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**BEAUCHAMP WATERSHED PLAN**



**FINAL**  
**BEAUCHAMP WATERSHED**  
**MANAGEMENT PLAN**

October 2001

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# INTRODUCTION

This document details how BLM will accomplish the decisions of the Judith -Valley -Phillips Resource Management Plan (JVP-RMP) in the Beauchamp Watershed area in southern Phillips County. This document provides information to the interested public and land users on current resource conditions and issues in the watershed and provides BLM a clear plan for implementing the JVP-RMP on a watershed basis.

The following resource concerns (issues) were identified and discussed in public meetings held on January 06, 2000 and during individual meetings with operators.

- 1) Increase of recreationists in watershed
  - \*People influx
  - \*Access
  - \*Additional county road maintenance cost due to increases in hunting/recreational activities
- 2) Upland Health
- 3) Noxious weed infestations ( spurge, knapweed, and Canada thistle) (watershed wide).
- 4) Prairie dog populations (watershed wide)
- 5) Unproductive clubmoss dominated areas
- 6) Elk and/or antelope damage to crops
- 7) Livestock Distribution (some allotments).
- 8) Riparian streams/reservoirs/potholes at risk (watershed wide).
  - \* Improving stream health and achieving Potential Natural Community
- 9) Reservoir and pothole health.
  - \*Shortage of water for Livestock.
- 10) Fence Maintenance/Modification

Past grazing in Beauchamp Watershed has varied from heavy use with little management to what we have today with allocated seasons and AUMs and agreed on management plans. In the period from the early 1900s to 1934 excessive numbers of sheep, cattle, and horses roamed freely with little consideration of grazing impacts on the range. During this period of time there were few range improvements and consequently portions of the Federal range that were near water were heavily grazed while other areas received little use. With the passing of the Taylor Grazing Act of 1934 regulations for grazing on the public lands became available for the control of livestock numbers, season of use, and rehabilitation.

In the 1950's range surveys were done for the first time in the watershed in cooperation with the Fish and Wildlife Service. These surveys established grazing capacities for big game and livestock that later resulted in the adjudication of AUMs to grazing permittees. In the 1960s and 1970s allotment management plans were implemented to improve fair and poor range conditions that were identified in the surveys or through monitoring.

In the late 1970s the public were becoming concerned about the condition of the public rangelands for livestock, wildlife, watershed and recreation. This concern resulted in an intensive inventory of the rangelands and Environmental Impact Statements (EIS) on the impacts of livestock grazing on the public lands. Allotment management plans were implemented and/or revised in the 1980s to enhance all resource values and to correct range

The importance of riparian areas only came to the forefront in the last 10 years and very little monitoring and record keeping was done prior to that time. It is only within the last ten years that we have intensively inventoried riparian areas with specific objectives in mind. In these inventories we found that some streams, reservoirs, and potholes are functioning at risk and could possibly be improved (See appendixes 6 and 7). Because this was a one time inventory with few historical records we did not give a trend rating to most riparian areas.

Over the years, range study sites and techniques have been set up to monitor trend in the watershed. Because monitoring techniques have changed over the years, climatic changes in some years have greater impacts than grazing, and some study sites are on the most unproductive soils, it is extremely hard to measure trend especially over the short term (less than 20 years). However, there are trend indicators such as range condition that give us an idea if the range is improving (See appendix 4 and 5). Over the long term when one considers improved management methods, construction of numerous range improvements, and fewer numbers of livestock grazing the public lands today along with our monitoring records, we find overall range conditions have improved and trend is up in the watershed.

## WATERSHED DESCRIPTION

The Beauchamp watershed area is comprised of the lands within the Missouri River Basin bordering the Charles M. Russell National Wildlife Refuge (CMR) in South Phillips County. The natural watershed boundary roughly corresponds with grazing allotment boundaries and the allotment boundaries form the legal watershed boundary (see map in Appendix 1).

Annual Precipitation is around 12 inches. Eighty percent of this precipitation comes between April and September. Temperatures range from -50 degrees F. to 109 degrees F. The frost free period is generally about 130 days from May 13 to September 21. Drought conditions occur frequently in the watershed.

The Beauchamp watershed encompasses 188,921 acres of Bureau of Land Management (BLM) administered public lands and 54,002 acres of private and state lands in BLM allotments in the watershed (Appendix 3). On the BLM lands there are 770.6 acres of reservoirs and potholes and 85.1 miles of riparian drainages (mostly ephemeral streams) that are used for livestock forage and water, wildlife habitat, and recreation (appendixes 6 and 7).

The geomorphic soil subgroups, soil descriptions, dominant soils, and associated vegetation in the watershed are:

Loamy glacial till uplands are dominated by the Ethridge, Telstad, Scobey and Phillips series. Vegetation on this silty range site is dominated by western wheatgrass, needle and thread grass, blue grama grass, junegrass, American vetch, and sedge sp.

Claypan soils on the glacial till uplands are dominated by Tinceny, Elloam, and Absher series. Vegetation on claypan sites are dominated by western/thickspike wheatgrass, green needlegrass, Sandberg bluegrass, big sagebrush, American vetch, and cactus.

Poorly drained to very poorly drained clayey soil in basins or potholes are dominated by Dimmick and Nishon series. Vegetation on these wet meadow/overflow sites is dominated by sedges, reeds, western wheatgrass, bluegrasses, and silver sage.

Medium textured alluvial soils on terraces, fans, and footslopes are dominated by the Famuf, Marvan, Yamac series. Vegetation on this silty site is dominated by western wheatgrass, green needlegrass, and silver sage.

Very slowly permeable clay alluvial soils on terraces and fans are dominated by the Vaeda and Vanda series. Vegetation on this dense clay range site is dominated by western wheatgrass, big sagebrush, greasewood,

Nuttalls saltbush, Sandberg bluegrass, cactus, and wild onion.

Shallow to deep soils on the dissected shale upland slopes are dominated by the Bascovy, Dilts, Julin, and Neldore series. Vegetation on this clayey range site is dominated by western wheatgrass, green needlegrass, American vetch, big sagebrush and Ponderosa pine and juniper.

Loamy and clayey alluvial soils on flood plains and along drainages are dominated by the Harlake and Havre, series. Vegetation on this overflow site is dominated by western wheatgrass, green needlegrass, silver sagebrush, and bluegrass sp.

The principal types of wildlife habitats found in the watershed are: coniferous tree habitat (Ponderosa pine areas, juniper and shrub habitat, woody draw deciduous tree and shrub habitat, sagebrush-grass habitat, and grassland habitat. Less common habitats present are the seep and fen wetland habitat, cottonwood-willow riparian forest habitat, reservoir wetland habitat, sparsely vegetated hardpan, and rocky outcrops. Most of the wildlife species that are found in Beauchamp watershed can also be found over much of Phillips County ( for more detail see list in JVP-RMP).

The combinations of forested areas, woody draws, wetlands, and grasslands provide habitat for elk, along with mule deer, white tailed deer, coyotes, bobcats, beaver, mourning doves, pheasants, and sharp-tailed grouse. The sagebrush-grass shrub habitat provides habitat for pronghorn antelope, sage grouse, waterfowl, shorebirds, neotropical migrants, etc.

Crucial winter habitat for elk, mule deer, and antelope is scattered throughout the watershed. Occasionally bighorn sheep are sighted in the western portion of the watershed, but they spend a large majority of their time in the Little Rockies outside of the Beauchamp watershed. The rough country with rocky outcrops and riparian trees provides habitat for raptors such as golden eagles, Swainson's hawks, and prairie falcons. Other raptors found in the area are northern harrier, ferruginous hawk, red tailed-hawk and rough-legged hawk.

Small mammals that are commonly found in the watershed include mountain cottontail, white-tailed jack rabbit, mink, striped skunk, badger, porcupine and shorttail weasel. There are 75 black-tailed prairie dog towns (1998 inventory) on BLM-administered land in the watershed. The natural waterfowl habitat for geese and ducks is limited to the pools in the streams and shallow potholes. 311 reservoirs and natural potholes are located on the surrounding uplands, providing habitat for numerous waterfowl species. The woody draws and wetlands provide habitat for neotropical migratory birds and other land birds. Some of the amphibians and reptiles include: great plains toads, leopard frogs, tiger salamanders, garter snakes, bull snakes, and western rattlesnakes.

There are no known resident threatened or endangered plant species in Beauchamp watershed. Bald eagles occasionally migrate through the area. Black-footed ferrets are not known to live in the watershed but will likely be reintroduced to the area within the lifetime of this document. Of the presently listed candidate species; swift fox could be found in the area, while mountain plover are present in the watershed. The mountain plover is found on prairie dog towns and sparsely, vegetated unproductive soils. Black-tailed prairie dogs, a recently listed candidate species occur in the planning area. In order to protect habitat for the black-footed ferret and other species associated with black-tailed prairie dogs, BLM has closed an area within Beauchamp watershed known as the 40 complex to recreational shooting of prairie dogs. The following former candidate species use the area; ferruginous hawk, northern goshawk, western burrowing owl, loggerhead shrike, and eastern short-horned lizard.

There are 19 reservoirs (Wedding, Plutz, Buddy, Bresaylor, Rotator Cup, Batosh, Rebate, Loader, Shoulder Blade, Spanky, Lark, Sentinel, Pale Face, White Face, Sagebrush, Taint, Current, Wrangler and Thundercloud ) that are managed for fisheries in the watershed.

The large amount of public lands with legal access in this watershed attract local and out of county recreationists. Every fall hunters pursue mule deer, antelope, elk, waterfowl, sage grouse, and sharp-tailed grouse. Other visitors to the area value watching the same wildlife plus other species from main roads, trails, and roadless areas. Seventy eight percent (189,809 acres) of the land in the Beauchamp watershed is federally owned. Agriculture is the

primary land use dominated by ranching and hay production with a small amount of cereal grain production. Hunting and other recreational activities are the only other significant use. Some mining claims have been staked but no mineral or oil production is occurring or has occurred in the watershed.

Lands in the watershed are important as a forage base for about 13 families in the livestock business in Phillips County. Approximately 34,105 animal-unit-months (AUMs) of vegetation are produced annually on BLM land. Forty percent of the total vegetation is allocated to livestock grazing (13,642 AUMs, Appendix 3) and sixty percent is allocated to watershed protection and wildlife habitat (20,463 AUMs). There are 34 allotments and 15 BLM permittees in the watershed.

Additional descriptive and historical information for South Phillips County which includes the Beauchamp Watershed can be found in the 1979 Missouri Breaks EIS, 1992 JVP-RMP and in the individual AMPs.

## RESOURCE INFORMATION, ISSUES, AND KEY QUESTIONS

### Recreation

Recreational activities in the Beauchamp watershed are mainly associated with hunting, fishing, wildlife viewing, and OHV (Off Highway Vehicles) travel. Hunting opportunities are good for elk, deer, antelope, waterfowl, and sage grouse and fair too poor for the other game species. Hunting of non game species such as prairie dogs and coyotes is generally good in the watershed. The BLM currently prohibits hunting prairie dogs in a portion of the watershed known as the 40 Complex. The Beauchamp watershed affords wildlife viewing for a variety of wildlife species. (See wildlife under watershed description section for species). Fishing opportunities in the 19 reservoirs range from fair to good. OHV travel has mainly been associated with the previously mentioned recreational activities.

### People Influx.(Watershed)

As recreational opportunities become more limited on private land, more people use public lands for recreation. Consequently the recreational quality to some land users decreases as more people use the public lands. Also, adverse impacts on different resources tend to increase.

Key questions to address include: Is there a need to control the influx of recreationists and how do we reduce adverse impacts and sustain resource values?

### OHV

Increased use of public lands in recent years has resulted in an increase in user conflicts. OHV use is becoming more common and as a result, resource damage may be increasing.

The key question to be answered is: How can the BLM best accommodate public land users while maintaining resource values and recreation quality?

### Access

Some roads commonly used by the public while visiting public lands cross private lands. To date, our office has not received complaints from the land owners about the traffic across the privately owned portions of the road.

Key questions to be answered: 1) Which roads cross privately owned land but are commonly used to access public lands? 2) Can the BLM obtain an easement across these stretches of privately owned land?

## Additional county road maintenance

The county is concerned about the additional road maintenance costs due to increases and promotion of hunting and recreational activities in the area. All weather access into the area has been made easier with improved OHV vehicles. An increase in the number of hunters using four wheel drive vehicles on county roads during wet conditions has led to increased road maintenance costs.

