				
		custodial			PFC	
02000	Fink Exchange of Use	T1	60	static	PFC	slight
02026	Fritz Harri				PFC	
15103	Gilskey	T1		static	FAR (non-native rangelands)	stable
		T2				
		PP1	30	static	PFC	stable
02002	Harrison Home Pasture				FAR (non-native rangelands)	

Allotment Number	Allotment Name	Plots	Eco-logical Site Index	Trend	Upland Range Health (Factor)	Soil Surface Factor
02015	Komarek Ranch					
02016	Komarek Place	custodial	55 65	static static	PFC PFC	
02021	Lower Armells	T1	55	static	PFC	stable
		C1				
02040	Lower Fargo Coulee	T1	55	static	PFC	stable
02018	Mayberry Place	PP1				
		T2	65	static	PFC	
04836	Murphy Coulee					
20019	Murphy Place	T1	50	static	PFC	stable
		PP1				
20072	Petranek				FAR (non-native rangelands)	
20074	Popnoe				PFC	
02030	Rindal Common			static	PFC	
02032	Satterfield Place			static	PFC	
02024	Sawmill Coulee	T2	90	static	PFC	slight
15097	Suffolk					
02033	Taylor Ranch	custodial			PFC	
15107	Ward B Common				FAR (non-native rangelands)	
02013	West Indian Butte (common)	T3	55	static	PFC	stable
02031	Willis Place	T1	45	static	PFC	stable
		T2	53	static	PFC	slight
		custodial	60	up	PFC	
		Petranek exchange	55	static	PFC	

APPENDIX E - Common Riparian Species

Trees	Shrubs	Forbs	Grasses
cottonwood*	yellow willow*	horsetail	western wheat*
green ash*	sandbar willow*	sweetclover	sloughgrass*
box elder*	red osier dogwood*	mint	smooth brome
peachleaf willow*	chokecherry*	curled dock	sedges*
	buffaloberry*	cattail*	spikesedge*
	golden current*	cocklebur	foxtail barley
	buffalo current*	american licorice*	Baltic rush*
			Kentucky bluegrass
			bulrushes*
			saltgrass
			cordgrass*

* Plants with deep binding root mass.

APPENDIX F - Riparian Inventory and Health Assessment

Polygon #	Stream	Year	PFC (mi)	FAR (mi)	NF (mi)	Cause
Allotment # 02002 (Harrison Home Pasture)						
9	Armells	1997			0.5	L, N
10	Armells	1997		0.7		L, N
11	Armells	1997		0.6		N, L
7	Dry Armells	1999		1.6		N, L
Allotment # 02003 (Cimrhakl)						
1	Fargo	1999		1.7		N
2	Fargo	1999		1.3		N
1	Fargo	1992		0.6		N
2	Fargo	1992		0.7		N
3	Fargo	1992		0.8		N
4	Fargo	1992		1.0		N
5	Fargo	1992		1.3		N
Allotment # 02006 (Antelope Coulee Common)						
1	Antelope	1999		1.5		L, N
2	Antelope	1999		0.5		L, N
3	Antelope	1999		1.5		L, N
4	Antelope	1999	0.9			-
Allotment # 02007 (Armells Pasture)						
5	Armells	1997			0.7	L, N
6	Armells	1997		0.8		N, L
7	Armells	1997		0.7		L, N
8	Armells	1997			0.9	L, N
Allotment # 02013 (West Indian Butte)						
1	Fargo	1992			1.0	L
2	Fargo	1992		0.5		L
3	Fargo	1992			0.8	L
4	Fargo	1992			0.6	L