The main question to be answered is: Who should absorb the road maintenance costs from the additional recreational activities?

## Upland health

The array and landscape pattern of soils and vegetation in the watershed area is mainly a function of climate, geology, and time. Current grazing management has a relatively minor influence (Miller, 1987). However, areas of poor (early seral) or fair (mid seral) range condition can accelerate and increase overland flow (Miller, 1987) and could lead to upland erosion problems and less vegetation production and cover (Appendixes 5 and 11).

Key question to be answered include: 1) What are the current conditions of the uplands? 2) What do we do about uplands rated unhealthy especially those with soils that are so poor that vegetative production and composition do not significantly respond to management changes?

## Noxious weed infestations(watershed)

The concern here is the controlling of noxious weeds (mainly Canada thistle, leafy spurge, and knapweed) before they get out of hand. At the present time BLM does not have a major weed problem in Beauchamp Watershed.

Key questions to answer include: 1) Methods of control? 2) Who is responsible? 3) Monitoring and inventorying ?

## Prairie dog populations, damage, and encroachment on private lands.

A JVP-RMP decision states that BLM will manage prairie dogs at the 1988 inventory levels (See Appendixes 8 for the 1988 and 2000 prairie dog acreage). The JVP-RMP also states the BLM will supply the habitat (prairie dog towns) for reintroduction of the black-footed ferret. The JVP-RMP also designated an area known as the 7km Complex as an ACEC. The 7 km Complex is based on the US Fish and Wildlife Service habitat assumptions for ferret management: "the area encompasses two or more prairie dog towns that are not more than 7 kilometers apart." Seven Kilometers is the average distance that a ferret can be expected to travel during normal activities. A portion of the 7 km Complex is located within the Beauchamp Watershed. The 40 complex, a subpart of the 7 km Complex is a series of prairie dog towns that have been identified as a release sight for black-footed ferrets. The 40 Complex lies entirely within the Beauchamp Watershed.

Ranchers and some resource specialists are concerned that healthy populations of prairie dogs denude vegetation from large areas of land thus reducing the AUMs for livestock and exposing soil to erosion. They also voice the concern on the expansion of prairie dogs from public land unto private lands causing resource damage (loss of crops, AUMs, erosion, etc.). Other wildlife orientated publics are of the opinion that prairie dog towns are needed habitat for several wildlife species. The black-tailed prairie dog is currently considered to be warranted for listing as a threatened species but was precluded from listing due to other species having a higher priority.

Key questions to be answered include: 1) How do we keep from reducing AUMs? 2) How do we reduce erosion? 3) How do we prevent crop loss? 4) What prairie dog towns will be needed for the ferret reintroduction and habitat for other species? 5) Are there tradeoffs or compensations to mitigate these concerns? 6) Ban on discharge of firearms

in the 40 Complex reduces ranchers ability to control coyotes during winter months.

## Unproductive clubmoss areas

Clubmoss is generally associated with silty soils. Areas covered by clubmoss reduce plant vigor and forage production even on productive soils. Clubmoss also reduces water infiltration, decreases plant competition, makes it more difficult for plants to reintroduce themselves, and increases runoff all of which adversely impact plant health and diversity. On the plus side, there is very little to no erosion occurring on the clubmoss covered areas because it protects the soils from runoff.

Key questions to be answered include: 1) How do we make clubmoss covered soils more productive? 2) What type of areas do we treat (Do we treat the best soils first and the poorest soils last)? 3) What treatments do we use? 4) How do we manage these sites after treatment?

## Wildlife damage to crops

Elk, whitetail deer, mule deer, and antelope tend to congregate on private crop lands and hayfields at various times during the year. They not only eat valuable hay and crops but do physical damage through trampling and bedding.

Key question to be answered: 1) What can be done to mitigate the damage?

## Livestock distribution

The main concern here is overgrazing/heavy use in some portions of pastures/allotments and light use in other parts.

Key question to be answered: 1) What kind of management and improvements are needed to mitigate distribution problems for the overall benefit of all resources?

## Fence maintenance/Modification

Some allotments have fences that are old and in need of repair or replacement. Several allotments have fences designed for sheep operations. Changes from cattle/sheep to a straight cattle operation has reduced the need for the more restrictive sheep fences. These sheep fences inhibit pronghorn migration but are still sound fences.

## Riparian

### Stream Health

The need for this analysis was triggered by the JVP decisions and the standards and guidelines (S&Gs) contained in the grazing regulations. The RMP objectives address three issues 1) improvement of riparian areas to proper functioning condition, 2) achieving a desired plant community (including age structure of woody species where there is the potential) and, 3) leaving adequate residual cover to protect streambanks (pages 12, 13, and 14 of the Phillips Resource Area Resource Management Plan, 1994). Since the JVP-RMP was final, two actions have affected the proposed action: (1.) The 1995 and 1996 riparian inventories and (2.) The revision of the grazing regulations and the development of national standards and guidelines (S&Gs) for management of rangelands. Regional S&Gs have been developed by the Lewistown District Resource Advisory Council and were in effect in September 1997. *The JVP decisions concerning riparian, uplands and wildlife habitat are consistent with these S&Gs. (See appendix 11 for S&G's)*

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Riparian plant community patterns are related to site potential (geology, soils, & water), disturbance history, and

current grazing practices. Nature's forces can exert a powerful influence on the riparian resource in the watershed. The Beauchamp watershed is known for periodic high runoff events which erode streambanks, uplands, and flatten riparian vegetation. Drought also has been known to adversely affect both riparian and upland vegetation.

Changes to the flow regime and sediment supply from the watershed are difficult to assess due to the amount of dams and other alterations to the basin's hydrology. There have been no overall hydrology studies for the watershed.

Based on public contacts via field tours and meetings with permittees and environmental groups there is general support for healthy riparian areas. Permittees in the watershed are concerned and see the value of maintaining and enhancing riparian conditions. They want to demonstrate sound stewardship and maintain current AUM allocations.

The main question is 1). How can we improve the functioning at risk and non-functioning riparian streams?

## Reservoir/ Pothole Health

A number of reservoirs and potholes are functioning at risk or non functioning due to soils, grazing, watershed condition, etc. (See appendix 6).

The main question is 1). How can we improve the functioning at risk and the non functioning reservoirs/potholes to a healthy condition for wildlife, livestock, watershed, and recreational activities.

## Water Quality

Parts of the watershed are naturally erosive resulting in high sediment loads. The trend of water quality is unknown as is the origin of sediment, how much is from channels and how much from upland sheet and rill erosion. However, stream riparian areas and uplands that are functioning properly will reduce excessive sediment to the system thereby improving water quality.

Based on running and standing water inventories in 1995 and 1996 and observed plant and animal life in and around these waters, the quality of water is meeting acceptable standards. Runoff that fills reservoirs, potholes and streams is chemically good water (Soiseth 1975). We also have 19 successful fisheries that confirm the good quality of water in the watershed. However, runoff and ponded waters can be turbid (cloudy) when associated with highly erosive and sodic soils due to sediment and dispersed clays. Also as water levels drop from evaporation, waters in some ponds could become moderately saline. Coliform bacteria could also increase in ponds where livestock/wildlife congregate especially when water levels are decreasing.

Data Gap: (1) long term water quality data, (2) current water quality data.

## Shortage of Water for livestock.

Several allotments have pastures without enough water or poor distribution of watering sites.

# ANALYSIS AND PROPOSED WATERSHED ACTIONS

## Recreation

## People Influx

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There is no cookbook solution to control the number of people coming into the watershed. The major influx into this watershed has been for hunting and prairie dog shooting. People using the public lands for these activities will fluctuate with wildlife populations. Recreational standards may be implemented if resource or social conflicts develop.

### Action Steps

1. Communicate and keep people informed on the impacts of people on the various resources.
2. New OHV Travel Plan

## OHV

Resource damage, changes in landscape, and user conflicts would be considered in opening or closing roads and trails. Hunting in an area where vehicles are restricted to the designated roads gives those hunters who like to walk more solitude.

Implement a signing program and publish maps that delineate boundaries and travel restrictions. Areas designated as limited will be signed, identifying those roads and trails not open to motorized travel and an explanation of allowed uses.

### Action steps

The BLM is currently undergoing the process of a nation wide Off Highway Vehicle Management Strategy that will have an effect on OHV use in the watershed but this plan is currently under protest and will not be implemented until these protests are resolved. At that time the Malta Field Office will implement its OHV management via the watershed process. However, OHV travel is currently restricted during the fall hunting season south of the Dry Fork Road (see Phillips Resource Area Resource Management Plan, 1994 for specific details).

## Access

The BLM has identified a few areas where the public would benefit from an easement across privately owned land. The land owner may also benefit from the easement because the BLM would be able to maintain these roads and improve creek crossing where applicable.

### Action steps

The BLM will attempt to obtain easements across privately owned lands to identified areas. Maintenance and creek crossings will be added once easements are obtained.

## Additional County Road Maintenance

At the present time BLM has not received any official requests or information from the county on the amounts of damage and costs that are attributed to increased recreational activities promoted /sponsored by BLM.

### Action Steps:

1. Set up a meeting with the County Commissioners and discuss to what extent the BLM is contributing to additional maintenance costs and to discuss funding.

# Uplands

## Current Conditions

Upland standards of 80% Potential Natural Community (PNC) and Late Seral are currently exceeded in Beauchamp watershed. Nearly 100 percent of the BLM acreage is rated at PNC or Late Seral Ecological condition. Some of the uplands that were rated mid seral and late seral are associated with unproductive soils (dense clay and claypan range sites). These areas respond very slowly to grazing methods even under ideal climatic condition. A key question is what do we do to maintain or improve dense clay and claypan range sites and areas with dense clubmoss?

### Action Steps:

In most cases we should continue current grazing management and AUM allocation and monitor key upland sites to insure maintenance of upland habitats. Where changes are needed, land treatments (chiseling, furrowing, etc.), grazing methods and livestock distribution techniques (new waters and fences, placement of salt etc.) are management practices that could be implemented. Management actions for special concerns are addressed in the following sections.

## Noxious weed infestations

At the present time BLM is working cooperatively with the Phillips County Weed District in the location and control of noxious weeds. An intensive inventory has not been done in Beauchamp Watershed.

### Action Steps:

1. Set up a cooperative effort with county, BLM and private land owners for identifying, inventorying, and documenting weed infestations in the Beauchamp Watershed along with the rest of the county.
2. Continue working cooperatively with county weed board in the control of noxious weeds.

## Prairie dog populations, damage, and encroachment on private lands

There are currently 2788.83 acres of prairie dog towns (See Appendix 3) in Beauchamp Watershed that are occurring on public lands. In 1988, there were 5425 acres of prairie dogs on public lands in the watershed. However, acreage in some allotments exceeds the 1988 target levels. Managing these towns at the 1988 levels and providing habitat for the black footed ferret as stated in the JVP-RMP decision is the challenge. Methods used to manage prairie dogs at these levels may change. Some of the methods the BLM has chosen to use or may decide to use in the future are listed below.

In the spring 1999 the BLM established a voluntary closure of prairie dog shooting in the area referred to as the 40 Complex. The 40 Complex is a series of prairie dog towns within the Beauchamp Watershed that are considered essential to the black-footed ferret reintroduction efforts. The voluntary closure was criticized by the US Fish and Wildlife Service and several environmental groups for falling short of protecting the black-footed ferret habitat. As a result, in October of 1999, the BLM officially closed the 40 Complex to the discharge of firearms for all purposes other than the lawful take of a game animal, upland game birds and waterfowl. This closure will remain in effect until further notice. Some concern has been shown that the ban on discharging firearms limits the ranchers ability to control coyotes during the winter months.

### Action Steps:

1. Work cooperatively with the land owners in identifying numbers and size of prairie dog towns. Agree on tradeoffs within the JVP-RMP rules on towns to keep and let grow, towns to eliminate, and towns to control.

3. Have concerned ranchers contact the Department of Agriculture's Wildlife Services to aid in controlling coyotes.
4. In September of 2001, the BLM along with volunteers from the Nature Conservancy, Predator Project and the World Wildlife Trust completed an effort to dust prairie dog towns in the 40-complex to prevent spread of plague.
5. The BLM will request MTFWP establish a year round closure to shooting on BLM lands within the 40 Complex.
6. The BLM will continue to participate in the Montana Black-tailed Prairie Dog Working Group, the Montana Black-footed Ferret Working group, Prairie Ecosystem Action Council (PEAC) and the Nature Conservancy's efforts.

### **Unproductive clubmoss areas**

Locations and amounts of clubmoss in Beauchamp watershed have not been documented at this time. Clubmoss infested areas are not as prevalent as they are in other watersheds. One site has been identified in the Upper Garey Coulee Allotment (5618) which is impacting production and species composition. Clubmoss occurs both on large blocks of lands with productive soils and also in mosaic patterns on the less productive soils.

#### **Action steps:**

1. Work cooperatively with land users and identify and prioritize (consider benefit/costs) clubmoss areas to be treated.
2. Work on the needed environmental clearances based on the above priorities.
3. As funds become available, chisel/burn and apply appropriate grazing treatment (graze after second growing season).

### **Wildlife damage to crops**

Since this is mainly a private landowner and Montana Fish, Wildlife, and Parks problem they will have to take the initiative to mitigate it. On the other hand if BLM can initiate some action on public land that will help alleviate the problem, it should be considered.

#### **Action Plan:**

1. Meet with land users, and Montana Fish, Wildlife, and Parks and come up with an action plan to mitigate the problem.
2. Implement the planned actions.

### **Livestock distribution**

Overgrazing/heavy utilization is occurring in certain areas of pastures in some allotments. This is caused by livestock/wildlife congregating for long periods of time in choice areas. These areas maybe close to water, may have more desirable vegetation, physical access maybe easier, or plants may be more nutritious. In many cases management actions such as herding, strategic placement of salt etc., are needed to reduce heavy utilization in these areas. Locations of these areas can be found on the AMP utilizations maps for allotments in this watershed (see AMP monitoring files located in the Malta office).

#### **Action plan:**

1. Work cooperatively with land users and **prioritize problem** areas for implementing management actions.
2. Management actions to use are construction of new fences and waters, use different grazing methods, develop early use pastures, winter grazing, and associated water development.
3. Move salt and mineral blocks 1/4 mile from **riparian zones** and watering sites.

## Fence Maintenance /Modification

Allotments that have boundary fences that are in need of repair or replacement have been identified in appendix 2. Fences will be replaced as money is available. Sheep type woven wire fences (located in Parrot Coulee, Parrot Lake, Camp Creek and West Dry Fork allotments) that are no longer necessary due to change in livestock use, will be replaced with standard antelope type fences as money becomes available. This will likely involve replacing short sections woven wire fence throughout the allotments over a period of time until it is determined that antelope have sufficient areas to migrate freely. The BLM will work with The Nature Conservancy on this project.

## Riparian

### Stream Health

The JVP-RMP, the grazing regulations, and State of Montana's *Grazing Best Management Practices* (BMPs) (USDA NRCS,1996) all dictate change in grazing management where current conditions are not meeting the standards. The riparian standard of proper functioning condition (6.0 miles) or functioning at risk with an upward trend (11.36 miles) are met on 20 % of the stream miles and are unmet on 80 % of the drainages (25.88 miles that are functioning at risk with unknown or static trend and 33.1 miles that are non-functioning.)

BLM has completed a riparian inventory for **streams** on public lands in Beauchamp Watershed. For detailed information on streams and their inventory classifications, see Appendix 7.

### Action plan:

1. Riparian areas not meeting the standards are all within allotments with management plans where, in most cases, **only minor changes** in management practices and more vigilant **monitoring of degree of utilization on** riparian areas are needed to **bring about** an upward trend towards PFC. However, **riparian potential in some stretches** of the streams are **sometimes limited** due to **uncontrollable** characteristics such as soil chemistry and moisture availability.
2. Implement **vegetation treatments and structures to reduce grazing impacts and** improve vegetation on riparian areas. Some treatments and structures to consider are: **Fence to control grazing, no hot season grazing** (July, August, & September), **change grazing method, change to winter grazing, apply land treatments on uplands, construct reservoirs away from streams, deferment with early use pastures, build shade structure on uplands to draw livestock out of riparian areas, water spreading developments to improve riparian areas, and reduce competition between grasses and trees.** (See appendix 2 for suggested management options for individual allotments.)

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## Reservoir/Pothole Health

There were 311 multiple use pit/fill reservoirs, fill reservoirs and potholes assessed for functioning condition in 1997 and 1998 ( Appendix 6). Based on this inventory, 80% of the acres in these reservoirs and potholes were healthy and properly functioning, 16% of the acres were functioning at risk with an unknown trend, and 4% of the acres were non functioning with an unknown trend. Pit reservoirs were also inventoried but because they were mainly constructed for livestock water they were not included or evaluated for riparian value in this watershed plan.

#### **Action Plan:**

1. Construct all new pit reservoirs with 4 : 1 slopes and 6 : 1 end slopes.
2. Place all salt/mineral blocks and scratchers 1/4 mile or more away from reservoirs to avoid concentration and lessen the impacts on riparian vegetation.
3. Construct more reservoirs to keep livestock from concentrating on one reservoir.
4. Move livestock to avoid long term concentrations.
5. CMR National Wildlife Refuge is currently protesting water rights applications for all reservoirs that would impound water that drains into the wildlife refuge. This limits BLM's ability to construct new reservoirs to provide additional water for livestock where needed. The BLM is looking into transferring water rights held on reservoirs which have silted full or washed out and applying them towards the construction of new reservoirs in nearby locations.

#### **Water Quality**

The BLM will continue to monitor water quality in the watershed to insure that water quality remains above the acceptable standards.

#### **Shortage of Water for livestock**

The BLM will seek to develop additional water sources for livestock and wildlife. As mentioned in the reservoir/pothole health section, CMR National Wildlife Refuge is protesting water rights applications on drainages flowing into the wildlife refuge. This limits our ability to develop new reservoirs in this watershed. In addition to transferring water rights from abandoned reservoirs, the BLM would also like to work with operators to develop springs or water wells.

## **GOALS/STANDARDS, GUIDELINES, CONSTRAINTS, AND MONITORING**

Grazing term permits and leases will be revised to include appropriate goals/standards, guidelines, and management actions (Appendix 2) to meet JVP-RMP decisions and the standards for rangeland health. Achieving or making significant and measurable progress towards the rangeland health standards is required of all uses of public rangelands. These standards are:

1. Uplands are in proper functioning condition.
2. Riparian and wetland areas are in proper functioning condition.
3. Water quality meets Montana state standards.

4. Air quality meets Montana state standards.

5. Habitats are provided to maintain healthy, productive and diverse populations of native plant and animal species, including special status species (federally threatened, endangered, candidate or Montana species of special concern as defined in BLM Manual 6840, Special Status Species Management).

Condition (health) of uplands, streams, and wetlands are defined in the following way:

1. **Proper Functioning Condition** - are areas where the interaction of geology, soil, water, and vegetation are at an acceptable level.
2. **Functioning At Risk** - These areas are functional but they have an existing soil, water, vegetation attribute that makes them susceptible to degradation.
3. **Nonfunctional** - These are areas that are clearly not providing adequate vegetation, litter, or land form to dissipate runoff/stream energy, reduce erosion, improve water quality, and/or improve vegetative cover and plant composition

The Phillips Resource Management Plan has a riparian goal that states that we achieve desired plant communities (including age structure of woody species where there is the potential) and that we leave adequate residual cover to protect streambanks. An example of a goal for attaining desirable plant communities could be the potential natural plant community for a specific ecological site (Appendix 13). On the other hand, the desirable plant community goal for an ecological site could be adjusted for management of specific resources in each allotment and/or watershed. The JVP-RMP also requires that "The BLM will initially accomplish riparian-wetland goals through livestock grazing methods at current stocking levels." The preferred management guidelines for Malta Field Office (The RECORD OF DECISION FOR THE STANDARDS FOR RANGELAND HEALTH AND GUIDELINES FOR LIVESTOCK MANAGEMENT FOR MONTANA, NORTH DAKOTA, AND SOUTH DAKOTA) include suggested grazing methods for meeting both the standards and the RMP objectives (See Appendix 12).

Vegetation management is the single most important manageable factor in restoring/protecting hydrologic and riparian functions. In some areas, effects of livestock grazing are readily noticeable by the amounts and compositions of low seral stage plants. For example, foxtail barley and cocklebur dominating on heavily trampled banks instead of bulrush and sedges.

Monitoring of changes in riparian and upland conditions will be accomplished by using the latest inventory data and sites as benchmarks (See Appendixes 4, 5, 6, 7, and 10). Amounts of bare ground and stream bank alteration caused by excessive grazing and other land disturbance activities, can be quickly addressed by limiting the locations, time, and degree of use.

If goals and standards are not met, the BLM will take the necessary action to achieve them. This would include but is not limited to, fencing riparian-wetland areas, reducing livestock numbers and use and rehabilitating degraded riparian-wetland areas. When trend is improving, the prescribed grazing method should be continued even if the riparian-wetland objectives are not achieved in the stated time frame." (PRA-RMP Final, page 13).

## SUMMARY

After analysis of all concerns and inventory data, the BLM finds the **Beauchamp Watershed to be in good health**. The 1997-1998 ecological inventory data showed most of the uplands in an upward trend. Currently, we have only one allotment in a downward trend.

In our upland health inventory for the biotic environment (plant composition and health) we found nearly 100% (189,417 acres) of the BLM lands were properly functioning. There were 170 acres that were non-functioning which had a downward trend. These lands were all within one allotment which has heavy summer use. This allotment is categorized as a "C" allotment. This designation limits the BLM's ability to construct range improvement projects. The 170 acres are part of a disposal tract that the BLM will likely look at disposing in a land trade. In some areas, functioning at risk uplands may be considered good habitat for wildlife species such as prairie dogs, mountain plover, etc., and should be managed at that level to protect sensitive species. Consequently, Standard One (100% of uplands in proper functioning condition) may never be met due to wildlife habitat needs. In the same upland inventory we found the physical environments (soil characteristics, erosion, etc.) on the BLM lands in the watershed to be in proper functioning condition.

In our riparian stream inventories we found 6.0 miles of drainages that were Properly Functioning and 11.36 functioning at risk (upward trend) in the watershed that met the grazing standard. There were 25.88 miles FAR with a static or unknown trend and 33.1 miles that were non functioning. Portions of these streams could be improved through management actions while some segments have poor unproductive erosive soils that would respond very slowly or not at all to livestock grazing practices.

The wetland (stillwater) riparian inventory was limited to pit/fill reservoirs, fill reservoirs and potholes that were not primarily planned for livestock water in the watershed. Our data showed that 80% of these wetlands acres were in proper functioning condition, 16% were functioning at risk, and 4% were non functioning. Again, just like in the uplands and streams, some of the functioning at risk and non-functioning wetlands are on unproductive soils, where vegetation growth or establishment of plant cover may be slow and sparse at best.

We believe the proposed management for each allotment in the Beauchamp Watershed (See Appendix 2) will move the functioning at risk and non-functioning areas/segments of uplands, wetlands, and streams that have the potential to improve to proper functioning condition or to an upward trend in a reasonable period of time (5 to 10 years with the proposed management and normal climatic conditions).

We believe most of the watershed concerns brought up in various meetings (recreation problems, access, noxious weeds, etc.) are being or can be improved through better communications, management, and cooperation with all interested parties before actions are taken. The action steps that the watershed planning participants addressed as management solutions for these concerns are listed in the Analysis and Proposed Watershed Action section of this plan. Because of the controversy of some concerns such as prairie dog management, current policy and budgets may dictate or restrict what can or cannot be done. In the case of prairie dogs, we will attempt to manage them at the 1988 levels as stated in the Phillips RMP.

In some cases, BLM policy and budget constraints may limit implementation of some management actions. Currently, the following constraints may limit implementation of some management actions: (1) Construction of reservoirs will depend on acquiring water rights. (2) Application of mechanical (chiseling, furrowing, etc.), burning, and chemical (fertilizing, spraying) treatments will follow current policy and regulations. (3) Boundary fences will be constructed on a case by case basis taking into consideration, who will construct, age of fence, present condition (does fence meet current specs), who owns the fence, land status of fence, and past maintenance responsibilities, and (4) Allocation of increases in forage production from improved management will be prorated according to resource needs in the allotment.

## PARTICIPANTS IN BEAUCHAMP WATERSHED PLAN

In 1998, BLM sent out 300 invitations asking individuals, groups, and agencies if they would like to participate in the development of the plan. We asked them to contact us if they were interested. Grazing permittees in the watershed were automatically on the list. We also placed a public announcement in the local paper each time we had a meeting. The following is a list of people that requested to be contacted through out the process and/or actively participated in the plan.