Polygon #	Stream	Year	PFC (mi)	FAR (mi)	NF (mi)	Cause
5	Fargo	1992			0.7	L
6	Fargo	1992		0.7		L
7	Fargo	1992		0.9		L
8	Fargo	1992		0.5		L
9	Fargo	1992		0.6		L
10	Fargo	1997		0.7		L
11	Fargo	1992		1.1		L
Allotment # 02013 (West Indian Butte)						
1	Armells	1990		0.6		L
2	Armells	1990			0.6	L
3	Armells	1990			0.5	L
1	Armells	1992		0.6		L
2	Armells	1992		0.5		L
3	Armells	1992		0.6		L
4	Armells	1992		0.6		L
5	Armells	1992	0.7			-
6	Armells	1992		0.4		L
Allotment # 02018 (Mayberry Place)						
12	Armells	1997			0.5	L, N
13	Armells	1997		0.3		L, N
14	Armells	1997			0.5	N, L
15	Armells	1997		0.5		N, L
16	Armells	1997			0.6	N, L
Allotment # 02024 (Sawmill Coulee)						
1	Sawmill	1999			1.3	L
2	Sawmill	1999			0.9	L
3	Sawmill	1999			1.0	L
4	Sawmill	1999		1.4		L
5	Sawmill	1999		1.4		L

Polygon #	Stream	Year	PFC (mi)	FAR (mi)	NF (mi)	Cause
6	Sawmill	1999		1.1		L
7	Sawmill	1999		1.4		L
8	Sawmill	1999		0.7		L
9	Sawmill	1999		0.4		L
Allotment # 02025 (Dry Armells Common)						
2	Dry Armells	1999	2.6			-
3	Dry Armells	1999		1.5		L
4	Dry Armells	1999		1.1		L
5	Dry Armells	1999		1.6		L
6	Dry Armells	1999		1.1		L
2	Armells	1995			0.8	L
3	Armells	1997		0.7		L
4	Armells	1997			1.1	L
Allotment # 02026 (Fritz Harri)						
1	Armells	1997			1.0	L
2	Armells	1997		0.4		L
Allotment # 02031 (Willis Place)						
1	Dry Armells	1999		1.1		N, L
Allotment # 20037 (Armells)						
4	Murphy	1999	1.2			-
5	Murphy	1999		0.8		L
6	Murphy	1999		1.3		L
Allotment # 20072 (Petranek)						
1	Murphy	1999	0.9			-
2	Murphy	1999	1.3			-
3	Murphy	1999	1.6			-
PFC = Proper Functioning Condition FAR = Functioning at Risk NF = Non-functioning L = Livestock N = Natural Causes						

APPENDIX G - Surface and Ground Water Sources

Allotment Number	Allotment Name	Reservoirs	Wells	Springs
02002	Harrison Home Pasture	1		
02003	Cimrahkl	15	1	
02006	Antelope Coulee Common	3		
02007	Armells Pasture	2		
02013	West Indian Butte Common	14	1	
02018	Mayberry Place	6		
02024	Sawmill Coulee	5	2	2
02025	Dry Armells Common	9	2	
02026	Fritz Harri	1	1	
02031	Willis Place	5	1	
20037	Armells	2	1	
20072	Petranek	16	5	
02015	Komarek Ranch	1		
02040	Lower Fargo Coulee	2		
02016	Komarek Place	6		
15107	Ward B Common	7		
20019	Murphy Place	5	1	
02000	Fink Exchange of Use	1		
02021	Lower Armells	1		
02032	Satterfield Place	7		
02030	Rindal Common	3		
02631	East For Armells Creek	1		
02005	Fergus Triangle	1		
15103	Gilskey	3		1
20028	Burn Shed Coulee	2		

APPENDIX H - Native Species for Reseeding Non-native Rangelands

Grasses

western wheatgrass	<i>Agropyron smithii</i>
green needlegrass	<i>Stipa viridula</i>
bluebunch wheatgrass	<i>Agropyron spicatum</i>
little bluestem	<i>Schizachyrium scoparium</i>

Forbs

scarlet globemallow	<i>Sphaeralcea coccinea</i>
American vetch	<i>Vicia americana</i>
prairie thermopsis	<i>Thermopsis rhombifolia</i>
Silverleaf scurfpea	<i>Psoralea argophylla</i>

Shrubs

Wyoming big sagebrush	<i>Artemisia tridentata wyomingensis</i>
rubber rabbitbrush	<i>Chrysothamnus nauseosus</i>
skunkbrush sumac	<i>Rhus trilobata</i>

APPENDIX I - Definition of Motorized Cross Country Travel

The following is reproduced from the brochure entitled 'Off-Highway Vehicle (OHV) Project'

DEFINITION OF MOTORIZED CROSS-COUNTRY TRAVEL

All alternatives have areas that prohibit cross-country travel either seasonally or yearlong. The objective is to prevent further resource damage by eliminating further expansion of motorized routes.