Clyde Robinson, Rancher  
Jim Robinson, Rancher  
Manson Frye, Rancher  
Gerry Williams, Rancher  
Winston Mitchell, Rancher  
Bill Mitchell, Rancher  
Jim Martin, Rancher  
Francis Kolczak, Rancher  
Clarence Jacobson, Rancher  
Dr. Ned Tranel, Rancher  
Linda Poole, Nature Conservancy  
Brian Martin, Nature Conservancy  
Russ LaFond, Secretary - Square Butte Grazing Assoc.  
Charlie Schwenke, President -Square Butte G. Assc.  
Ken Blunt, Rancher  
Fred Itcaina, Rancher  
Bob Frye  
Gene Barnard, Rancher and RAC member  
Jody Jones, CMR National Wildlife Refuge  
Matt DeResier, CMR National Wildlife Refuge  
Martawn Veseth, Rancher  
Kevin Koss, Rancher  
Jess Robinson, Rancher  
Don Robinson, Rancher  
Francis Jacobs, Rancher  
Lee Jacobs, Rancher  
Dean Kienenberger, Rancher and Pres. NPCSGD  
Darrell Seeley, Banker and RAC member  
Anne Boothe, Malta Chamber of Commerce  
Wayne Worthington, Sec./Treas.-Flathead Wildlife Inc.  
Marco Manoukian, County Agent  
Jeanne Barnard, Big Flat Electric Coop  
Lorna Stolen, Natural Resources Conservation Service  
Mark Sullivan, Montana State Fish, Wildlife, and Parks  
Fritz Prellwitz, Bowdoin National Wildlife Refuge  
Joe Goulet, County Weed Board  
John Grensten, BLM T & E Wildlife Biologist  
Tim Novotny, BLM Wildlife Biologist  
Huey Long, BLM Soil Scientist  
Dennis Lingohr, BLM Range Management Specialist  
Roy Taylor, BLM Range Management Specialist  
Jon Kautt, BLM Range Management Specialist  
Mike Gilkerson, BLM Range Technician  
Jenny Jennings, BLM Hydrologist  
Thora Prellwitz, BLM Range Assistant  
Bonnie Wiederrick, Administrative Assistant  
Ron Soiseth, BLM Ecosystem Specialist  
Rick Hotaling / Bruce Reed, BLM Field Manager  
Ramone McCoy, BLM Assistant Field Manager  
Jody Miller, BLM Archeologist  
Robert Padilla, BLM Reality Specialist  
Mary Skordinsky, BLM Recreation Specialist

## Comments and Changes to Draft Beauchamp Watershed Plan

During the 30 day comment period, the BLM received one letter commenting on the draft Beauchamp Watershed Management Plan. The letter was from the National Wildlife Federation's Northern Rockies Office. Their comments have been taken into consideration and appropriate changes have been made to sections regarding prairie dog and black-footed ferret management sections of the final watershed plan.

The National Wildlife Federation has requested the following be included in the Final Watershed Plan:

1. Expansion of the shooting restrictions to cover more of the 40 complex in the Management Unit and that the plan specifies that the BLM request's MTFWP to establish year long closures to the 40 Complex.

**BLM Response:** The entire 40 complex is already covered by the BLM's shooting closure. The BLM is not going to increase shooting closures to other areas. The BLM will request MTFWP to establish a year long shooting closure similar to the one that is already in place.

2. Dusting of prairie dog colonies to reduce adverse impacts of plague.

**BLM Response:** The BLM has completed dusting the prairie dog towns within the 40 Complex in September of 2001.

3. Methods to encourage leaseholder tolerance for increased prairie dog numbers on BLM lands needed for ferret recovery.

**BLM Response:** The BLM will continue to manage prairie dogs at the 1988 levels. No decrease in AUM's is necessary to maintain prairie dogs at this level. Loss of prairie dog habitat on private land may be compensated for by additional habitat on BLM land in the vicinity of the habitat loss. Prairie dog expansion within the 7 km Complex above the existing levels (1988 survey) would not be allowed on BLM land without AUM mitigation. Any loss of livestock forage due to prairie dog habitat increases on BLM land above the existing level (1988 survey) would be mitigated through land treatments (mechanical, fire, etc.). The BLM will continue to participate in related working groups such as the Montana Prairie Dog Working Group, Montana Black-footed Ferret Working Group, Prairie Ecosystem Action Council and The Nature Conservancy's efforts.

4. Actions that will be taken to facilitate connectivity and communication between the ferret population in the CMR NWR and the 40 Complex.

**BLM Response:** The 40 Complex is part of the overall 7 km Complex. The 7 km Complex is itself a connected population in that it consists of prairie dog towns that are within 7 kilometers of each other (the average distance that a ferret will travel during normal activities). The BLM will continue to manage the 40 Complex and the 7 km Complex at the 1988 levels.

5. The plan should be clear that on BLM lands, that ferret recovery and the need to restore prairie dogs to 1988 levels will be a higher priority than maintaining existing AUM's.

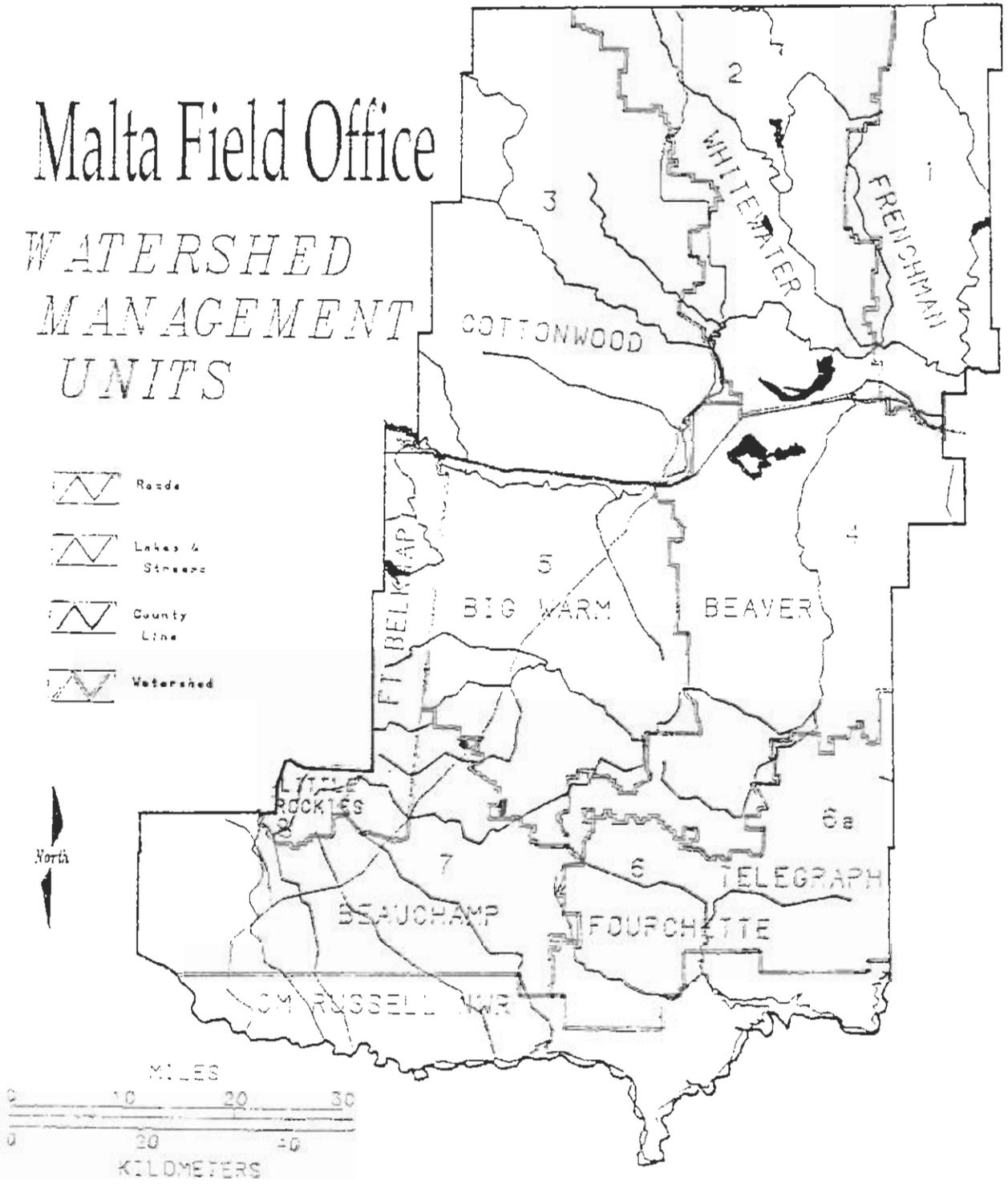
**BLM Response:** The BLM is committed to managing prairie dogs at the 1988 levels. At these levels, no AUM reductions are necessary. The JVP decision states that the BLM will not reduce AUM's in the 7 km Complex due to prairie dog expansion. Any increases in prairie dog numbers above the 1988 levels (on a long term basis) will only be allowed after a land treatment has been completed to increase forage production.

**Other Changes Since Draft Plan was released:**

In addition to responding to these comments, an error in Appendix 2 was discovered in calculations of Standards one and five. This resulted in small changes to some of the PFC percentages in that appendix. Once again, the BLM would like to thank all of those who have participated in this process and we would like to encourage you to continue to participate in future watershed management plans.

# Malta Field Office

## WATERSHED MANAGEMENT UNITS



Appendix 2. Allotment Concerns, Findings, and suggested Management

Allotment	Concerns/Findings	Rangeland Health Standards	Suggested Management
5446 Parrot Coulee	Protect sagebrush habitat 2 disposal tracks (P-175) Lentic 67% PFC 33% NF Change Fencing (sheep wire) Prairie dogs	Standard 1 (Uplands) 99 % PFC Standard 2 (Riparian) 67 % WL PFC 0 % ST PFC Standard 3 (Water) 100 % PFC Standard 4 (Air) 100 % PFC Standard 5 (Habitat) 99 % PFC	Replace woven wire w/ antelope type fence.  Manage Prairie dogs at 88 levels  Proposed expansion of Pdog acres may lead to grazing mgmt modifications  Locate additional water sites
5447 Garey Coulee (home)	Lentic 65% PFC 35% FAR/NF Prairie dogs	Standard 1 (Uplands) 99 % PFC Standard 2 (Riparian) 65 % WL PFC 100 % ST PFC Standard 3 (Water) 100 % PFC Standard 4 (Air) 100 % PFC Standard 5 (Habitat) 100 % PFC	Find additional water sites  Manage Pdog acres at 88 levels
5448 Garey Coulee	More water needed Small Dog towns (2 acres)	Standard 1 (Uplands) 99 % PFC Standard 2 (Riparian) 100 % ST PFC Standard 3 (Water) 100 % PFC Standard 4 (Air) 100 % PFC Standard 5 (Habitat) 100 % PFC	Find additional water sites.  Manage Pdog acres at 88 levels  Maintain current grazing mgmt
5600 Parrot Lake	Remove sheep fence sheep herders monuments - cultural sites	Standard 1 (Uplands) 100 % PFC Standard 2 (Riparian) 97 % WL PFC Standard 3 (Water) 100 % PFC Standard 4 (Air) 100 % PFC Standard 5 (Habitat) 100 % PFC	Replace woven wire w/ antelope type fence.  Manage Prairie dogs at 88 levels  Proposed expansion of Pdog acres may lead to grazing mgmt modifications

Allotment	Concerns/Findings	Rangeland Health Standards	Suggested Management
5601 Best Coulee	<p>Remove sheep fence</p> <p>Lentic-100% FAR</p> <p>More water needed</p> <p>Prairie Dogs</p>	<p>Standard 1 (Uplands) 100 % PFC</p> <p>Standard 2 (Riparian) 0 % WL PFC</p> <p>Standard 3 (Water) 100 % PFC</p> <p>Standard 4 (Air) 100 % PFC</p> <p>Standard 5 (Habitat) 100 % PFC</p>	<p>Manage Prairie dogs at 88 levels</p> <p>Proposed expansion of Pdog acres may lead to grazing mgmt modifications</p> <p>Locate more water sites to improve livestock distribution</p>
5604 Upper Bull Creek	<p>Disposal Track (P-182)</p> <p>Elk &amp; deer habitat</p> <p>No public access</p>	<p>Standard 1 (Uplands) 100 % PFC</p> <p>Standard 2 (Riparian) NONE</p> <p>Standard 3 (Water) 100 % PFC</p> <p>Standard 4 (Air) 100 % PFC</p> <p>Standard 5 (Habitat) 100 % PFC</p>	<p>Continue current grazing mgmt</p>
5605 Upper Cabin Creek	<p>Disposal (P-182)</p>	<p>Standard 1 (Uplands) 100 % PFC</p> <p>Standard 2 (Riparian) NONE</p> <p>Standard 3 (Water) 100 % PFC</p> <p>Standard 4 (Air) 100 % PFC</p> <p>Standard 5 (Habitat) 100 % PFC</p>	<p>Continue current grazing mgmt</p>
5606 Squaw Creek	<p>Disposal (P-182)</p>	<p>Standard 1 (Uplands) 100 % PFC</p> <p>Standard 2 (Riparian) NONE</p> <p>Standard 3 (Water) 100 % PFC</p> <p>Standard 4 (Air) 100 % PFC</p> <p>Standard 5 (Habitat) 100 % PFC</p>	<p>Continue current grazing mgmt</p>

Allotment	Concerns/Findings	Rangeland Health Standards	Suggested Management
5607 North Cabin Creek	Heavy use by livestock around reservoirs - currently all rate as NF or FAR	Standard 1 (Uplands) 100 % PFC Standard 2 (Riparian) 0 % WL PFC Standard 3 (Water) 100 % PFC Standard 4 (Air) 100 % PFC Standard 5 (Habitat) 100 % PFC	Locate additional water sites  Change grazing management to improve lentic condition.
5608 Lower Squaw Creek	Disposal (P-183)  Uplands in poor condition	Standard 1 (Uplands) 0 % PFC Standard 2 (Riparian) NONE Standard 3 (Water) 100 % PFC Standard 4 (Air) 100 % PFC Standard 5 (Habitat) 100 % PFC	This allotment is classified as a custodial allotment and has been identified as a disposal parcel. For these reasons, range improvement projects that may be proposed for this allotment will receive lower priority.
5609 Cabin Creek	Lentic 50% PFC 22% FAR 27% NF  8 Res total - old  Horse trap interpretive sign	Standard 1 (Uplands) 100 % PFC Standard 2 (Riparian) 50 % WL PFC Standard 3 (Water) 100 % PFC Standard 4 (Air) 100 % PFC Standard 5 (Habitat) 100 % PFC	WSA rules limit options for improving lentic conditions soils may limit riparian veg.  Continue current grazing mgmt
5610 Antelope Creek	Lentic 21% PFC 48% FAR 31% NF  Acquiring Kid Curry Hideout with land trade (160 acres)	Standard 1 (Uplands) 100 % PFC Standard 2 (Riparian) 21 % WL PFC 0 % ST PFC Standard 3 (Water) 100 % PFC Standard 4 (Air) 100 % PFC Standard 5 (Habitat) 99 % PFC	Lentic Riparian limited by soils, steep slopes, and fluctuating water levels  Lentic riparian limited by soils, topography and WSA restrictions.  Possible spring development (mud spring)  Possible change in season of use

Allotment	Concerns/Findings	Rangeland Health Standards	Suggested Management
5611 Upper Cyprian Creek	Additional water Prescribed Fire Disposal (P-180) -Potential exchange for Kid Curry Hideout	Standard 1 (Uplands) 100 % PFC Standard 2 (Riparian) 100 % WL PFC 0 % ST PFC Standard 3 (Water) 100 % PFC Standard 4 (Air) 100 % PFC Standard 5 (Habitat) 100 % PFC	Continue current grazing mgmt  Study prescribed fire site
5612 Square Butte	Lentic 83% PFC 17% FAR  + 10 or 11 tanks from pipeline  Prairie dog acreage low  Lotic riparian is FAR or NF (upward trend ?)  Prairie dogs	Standard 1 (Uplands) 100 % PFC Standard 2 (Riparian) 93 % WL PFC 0 % ST PFC Standard 3 (Water) 100 % PFC Standard 4 (Air) 100 % PFC Standard 5 (Habitat) 99 % PFC	<b>Manage water pipeline system</b>  transfer water rights of older silted in reservoirs and build new reservoirs  Manage pdogs at 88 levels  Continue current grazing mgmt
5613 Camp Creek	Disposal track (P-177) Creek Crossing Public Access Prairie dogs Sheep fence	Standard 1 (Uplands) 99 % PFC Standard 2 (Riparian) 100 % WL PFC Standard 3 (Water) 100 % PFC Standard 4 (Air) 100 % PFC Standard 5 (Habitat) 100 % PFC	Improve creek crossing  Replace woven wire w/ antelope type fence.  Manage pdogs at 88 levels  Continue current grazing mgmt
5614 Upper Beauchamp Creek	Prairie dogs	Standard 1 (Uplands) 100 % PFC Standard 2 (Riparian) 100 % WL PFC Standard 3 (Water) 100 % PFC Standard 4 (Air) 100 % PFC Standard 5 (Habitat) 100 % PFC	Manage pdogs at 88 levels  Continue current grazing mgmt

Allotment	Concerns/Findings	Rangeland Health Standards	Suggested Management
5615 West Dry Fork	Lentic (27 reservoirs) 79% PFC 20% FAR 1% NF  Improve creek crossing Remove sheep fence  Ferret reintroduction Shooting closure  Spillway at Wrangler Res.	Standard 1 (Uplands) 95 % PFC Standard 2 (Riparian) 79 % WL PFC 100 % ST PFC Standard 3 (Water) 100 % PFC Standard 4 (Air) 100 % PFC Standard 5 (Habitat) 100 % PFC	Proposed increase in pdog acres may lead to modification of grazing mgmt  3 creek crossing improvements  Replace woven wire w/ antelope type fence.  Repair spillway (completed)
5616 French Coulee	Combine into other allotments when fence replaced	Standard 1 (Uplands) 100 % PFC Standard 2 (Riparian) NONE Standard 3 (Water) 100 % PFC Standard 4 (Air) 100 % PFC Standard 5 (Habitat) 100 % PFC	Combine into East Dry Fork allotment
5617 East Dry Fork	Lentic (31 res.) 87% PFC 8% FAR 4% NF Keep new water away from creek  Boundary fence in poor condition  Prairie dogs	Standard 1 (Uplands) 97 % PFC Standard 2 (Riparian) 87 % WL PFC 0 % ST PFC Standard 3 (Water) 100 % PFC Standard 4 (Air) 100 % PFC Standard 5 (Habitat) 95 % PFC	keep new water developments away from creek  Repair boundary fence  look at double rotation grazing schedule  Create riparian pasture  Possible 6 pasture system  Manage pdogs at 88 levels
5618 Upper Garey Coulee	Clubmoss  Crested wheatgrass (320 acres)	Standard 1 (Uplands) 99 % PFC Standard 2 (Riparian) 100 % WL PFC Standard 3 (Water) 100 % PFC Standard 4 (Air) 100 % PFC Standard 5 (Habitat) 79 % PFC	Chisel plowing (buffer around pdog town)  Continue current grazing mgmt  Look into converting crested wheatgrass into natives or improving with land treatments.

Allotment	Concerns/Findings	Rangeland Health Standards	Suggested Management
5619 Lower Garey Coulee	Prairie dogs	Standard 1 (Uplands) 100 % PFC Standard 2 (Riparian) NONE Standard 3 (Water) 100 % PFC Standard 4 (Air) 100 % PFC Standard 5 (Habitat) 100 % PFC	manage pdogs at 88 levels  Continue current grazing mgmt
5620 Upper Fourchette Creek	Access to plowed road  Disposal (P-174)  Prairie dogs	Standard 1 (Uplands) 95 % PFC Standard 2 (Riparian) 100 % WL PFC Standard 3 (Water) 100 % PFC Standard 4 (Air) 100 % PFC Standard 5 (Habitat) 83 % PFC	look into possible easement  manage pdogs at 88 levels  Look at possible switch to 3 or 4 pasture grazing system
5621 Upper CK Creek	Combine into other allotments?	Standard 1 (Uplands) 98 % PFC Standard 2 (Riparian) NONE Standard 3 (Water) 100 % PFC Standard 4 (Air) 100 % PFC Standard 5 (Habitat) 100 % PFC	Continue current grazing mgmt
5622 Grouse Creek	Disposal Track for 107 (P-179)	Standard 1 (Uplands) 96 % PFC Standard 2 (Riparian) 100 % WL PFC Standard 3 (Water) 100 % PFC Standard 4 (Air) 100 % PFC Standard 5 (Habitat) 100 % PFC	Fence realignment after land disposal - move remaining lands into allotment 5623

Allotment	Concerns/Findings	Rangeland Health Standards	Suggested Management
5623 Upper Sevenmile Creek	Name Change to Luger Buttes  Prairie dogs	Standard 1 (Uplands) 96 % PFC Standard 2 (Riparian) 84 % WL PFC Standard 3 (Water) 100 % PFC Standard 4 (Air) 100 % PFC Standard 5 (Habitat) 100 % PFC	Name change accepted  Manage pdogs at 88 levels
5624 East Rock Creek	More water needed in section 5,8,15,22	Standard 1 (Uplands) 99 % PFC Standard 2 (Riparian) 100 % WL PFC Standard 3 (Water) 100 % PFC Standard 4 (Air) 100 % PFC Standard 5 (Habitat) 100 % PFC	locate additional water sites  potentially combine allotments 5622, 5623, 5624, 5626, 5633 into one allotment  Continue current grazing mgmt
5625 Lavelle Creek	Aquifer W/ Tanks  Reservoirs silted full Need more water  Lentic 87 % PFC 12 % FAR 2 % NF  creek crossing	Standard 1 (Uplands) 99 % PFC Standard 2 (Riparian) 86 % WL PFC 0 % ST PFC Standard 3 (Water) 100 % PFC Standard 4 (Air) 100 % PFC Standard 5 (Habitat) 100 % PFC	Locate new water in SE  Monitor pipeline and aquifer  improve creek crossing  Continue current grazing mgmt
5626 Rock Creek	Lentic (20 Res) 63 % PFC 32 % FAR 06 % NF  More water needed  Prairie Dogs	Standard 1 (Uplands) 98 % PFC Standard 2 (Riparian) 63 % WL PFC Standard 3 (Water) 100 % PFC Standard 4 (Air) 100 % PFC Standard 5 (Habitat) 100 % PFC	Manage pdogs at 88 levels  locate new water sites  Continue current grazing mgmt

Allotment	Concerns/Findings	Rangeland Health Standards	Suggested Management
5627 Current	More water needed  Lentic (27 Res) 98 % PFC 1.5 % FAR 0.5 % NF  Prairie Dogs	Standard 1 (Uplands) 96 % PFC Standard 2 (Riparian) 98 % WL PFC Standard 3 (Water) 100 % PFC Standard 4 (Air) 100 % PFC Standard 5 (Habitat) 100 % PFC	Transfer water rights from 2 ZMI reservoirs that were never built  Manage pdogs at 88 levels
5628 Beauchamp Creek	Lentic (4 Res) 56 % PFC 44 % FAR  Lotic FAR & NF  Prairie dogs	Standard 1 (Uplands) 100 % PFC Standard 2 (Riparian) 56 % WL PFC 0 % ST PFC Standard 3 (Water) 100 % PFC Standard 4 (Air) 100 % PFC Standard 5 (Habitat) 99 % PFC	install riparian fence  manage pdogs at 88 levels
5629 -- Coal Mine Coulee		Standard 1 (Uplands) 100 % PFC Standard 2 (Riparian) NONE Standard 3 (Water) 100 % PFC Standard 4 (Air) 100 % PFC Standard 5 (Habitat) 100 % PFC	Continue current grazing mgmt  Possibly combine into 5610
5631 Crukschank	Poor creek Crossing  Lentic (18 Res) 52 % PFC 47 % FAR  More water needed stay away from Beauchamp Creek	Standard 1 (Uplands) 99 % PFC Standard 2 (Riparian) 53 % WL PFC 0 % ST PFC Standard 3 (Water) 100 % PFC Standard 4 (Air) 100 % PFC Standard 5 (Habitat) 99 % PFC	install creek crossing  locate new reservoir sites  Continue current grazing mgmt