Cross-country travel is motorized travel off roads and trails. The following shows where motorized travel is considered cross-country.

The passage of motorized vehicles depressing undisturbed ground and/or crushing vegetation is considered cross-country travel.



Motorized use on livestock and game trails is considered cross-country travel unless they meet the definition or examples.

Motorized travel on agency constructed roads and trails and clearly evident two-track and single-track routes is not considered cross-country travel. Routes must meet the definition for their continuous length. The following shows where motorized travel is not considered cross-country.

Routes may take the form where perennial vegetation is devoid or scarce or where wheel tracks are depressions in the ground but are vegetated.



Motorized travel is not considered cross-country when it occurs on clearly evident two-track and single-track routes established by the regular use and continuous passage of motorized vehicles.

The motorized vehicle maximum width must easily be accommodated within the existing road or trail profile.

Pickup truck on road - within the road profile.



ATV on single-track trail - not within the trail profile.

APPENDIX J - Guidelines for Livestock Grazing Management

ARMELLS CREEK (BREAKS PORTION) WATERSHED GUIDELINES FOR LIVESTOCK GRAZING MANAGEMENT

Guideline #1

If salt and/or mineral are provided to livestock, they will be placed a minimum of 1/4 mile from riparian areas (including both reservoirs and creeks) and stock water tanks. Salt and/or mineral placement locations will be rotated periodically (once each grazing season at a minimum).

Guideline #2

Adequate vegetative stubble heights will remain on plants identified as having deep binding root mass at the end of the grazing season to provide streambank stability, trap and filter sediment, improve water quality, and to facilitate meeting site specific objectives. Average vegetative stubble heights will be four inches for these species along intermittent streams.

Guideline #3

Average utilization on key grass species in upland areas will not exceed 50% by weight.

Guideline #4

Season long or yearlong grazing use will not occur unless it has been demonstrated to be consistent with achieving healthy, properly functioning ecosystems and site specific objectives.

Guideline #5

Native plant species will be used for reclamation of all disturbed areas.

Guideline #6

Pasture moves should be made as close as possible to the date prescribed and any moves exceeding five days should be with concurrence of the BLM. Earlier or later move dates could be required or permitted based on resource or livestock conditions or if the guidelines for upland utilization or riparian stubble heights are exceeded or are yet to be reached.

Guideline #7

Any deviation from scheduled use must be applied for by the permittee and approved by the BLM manager prior to any changes taking place. The guidelines for upland utilization, riparian stubble heights and progress toward meeting site specific objectives will be evaluated when reviewing requests for deviation from scheduled use.

Guideline #8

During periods of drought, or at the earliest possible time when it becomes apparent that drought conditions are likely, the BLM and permittees will meet to discuss and arrange management changes needed to reduce resource impacts and continue progress toward meeting specific objectives. (Refer to BLM Montana, North Dakota and South Dakota drought policy.)

Guideline #9

Grazing will be managed to promote desired plants and plant communities of various age classes, based on the rate and physiological conditions of plant growth.

Guideline #10

Locate facilities (water developments, etc) away from riparian-wetland areas.

Guideline #11

Noxious weed control is essential and should include: cooperative agreements, public education, and integrated pest management (mechanical, biological, chemical).

Guideline #12

Livestock management should utilize practices such as those referenced by the published Natural Resources Conservation Service (NRCS) prescribed grazing technical guide to maintain, restore or enhance water quality.

Guideline #13

Grazing management should maintain or improve habitat for federally listed threatened, endangered, and sensitive plant and animals.

Guideline #14

Grazing management should maintain or promote the physical and biological conditions to sustain native populations and communities.

CORRECTIVE ADJUSTMENTS FOR RESOURCE PROTECTION

The guidelines described above are considered best management practices necessary to achieve objectives identified in this plan and to maintain or improve rangeland resources. Livestock use that exceeds the guideline will reduce the ability to maintain proper range conditions. The success of these guidelines is dependent on active involvement by the livestock permittees in the day-to-day management of allotments.

If the guidelines are exceeded and overuse does occur, corrective action should be implemented during the next grazing season to insure that such use does not occur again and prevent necessary vegetative recovery from taking place. In such instances, prior to the next grazing season, the permittee(s) and BLM Manager should cooperatively develop these corrective adjustments. The recommended management adjustments identified below are a tool that can be used, modified, or added to, on a case by case basis. The BLM would prefer that the grazing permittee(s) suggest corrective actions needed to maintain vegetative health and vigor while still meeting livestock management needs. If however, a cooperatively developed corrective adjustment cannot be reached, the following adjustments will be applied:

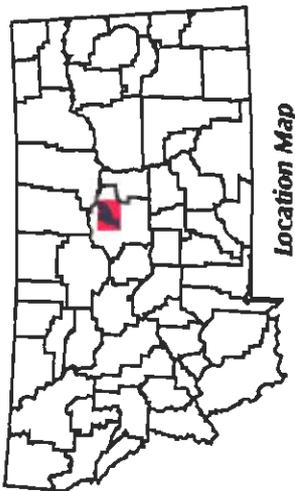
Recommended Stubble Height for Riparian Species = 4 inches

Actual Stubble Height (inches)	Corrective Adjustment
3 to 4 inches any one year	Discuss situation w/permittee
3 to 4 inches 2 consecutive years	5 inch stubble height next year
3 to 4 inches 2 or more consecutive years	6 inch stubble height the next year
2 to 3 inches any one year	5 inch stubble height the next year
2 to 3 inches 2 consecutive years	6 inch stubble height the next year
2 to 3 inches 2 or more consecutive years	Rest the pasture the following year
less than 2 inches in any one year	Rest the pasture the following year