Allotment	Concerns/Findings	Rangeland Health Standards	Suggested Management
5632 Thornhill	Lentic - All 4 Res FAR  Isolated tracks Disposal tracts (P-180)	Standard 1 (Uplands) 100 % PFC Standard 2 (Riparian) 0 % WL PFC Standard 3 (Water) 100 % PFC Standard 4 (Air) 100 % PFC Standard 5 (Habitat) 100 % PFC	combine with 5625  Continue current grazing mgmt
5633 C.K.Creek	2 creek crossings need development and easements  Lentic (27 Res) 86 % PFC 9 % FAR 5 % NF  New Water needed  Prairie Dogs	Standard 1 (Uplands) 98 % PFC Standard 2 (Riparian) 86 % WL PFC Standard 3 (Water) 100 % PFC Standard 4 (Air) 100 % PFC Standard 5 (Habitat) 100 % PFC	install creek crossings  locate new water sites  manage pdogs at 88 levels  Continue current grazing mgmt

PFC BLM acres = Total BLM acres minus FAR/NF BLM upland acres minus BLM prairie dog acres  
(by allotment)

PFC BLM Habitat acres = Total BLM acres minus FAR/NF BLM wetland acres, minus FAR/NF  
BLM Stream acres, minus crested wheatgrass acres, minus noxious weed acres (less than 5  
acres per allotment)

### Appendix 3. Grazing Information by Allotment in Beauchamp Watershed

Allotment Number	Allotment Name	MGMT Cat.	Season from:	Season to:	Grazing Meth.	Public AUM's	Public Acres
5446	Parrot Coulee	I	06-05	10-05	S	475	2693
5447	Garey Coulee (home)	I	05-01	11-30	S	561	3020
5448	Garey Coulee	C	03-01	02-28	S	173	800
5600	Parrot Lake	I	03-01	02-28	S	719	3079
5601	Best Coulee	I	04-01	11-30	S	532	2735
5604	Upper Bull Creek	C	03-01	02-28	S	36	360
5605	Upper Cabin Creek	C	03-01	02-28	S	48	160
5606	Squaw Creek	C	03-01	02-28	S	45	255
5607	North Cabin Creek	M	05-16	09-15	S	243	1111
5608	Lower Squaw Creek	C	03-01	02-28	S	43	170
5609	Cabin Creek	M	05-01	10-31	DR	762	6734
5610	Antelope Creek	I	05-01	12-31	S	4520	42106
5611	Upper Cyprian Creek	M	03-01	02-28	S	646	3779
5612	Square Bluff	I	05-31	10-31	S	1006	9599
5613	Camp Creek	I	06-26	12-15	DR	605	2751
5614	Upper Beauchamp Creek	M	09-15	07-15	DR	593	3051
5615	West Dry Fork	I	05-01	11-30	DR	1923	14854
5616	French Coulee	C	03-01	02-28	S	7	80
5617	East Dry Fork	I	05-01	11-30	DR	2657	18672
5618	Upper Garey Coulee	I	04-08	11-20	DR	438	1551
5619	Lower Garey Coulee	C	03-01	02-28	S	63	345
5620	Upper Fourchette Creek	I	06-01	10-15	S	662	3296
5621	Upper C.K. Creek	C	03-01	02-28	S	31	204
5622	Grouse Creek	C	03-01	02-28	S	116	242
5623	Upper Seven Mile Creek	I	04-01	12-31	DR	794	3809
5624	East Rock Creek	I	06-01	04-30	DR	672	4137
5625	Lavelle Creek	I	05-01	10-31	RR	1391	9726
5626	Rock Creek	I	05-01	11-14	S	800	5774
5627	Current	I	04-01	11-30	DR	2144	13726
5628	Beauchamp Creek	M	05-01	10-31	S	282	2735
5629	Coal Mine Coulee	C	03-01	02-28	S	53	423
5631	Cruickschank	I	05-01	11-30	DR	989	7080
5632	Thornhill	C	12-31	12-31	S	553	5388
5633	C.K. Creek	I	11-30	11-30	S	2466	14352

TOTAL      27311      88803

I = Season Long, DR = Deferred Rotation, RR = Rest Rotation.

M = Maintain, C = Custodial, I = Improve

# Appendix 4. Ecological condition by allotment for Beauchamp Watershed.

Allotment Number	PNC Excellent Acres	Late Seral (good) Acres	Mid Seral (fair) Acres	Early Seral (poor) Acres	Total Fed. Acres	Prior Event Data	Prior Trend
5445	0	2693	0	0	2693		
5447	3020	0	0	0	3020		
5448	0	801	0	0	801		
560	0	3079	0	0	3079		
5601	0	2735	0	0	2735		
5604	0	760	0	0	760		
5605	160	0	0	0	160		
5606	0	255	0	0	255		
5607	1111	0	0	0	1111		
5608	0	0	170	0	170		
5609	0	6734	0	0	6734		
5610	0	42106	0	0	42106		
5611	0	3779	0	0	3779		
5612	0	9590	0	0	9590		
5613	0	2751	0	0	2751		
5614	0	3051	0	0	3051		
5615	0	14854	0	0	14854		
5616	0	80	0	0	80		
5617	0	18672	0	0	18672		
5618	0	1551	0	0	1551		
5619	0	345	0	0	345		
5620	0	3206	0	0	3206		
5621	0	204	0	0	204		
5622	0	242	0	0	242		
5623	0	3609	0	0	3609		
5624	0	4137	0	0	4137		
5625	0	9726	0	0	9726		
5626	0	5774	0	0	5774		
5627	0	13726	0	0	13726		
5628	0	2735	0	0	2735		
5629	423	0	0	0	423		
5631	0	7000	0	0	7000		
5632	0	7358	0	0	7358		
5633	0	3302	0	0	3302		
<b>TOTALS</b>	<b>4714</b>	<b>183911</b>	<b>170</b>	<b>0</b>	<b>188797</b>		

☐ = Stable trend    ☐ = Unknown trend

# Appendix 5. Upland Health Data for Biotic Environment for Beauchamp Watershed

A: Risk Acres by Soil Group (1)

Ajlot. #	Public Acres	PFC Acres	Trend	Blue	Brown	Green	Orange	Yellow	Magenta
5446	2693	2693	up						
5447	3020	3020	up						
5448	800	800	up						
5600	3079	3079	up						
5601	2735	2735	up						
5604	360	360	up						
5605	160	160	up						
5606	255	255	up						
5607	1111	1111	up						
5608	170	0	down	95		37			38
5609	6734	6734	up						
5610	42106	42106	up						
5611	3779	3779	up						
5612	9599	9599	up						
5613	2751	2751	up						
5614	3051	3051	up						
5615	14854	14854	up						
5616	80	80	up						
5617	18672	18672	up						
5618	1551	1551	up						
5619	345	345	up						
5620	3296	3296	up						
5621	204	204	up						
5622	242	242	up						
5623	3809	3809	up						
5624	4137	4137	up						
5625	9726	9726	up						
5626	5774	5774	up						
5627	13726	13726	up						
5628	2735	2735	up						
5629	423	423	up						
5631	7080	7080	up						
5632	5388	5388	up						
5633	14854	14854	up						

(1) For descriptions on soil color codes, see appendix 11

Appendix 6. Wetland Health Information for the Beauchamp Watershed.

Allot. #	Wetland Acres	Fill Reservoirs			Ponds		
		PFC	FAR	NF	PFC	FAR	NF
5446	18.94	0.62	0	6.34	11.98	0	0
5447	35.75	3.28	7.43	0	20.03	5.04	0
5448	0	0	0	0	0	0	0
5600	23.17	14.62	7.0	0	7.85	0	0
5601	6.30	0	6.30	0	0	0	0
5604	0	0	0	0	0	0	0
5605	0	0	0	0	0	0	0
5606	0	0	0	0	0	0	0
5607	1.29	0	0.51	0.78	0	0	0
5608	0	0	0	0	0	0	0
5609	6.22	3.13	1.39	1.70	0	0	0
5610	32.61	6.84	16.80	8.97	0	0	0
5611	4.96	4.96	0	0	0	0	0
5612	41.89	34.96	6.93	0	0	0	0
5613	15.26	15.26	0	0	0	0	0
5614	8.57	8.57	0	0	0	0	0
5615	60.48	47.91	11.12	1.45	0	0	0
5616	0	0	0	0	0	0	0
5617	101.75	81.88	7.36	5.43	7.08	0	0
5618	28.03	3.26	0	0	24.77	0	0
5619	0	0	0	0	0	0	0
5620	12.95	12.95	0	0	0	0	0
5621	0	0	0	0	0	0	0
5622	7.12	7.12	0	0	0	0	0
5623	22.49	18.83	2.35	1.31	0	0	0
5624	12.18	11.63	0	0	0.55	0	0
5625	71.9	61.54	8.3	2.06	0	0	0
5626	37.28	23.93	11.57	2.18	0	0	0
5627	102.63	88.59	1.50	0.48	11.49	0	0
5628	8.03	4.52	3.51	0	0	0	0
5629	0	0	0	0	0	0	0
5631	35.52	10.26	14.69	0	8.54	3.03	0
5632	6.23	0	5.21	0	0	0	0
5633	69.68	40.12	5.05	1.60	0	0	0
TOTALS	770.64	524.39	112.62	34.3	92.26	7.07	0

## Appendix 7. Functioning Condition of Streams in Beauchamp Watershed

Allotment No.	Drainage / Stream	Length (Miles)	Veg Cond	Soil Cond	Hydro Cond	Function condition	Trend
5446	Sevenmile Creek	3.4	67	83	75	FAR	U
5447	Fk of Dry Fork	1.1	83	100	100	PFC	I
5448	Fk of Dry Fork	1.4	77	100	100	PFC	I
5610	Antelope Creek	10.9	61	50	58	NFC	U
5610	Bull Creek	6.68	67	67	67	FAR	U
5610	Bull Creek	4.85	67	67	67	FAR	S
5610	Bull Creek	4.76	67	67	58	FAR	I
5610	Winter Creek	9.2	78	66	75	FAR	U
5611	Siparyann Creek	0.9	67	83	75	FAR	I
5612	Siparyann Creek	6	56	79	38	NF	I
5612	Siparyann Creek	4.6	60	69	54	FAR	I
5612	Duval Creek	4.4	52	67	25	NF	U
5615	Dry Fork	3.5	65	100	75	PFC	U
5617	Dry Fork	1.1	40	83	42	NF	S
5617	Dry Fork	5.8	72	100	67	FAR	S
5617	Dry Fork	3.4	66	83	50	FAR	U
5625	Little Cottonwood Creek	1.1	72	83	75	FAR	I
5625	Little Cottonwood Creek	1.7	72	83	66	FAR	U
5625	Little Cottonwood Creek	1.5	56	66	66	FAR	U
5628	Beauchamp Creek	2.3	61	33	41	NF	U
5631	Beauchamp Creek	1.6	61	16	33	NF	D
5631	Beauchamp Creek	1.4	61	66	42	NF	D
5631	Beauchamp Creek	1.9	61	50	33	NF	D
5631	Beauchamp Creek	1.6	61	100	75	FAR	S

U = Unknown  
 I = Improving  
 S = Static  
 D = Downward

## Appendix 8. Prairie Dog Data for BLM Lands in Beauchamp Watershed

Allotment #	1988 Acres	2000 Acres	Difference between 1988 & 2000
5446	40	35.56	-4.44
5447	32	30.30	-1.7
5448	2	7.05	5.05
5600	0	0	0
5601	180	4.850	-175.15
5604	0	0	0
5605	0	0	0
5606	0	0	0
5607	0	0	0
5608	0	0	0
5609	0	0	0
5610	0	122.36	122.36
5611	0	0	0
5612	134	2.89	-131.11
5613	73	20.63	-52.37
5614	0	0	0
5615	1218	731.88	-486.12
5616	0	0	0
5617	1085	491.13	-593.87
5618	119	9.01	-109.99
5619	7	0	-7
5620	42	164.27	122.27
5621	10	4.10	-5.9
5622	0	22.14	22.14
5623	22	160.77	138.77
5624	4	31.92	33.92
5625	169	54.23	-114.77
5626	387	87.65	-299.35
5627	991	484.76	-506.24
5628	59	0	-59
5629	0	0	0
5631	234	42.74	-191.26
5632	0	0	0
5633	617	273.59	-343.41
<b>TOTAL</b>	<b>5425</b>	<b>2788.83</b>	<b>-2636.17</b>

The BLM completed prairie dog town acreage surveys during the years 1980, 1984, 1988, 1993, 1995\*, 1996\*, 1997\*, 1998, 1999\*, and 2000. This data is available by contacting the BLM's Manka Field Office.

\* Indicates that these surveys were a 1/3 sample of prairie dog towns, not complete surveys.