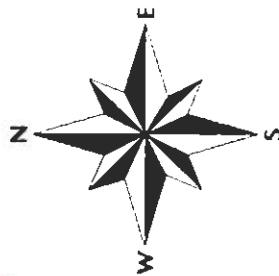
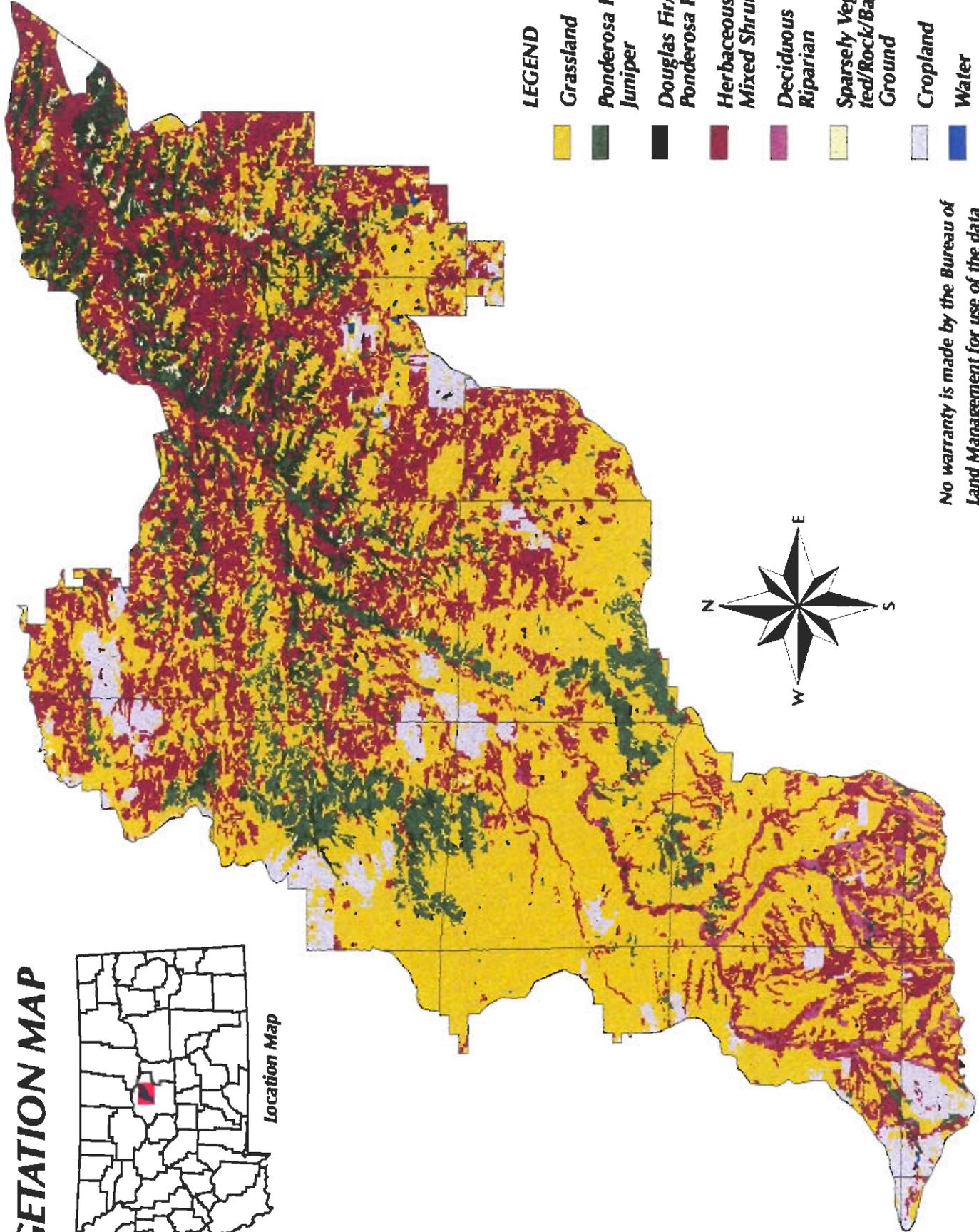
Recommended Upland Species Utilization Level = 50% by Weight

Actual Utilization Level (%)	Corrective Adjustment
Exceeds prescribed level by more than 10% but less than 25%	Adjust utilization to 40% the next year
Exceeds prescribed level by more than 25%	Rest the pasture the following year

ARMELLS CREEK WATERSHED VEGETATION MAP



Location Map



LEGEND	
	Grassland
	Ponderosa Pine/ Juniper
	Douglas Fir/ Ponderosa Pine
	Herbaceous/ Mixed Shrub
	Deciduous Riparian
	Sparsely Vegeta- ted/Rock/Bare Ground
	Cropland
	Water

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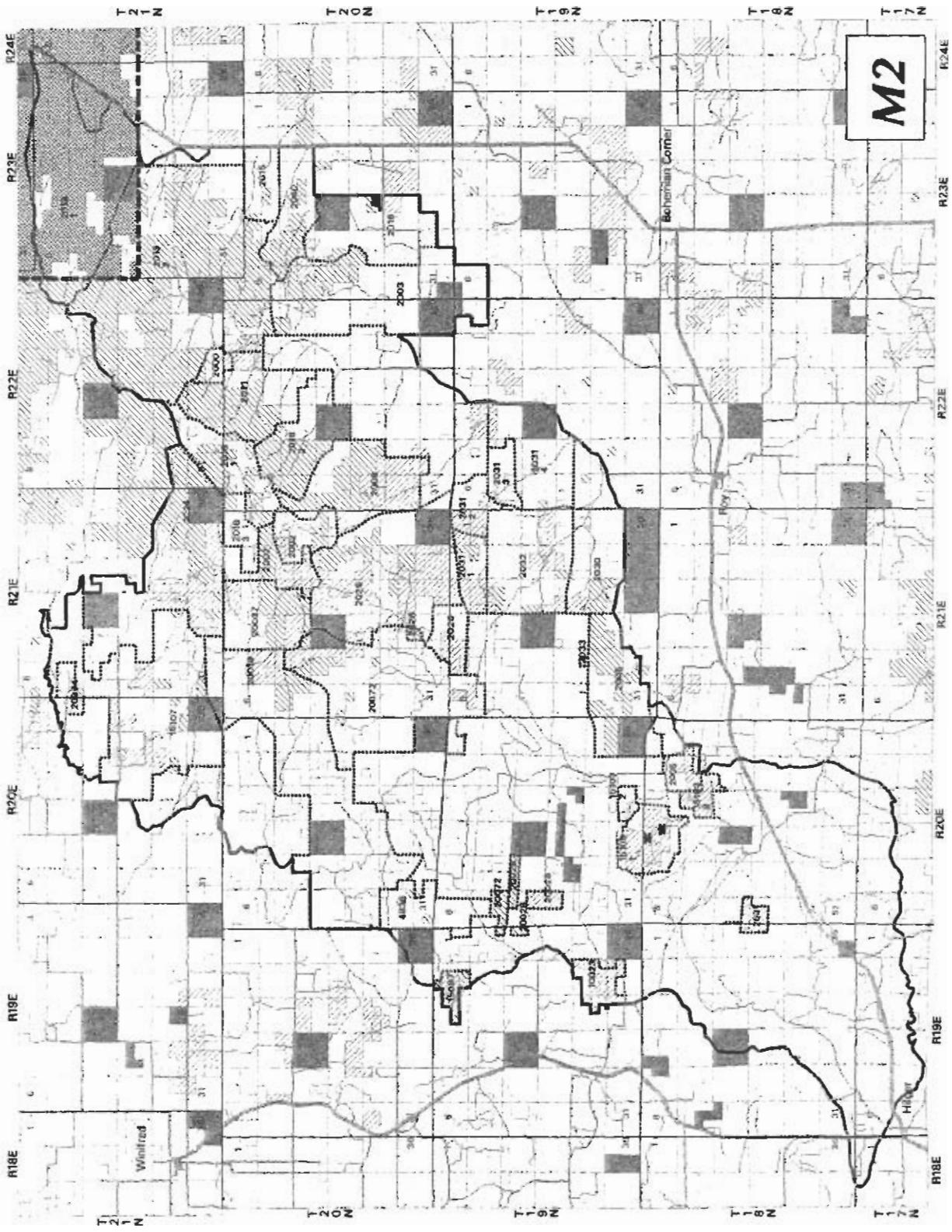
ARMELLS CREEK WATERSHED MAP

LEGEND

-  BLM : PD
-  BLM : LU
-  Fish and Wildlife Service
-  State
-  Private
-  Prairie Dog town
-  Grazing Allotment Boundary
-  Weeds