Appendix B Field Plot Locations and Health Assessments

Abot #	Proj Name	Twn.	Rng.	Sec.	1/4 1/4	Date	Soils Series	Range Site	ESI	Trend	Biotic Health	Physical Health
5446	5446P112	25N	27E	2	NWNW	07/28	MARVAN	CY	60	9	HEALTHY	FUNCTIONING
5447	5447P111	24N	28E	14	SESW	9/30	ETHRIDGE	OV	80	8	HEALTHY	FUNCTIONING
5448	5448P111	24N	28E	21	SWSE	9/30	MARVAN	DC	65	8	HEALTHY	FUNCTIONING
5600	5600P111	26N	27E	21	NWNW	7/20	ELLOAM	CP	70	4	HEALTHY	FUNCTIONING
5601	5601P111	25N	27E	31	NESW	7/20	MARVAN	CY	75	10	HEALTHY	FUNCTIONING
5602	5602P111	25N	24E	34	NWNW	10/09	WINDHAM	SI	75	7	HEALTHY	FUNCTIONING
5603	5603P111	25N	24E	33	SENE	9/30	DANVERS	SI	60	7	HEALTHY	FUNCTIONING
5604	5604P111	25N	23E	24	NESW	9/30	ETHRIDGE	SI	70	10	HEALTHY	FUNCTIONING
5605	5605P111	25N	23E	27	NWNW	9/25	SCOBEE	SI	85	10	HEALTHY	FUNCTIONING
5606	5606P111	25N	23E	18	NWNW	9/25	TELSTAD	SI	70	10	HEALTHY	FUNCTIONING
5607	5607P111	25N	22E	26	SWNE	9/23	SAVAGE	SI	85	9	HEALTHY	FUNCTIONING
5608	5608P111	25N	22E	13	NENE	9/25	TELSTAD	SI	55	5	UNHEALTHY	FUNCTIONING
5609	5609P111	24N	22E	27	NENE	9/23	BASCOVEY	CY	70	3	HEALTHY	FUNCTIONING
5609	5609P112	25N	22E	32	SWNW	9/23	BASCOVEY	CY	80	7	HEALTHY	FUNCTIONING
5610	5610R111	24N	23E	22	SWSE	8/20	YAMAC	SI	75	6	HEALTHY	FUNCTIONING
5610	5610P111	23N	23E	14	NENE	8/19	BASCOVEY	CY	65	6	HEALTHY	FUNCTIONING
5610	5610P112	23N	23E	6	NENW	8/20	BASCOVEY	CY	75	5	HEALTHY	FUNCTIONING
5610	5610P113	23N	23E	33	SWNE	8/19	DULTS	SWC	45	8	HEALTHY	FUNCTIONING
5611	5611P111	24N	24E	34	SWSW	8/19	MARVAN	CY	60	8	HEALTHY	FUNCTIONING
5612	5612	23N	24E	18	SWSW	8/19	ABSHER	CP	55	5	HEALTHY	FUNCTIONING
5612	5612	23N	24E	19	SWSW	8/18	BASCOVEY	CY	75	7	HEALTHY	FUNCTIONING
5612	5612	23N	24E	17	NESW	8/18	BASCOVEY	CY	70	2	HEALTHY	FUNCTIONING
5612	5612	23N	24E	33	SWSE	8/18	BASCOVEY	CY	65	8	HEALTHY	FUNCTIONING

Alot #	Proj Name	Twn.	Rdg.	Sec.	1/4 1/4	Date	Soils Series	Range Site	ESI	Trend	Biotic Health	Physical Health
5613	5613P1T1	23N	26E	8	SWSW	8/31	ELLOAM	CP	60	8	HEALTHY	FUNCTIONING
5614	5614P1T1	24N	26E	13	SWNE	9/30	BASCOVEY	CY	65	7	HEALTHY	FUNCTIONING
5615	5615	23N	28E	17	SESE	7/09	ELLOAM	CP	70	9	HEALTHY	FUNCTIONING
5615	5615	23N	28E	9	NWSE	7/09	DILTS	SWC	70	4	HEALTHY	FUNCTIONING
5615	5615	24N	28E	31	SESW	6/30	THEONY	CP	75	8	HEALTHY	FUNCTIONING
5615	5615	24N	27E	20	NENE	7/28	BASCOVEY	CY	70	7	HEALTHY	FUNCTIONING
5615	5615	24N	27E	8	SESW	7/28	BASCOVEY	CY	85	9	HEALTHY	FUNCTIONING
5615	5615	23N	27E	13	SWSE	7/08	DILTS	SWC	65	6	HEALTHY	FUNCTIONING
5616	5616	25N	27E	35	NWSW	8/27	ELLOAM	CP	55	5	HEALTHY	FUNCTIONING
5616	5616P1T1	24N	28E	6	SWSW	10/01	SCOBEY	SI	75	5	HEALTHY	FUNCTIONING
5617	5617P1T1	24N	28E	19	NWNE	10/07	DILTS	SWC	65	8	HEALTHY	FUNCTIONING
5617	5617P1T2	24N	27E	23	NENE	09/25	ELLOAM	CP	55	1	HEALTHY	FUNCTIONING
5617	5617P1T3	24N	27E	14	NWSW	10/01	MARVAN	CY	55	8	HEALTHY	FUNCTIONING
5617	5617P2T1	23N	28E	3	NWSE	09/25	MARVAN	CY	55	8	HEALTHY	FUNCTIONING
5617	5617P3T8	24N	28E	18	NESE	10/01	JOPLIN	SI	75	5	HEALTHY	FUNCTIONING
5617	5617P3T9	24N	28E	7	NWNE	10/01	BASCOVEY	CY	50	3	HEALTHY	FUNCTIONING
5618	5618P1T1	24N	28E	10	NESE	09/30	NISHON	OV	75	-2	AT RISK	FUNCTIONING
5619	5619P1T1	24N	28E	34	NWNE	09/25	MARVAN	CY	55	5	HEALTHY	FUNCTIONING
5620	5620P1T1	23N	29E	6	SWSW	09/25	ETHRIDGE	CY	65	9	HEALTHY	FUNCTIONING
5622	5622	24N	26E	30	SESE	08/27	BASCOVEY	CY	60	7	HEALTHY	FUNCTIONING
5622	5622P1T1	24N	26E	30	SESE	7/22	MARVAN	CY	55	6	HEALTHY	FUNCTIONING
5623	5623P1T1	23N	25E	2	SESE	7/23	HARLAKE	OV	70	5	HEALTHY	FUNCTIONING
5623	5623P1T2	23N	25E	13	SWNE	7/27	MARVAN	CY	70	8	HEALTHY	FUNCTIONING

Allot #	Proj Name	Twn.	Reg.	Sec.	1/4 1/4	Date	Soils Series	Range Site	FSI	Trend	Biotic Health	Physical Health
5624	5624P1T1	23N	25E	17	SWNE	7/22	HARLAKE	OV	70	1	HEALTHY	FUNCTIONING
5624	5624P1T2	23N	25E	9	SESE	7/27	MARVAN	CY	75	6	HEALTHY	FUNCTIONING
5625	5625P2T3	23N	24E	12	SENW	9/21	ZAHILL	TSI		7	HEALTHY	FUNCTIONING
5625	5625P3T1	23N	24E	24	NENE	9/21	DILTS	SWC	70	2	HEALTHY	FUNCTIONING
5625	5625P1T5	23N	24E	4	NENW	9/21	BASCOVEY	CY	70	5	HEALTHY	FUNCTIONING
5625	5625P1T8	23N	24E	10	NESW	9/21	BASCOVEY	CY	65	7	HEALTHY	FUNCTIONING
5626	5626P2T1	23N	25E	28	SESE	10/09	THOENY	CP	65	-2	AT RISK	FUNCTIONING
5626	5626P1T1	23N	25E	21	NESW	10/09	ETHRIDGE	CY	70	10	HEALTHY	FUNCTIONING
5627	5627	23N	27E	3	SWNE	6/25	HARLAKE	OV	80	9	HEALTHY	FUNCTIONING
5627	5627	23N	27E	27	NESW	6/30	THOENY	CP	70	5	HEALTHY	FUNCTIONING
5627	5627P1T0	23N	27E	20	SWNE	6/30	BASCOVEY	CY	70	7	HEALTHY	FUNCTIONING
5627	5627P1T3	23N	27E	32	NENW	6/30	MARVAN	CY	70	10	HEALTHY	FUNCTIONING
5628	5628P1T1	23N	28E	29	NWNW	8/26	MARVAN	CY	60	8	HEALTHY	FUNCTIONING
5629	5629P1T1	24N	23E	12	SESE	10/09	BASCOVEY	CY	80	10	HEALTHY	FUNCTIONING
5631	5631P3T1	22N	28E	2	NWNW	9/24	ELLOAM	CP	75	4	HEALTHY	FUNCTIONING
5631	5631P2T1	22N	28E	3	NESW	9/24	BASCOVEY	CY	60	5	HEALTHY	FUNCTIONING
5632	5632P1T1	24N	25E	21	SENW	8/21	YAMAC	SI	70	6	HEALTHY	FUNCTIONING
5633	5633P1T1	23N	26E	29	SWNW	7/22	VOLBURG	CCY	60	1	HEALTHY	FUNCTIONING
5633	5633P1T2	23N	26E	28	NESW	7/22	ELLOAM	CP	50	10	HEALTHY	FUNCTIONING
5633	5633P1T3	23N	26E	33	NWSE	7/22	DILTS	SWC	55	5	HEALTHY	FUNCTIONING
5633	5633P1T4	23N	26E	27	NWSE	7/22	ELLOAM	CP	60	1	HEALTHY	FUNCTIONING
5633	5633P1T6	23N	26E	22	SESE	8/26	DILTS	SWC	85	10	HEALTHY	FUNCTIONING

Alot #	Proj Name	Twn.	Rng.	Sec.	1/4 1/4	Date	Soils Series	Range Site	ESI	Trend	Biotic Health	Physical Health
5633	5633P117	23N	27E	31	NENE	7/23	HARLEM	OV	.60	10	HEALTHY	FUNCTIONING
5633	5633P111A	23N	25E	26	NESW	7/28	BASCOVEY	CY	70	10	HEALTHY	FUNCTIONING

Appendix 10. Soil Legend for Beauchamp Watershed.

Minor Range Sites  
Response to Grazing Management

Major Range Sites  
Response to Grazing Management

Color	Soils No.	Soils Names	Major Range Sites Response to Grazing Management	Minor Range Sites Response to Grazing Management
BROWN	0013B	BEAVERTON	SWG-moderate	
BROWN	0033B	PHILLIPS	SI-rapid if clubmoss is treated	
BROWN	0035C	ASSINIBOINE	SY-rapid	
BROWN	0036C	CHINOOK	SY-rapid	
BROWN	0037B	EVANSTON	SI-rapid if clubmoss is treated	
BROWN	0037C	EVANSTON	SI-rapid if clubmoss is treated	
BROWN	0050B	TELSTAD	SF-rapid if clubmoss is treated	
BROWN	0056B	SCOBLEY	SI-rapid if clubmoss is treated	
BROWN	0110C	ATTUWAN BEAVEREIL	SI-rapid if clubmoss is treated	SWC-moderate
BROWN	0190B	NESPA	SWG-moderate to rapid	
BROWN	0221D	HILLON KEVIN	SI-rapid if clubmoss is treated	SI-rapid if clubmoss is treated
BROWN	0221E	HILLON KEVIN	TSI-moderate if clubmoss is treated	TSI-moderate if clubmoss is treated
BROWN	0221F	HILLON-KEVIN	TSI-moderate if clubmoss is treated	TSI-moderate if clubmoss is treated
BROWN	0224D	HILLON JOPLIN	TSI-moderate if clubmoss is treated	TSI-moderate if clubmoss is treated
BROWN	0270E	BEAVEREIL-TINSLEY	SWG-moderate	GR-moderate
BROWN	0331C	PHILLIPS KEVIN	SI-rapid if clubmoss is treated	SI-moderate if clubmoss is treated
BROWN	0351C	FORTBENTON	Sa-rapid	
BROWN	0412D	JOPLIN TELSTAD	SI-rapid if clubmoss is treated	SI-rapid if clubmoss is treated
BROWN	0412C	KEVIN-HILLON	SI-moderate if clubmoss is treated	SI-moderate if clubmoss is treated
BROWN	0444C	KEVIN SUNBURST	SI-moderate if clubmoss is treated	CY-rapid
BROWN	0446D	KEVIN-SUNBURST	SI-moderate if clubmoss is treated	CY-rapid if clubmoss is treated