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M2

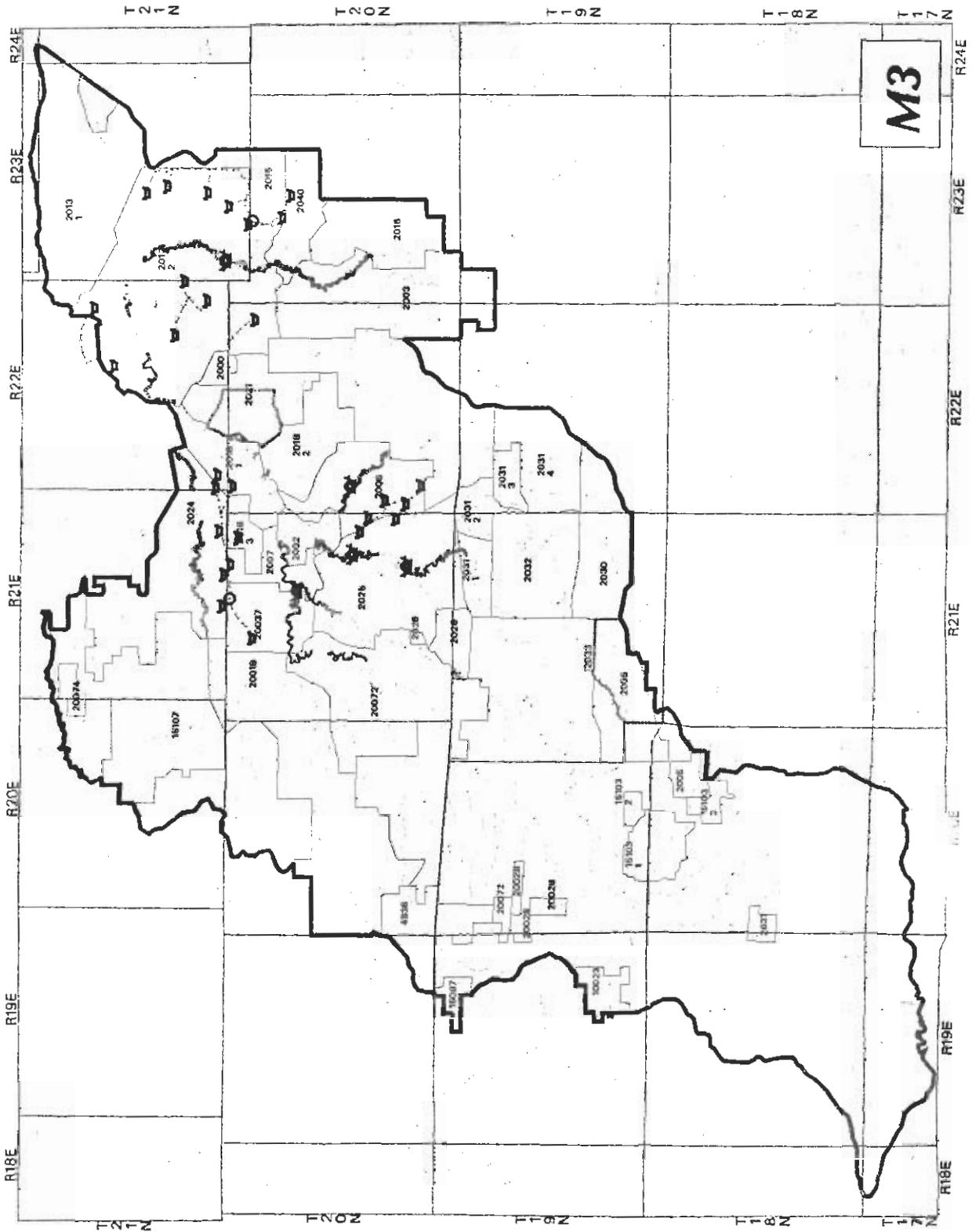
**ARMELLS CREEK WATERSHED
ALTERNATIVE TWO:
PROPOSED ACTION**

-  Grazing Allotment Boundary
-  Non Functioning
-  Functioning at Risk
-  Proper Functioning Condition
-  Pipeline
-  Project Area (Prescribed Fire)
-  Artesian Well & Tank
-  Proposed Well
-  Tank

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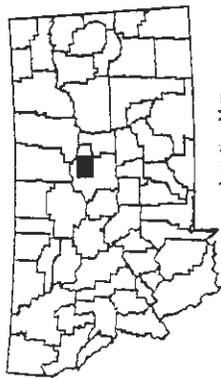
Location Map



ARMELLS CREEK WATERSHED EXISTING ROADS MAP

LEGEND

-  BLM
-  Fish and Wildlife Service
-  State
-  Private
-  Highway
-  Public Access Route
-  Existing Route



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