Minor Range Sites  
Response to Grazing Management

Major Range Sites  
Response to Grazing Management

Color Soils No. Soils Names

BROWN	0503C	HEI STAD JOPLIN	SI-rapid if clubmoss is treated	SI-rapid
BROWN	0511B	MARTINDALE JUDITH	SI-moderate to rapid	SI-moderate to rapid
BROWN	0561B	SCOBEEY PHILLIPS	SI-rapid if clubmoss is treated	SI-rapid if clubmoss is treated
BROWN	0563C	SCOBEEY KEVIN	SI-rapid if clubmoss is treated	SI-moderate if clubmoss is treated
BROWN	0564C	SCOBEEY KEVIN-ELLOAM	SI-rapid if clubmoss is treated; SI-rapid if clubmoss is treated	CP-slow
BROWN	0566C	SCOBEEY KEVIN	SI-rapid if clubmoss is treated	SI-moderate if clubmoss is treated
BROWN	0731C	JUDITH WINDHAM	SI-moderate to rapid	SI-moderate to rapid
BROWN	0921D	SUNBURST KEVIN	CY-rapid	SI-moderate if clubmoss is treated
BROWN	0923C	SUNBURST KEVIN	CY-rapid	SI-moderate if clubmoss is treated
BROWN	0923F	SUNBURST KEVIN	TCY-rapid	TSI-moderate
BROWN	0925C	SUNBURST BASCOVY	CY-rapid; CY-rapid	DC-very slow
BROWN	1221F	III JON KEVIN	TSI-moderate	TSI-moderate
BROWN	1333C	KEVIN PHILLIPS ELLIOTT	SI-rapid if clubmoss is treated	SI-rapid if clubmoss is treated; CP-slow
BROWN	1373C	EVANSTON CHINOOK	SI-moderate to rapid; SY-moderate to rapid	SI-moderate to rapid
BROWN	1441D	KEVIN-SCOBEEY PHILLIPS	SI-moderate if clubmoss is treated; SI-rapid if clubmoss is	SI-rapid if clubmoss is treated
BLUE	0010C	BARKOLF	CY-rapid	CY-rapid
BLUE	0025C	BASCOVY	CY-rapid	CY-rapid
BLUE	0096D	MELGONOT KOBASIE	CY-rapid	CY-rapid
BLUE	0097D	NELDRE BASCOVY	SWC-rapid	SWC-rapid
BLUE	0250E	BASCOVY NELDRE	TCY-rapid; SWC-rapid	DC-very slow
BLUE	0251C	BASCOVY NELDRE	CY-rapid	SWC-rapid
BLUE	0924E		TCY-rapid; TCY-rapid	SWC-rapid
BLUE	0926F	SUNBURST NELDRE	TCY-rapid; SWC-rapid	N.A. (R.O.-rock outcrop)

Color Soils Soils Names Major Range Sites Response to Grazing Management

Minor Range Sites Response to Grazing Management

BLUE	0971F	NELDORF-CABBART	SWC-rapid; SW-rapid	GR-moderate
BLUE	0973E	NELDORF-COOL	Woodland-rapid	TCY-rapid
BLUE	0974F	PINEBREAKS NELDORF	Woodland-rapid	Woodland-rapid;MAGENTA
BLUE	1251E	NELDORF-BASCOVY	SWC-rapid	TCY-rapid
BLUE	1400F	ROCK OUTCROP-ARSTIE	N.A.(R.O.-rock outcrop)	SU-slow
BLUE	1920F	SUNBURST NELDORF	TCY	SWC
BLUE	1970F	NELDORF-BASCOVY-	SWC-rapid;TCY-rapid	N.A.(R.O.-rock outcrop)
BLUE	1972F	VOLBERG ROCK	CC-rapid	N.A.(R.O.-rock outcrop)
BLUE	1973F	NELDORF-MOIST-	Woodland;SWC-rapid	N.A.(R.O.-rock outcrop)
BLUE	1976F	NELDORF-PINEBREAKS-	Woodland-rapid; Woodland-rapid	TCY-rapid
BLUE	1977F	VOLBERG-PINEBREAKS-	Woodland-rapid; Woodland-rapid	NA (R.O.-rock outcrop)
BLUE	2972F	VOLBERG NELDORF-	CC-rapid ;SWC-rapid	N.A.(R.O.-rock outcrop)
YELLOW	0331B	PHILLIPS-ABSHER	SI-rapid if clubmoss is treated	DC-very slow
YELLOW	0331C	PHILLIPS-ABSHER	SI-rapid if clubmoss is treated	DC-very slow
YELLOW	0332B	PHILLIPS-ELLOAM	SI-rapid if clubmoss is treated	CP-slow
YELLOW	0391B	CREED-ABSHER	CP-slow	DC-very slow
YELLOW	0502C	HELSTAD-ELLOAM	SI-rapid if clubmoss is treated	CP-slow
YELLOW	0503C	HELSTAD-ABSHER	SI-rapid if clubmoss is treated	DC-very slow
YELLOW	0562B	SCOBIEY-ELLOAM	SI-rapid if clubmoss is treated	CP-slow
YELLOW	0562C	SCOBIEY-ELLOAM	SI-rapid if clubmoss is treated	CP-slow
ORANGE	0052B	ELLOAM	CP-slow	DC-very slow
ORANGE	0211B	THOENY-ABSHER	CP-slow	DC-very slow
ORANGE	0212B	THOENY-ELLOAM	CP-slow	CP-slow

Color Soils Soils Names

Major Range Sites  
Response to Grazing Management

Minor Range Sites  
Response to Grazing Management

Color	Soils No.	Soils Names	Soils Names	Soils Names	Soils Names
ORANGE	0521B	ELLOAM-ABSHIPER	CP-slow		DC-very slow
ORANGE	0567C		SI rapid if clubmoss is treated;CP-slow		DC-slow
ORANGE	0860C	WENGART COMPLEX	CP-slow		DC-very slow
ORANGE	1052B	ELLOAM-THOENY	CP-slow		CP-slow
ORANGE	1059E	WENGART-VAEDA-	CP-slow & DC-very slow		TCY-rapid
ORANGE	1332C	PHILLIPS-ELLOAM-	SI-rapid if clubmoss is treated;CP-slow		CP-slow
ORANGE	1523C		CP-slow;SI-rapid if clubmoss is treated		DC-slow
RED	0081F	MACMEAL	Woodland-rapid		
RED	0101E	BARKOF WINDHAM	Woodland-rapid		
RED	0115F	SILVERCHIEF-	Woodland-rapid		
RED	0120F	MOCMONT	Woodland-rapid		
RED	0121F	MOCMONT-TOLEX	Woodland-rapid		
RED	0122F	MOCMONT-LANDUSKY	Woodland-rapid		
RED	0130F	RUBBLE MOCMONT-	Woodland-rapid		
RED	0139F	WHITECOW-WARNEKE	Woodland-rapid		
RED	0140F	WHITECOW	Woodland-rapid		
RED	0151F	WARNEKE WHITECOW-	Woodland-rapid		
RED	0160D	WHITECOW	Woodland-rapid		
RED	0160E	WHITECOW	Woodland-rapid		
RED	0200F	MINED LANDS	Woodland-rapid		
MAGENTA	0201D	CABBA WINDHAM	Sh-rapid		
MAGENTA	1021E	CABBART-TWILIGHT-	SW-rapid; TSY-rapid		SI-rapid

Color Soils Soils Names

Major Range Sites  
Response to Grazing Management

Minor Range Sites  
Response to Grazing Management

Color	Soils No.	Soils Names	Major Range Sites Response to Grazing Management	Minor Range Sites Response to Grazing Management
MAGENTA	1022F	HILTON-CABBART-ROCK	TSI-moderate; SW-moderate to rapid	N.A.(R.O.-rock outcrop)
MAGENTA	1066D	TWILIGHT-CABBART-	SY-moderate; SW-rapid	SF-moderate
MAGENTA	1850F	CABBART-TWILIGHT-	Woodland-rapid; Woodland-rapid	Woodland-rapid
MAGENTA	197H	YAWDIM-CABBART-	SWC-rapid; SW-rapid	N.A.(R.O.-rock outcrop)
WHITE	0041A	VAEDA	DC-extremely slow	
WHITE	0048A	VANDA	DC-extremely slow	
WHITE	0241B	BENZ-VANDA	SU-very slow	DC-extremely slow
WHITE	0302A	MARVAN SALINE-VANDA	DC-very slow	DC-extremely slow
WHITE	0302B	MARVAN SALINE-VANDA	DC-very slow	DC-extremely slow
WHITE	0392D	CREED GERDRUM	CP-slow	CP-slow
WHITE	0402B	GERDRUM-ABSHER	CP-slow	DC-very slow
WHITE	0603A	BULLHOOK	SU-very slow	
WHITE	0610	BENTONITE PFT	NA	
WHITE	1002A	LOSTRIVER BULLHOOK	SU-very slow	SU-very slow
WHITE	0208B	ABSHER-NOBE	DC-very slow	SU-extremely slow
WHITE	1392B	CREED-GERDRUM-	CP slow; CP-slow	DC-very slow
GREEN	0028A	NESHON	OV-moderate	
GREEN	0029A	MCKENZIE	OV-moderate	
GREEN	0030A	MARVAN	CY-rapid	
GREEN	0030B	MARVAN	CY-rapid	
GREEN	0031B	PERD	SF-rapid if clubmoss is treated	
GREEN	0032B	KOBASE	CY-rapid	
GREEN	0038B	LEHRIDGE	CY-moderate to rapid	

Color

Soils No.

Major Range Sites  
Response to Grazing Management

Minor Range Sites  
Response to Grazing Management

GREEN	0038C	ETHRIDGE	CY-moderate to rapid	
GREEN	0043A	PENDROY	CY-rapid if soils are wet enough	
GREEN	0060A	HAYRE	SI-moderate to rapid if soils are wet enough	
GREEN	0075C	FARNUF	SI-moderate to rapid if soils are wet enough	
GREEN	0079C	YABIACALL	SI-moderate to rapid if soils are wet enough	
GREEN	0081A	GLENDIVE	SI-moderate to rapid if soils are wet enough	
GREEN	0082B	SAVAGE	CY-moderate to rapid if soils are wet enough	
GREEN	0082C	SAVAGE	CY-moderate to rapid if soils are wet enough	
GREEN	0090A	HARLAKE	CY-moderate to rapid if soils are wet enough	
GREEN	0093A	BOWDOIN	DC-slow	
GREEN	0094C	BUSBY	SY-rapid	
GREEN	0094D	BUSBY	SY-rapid	
GREEN	0170A	DIMICK	OV-moderate	
GREEN	0301C	MARVAN SALINE	DC-slow	CY-moderate to rapid if soils are wet enough
GREEN	0311B	FERD-GERDRUM	SI-moderate to rapid	CP-slow
GREEN	0312B	FERD ABSHER	SI moderate to rapid	CP-slow
GREEN	0320A	KOBASE	CY-moderate to rapid	
GREEN	0322C	KOBASE-MEGONOT	CY-moderate to rapid	CY-moderate to rapid
GREEN	0323B	KOBASE-MARVAN	CY-moderate to rapid; CY-moderate to rapid	DC-very slow
GREEN	0381B	ETHRIDGE-GERDRUM	CY-moderate to rapid	CP-slow
GREEN	0481A	BIGSAG	SL-slow	
GREEN	0601A		SI moderate to rapid if wet; CY-moderate to rapid if wet	SI-moderate to rapid if soils are wet enough
GREEN	0603A	HAYRE	CY-moderate to rapid if soils are wet enough	

Color Soils Soils Names  
No.

GREEN	0791E	YAMACALL	SI-moderate to rapid	
GREEN	0792C	YAMACALL	SI-moderate to rapid	
GREEN	0811A	GLENDIVE HAVRE	SI-rapid if soils are wet enough	SI-rapid if soils are wet enough
GREEN	0831D	SAVAGE-FARNUP	CY-moderate to rapid if wet enough	SI-rapid if soils are wet enough
GREEN	0871B	TAMANEEN-DANVIERS	CY-moderate to rapid if wet enough	CY-moderate to rapid if wet enough
GREEN	0901A	LALUE	WM-rapid	
GREEN	0903A	HARLAKE LOSTRIVER	CY-moderate to rapid if soils are wet enough	SU-slow
GREEN	0905A	HARLAKE HAVRE	CY-moderate to rapid if soils are wet enough	CY-moderate to rapid if soils are wet enough
GREEN	1030D	MARVAN GERDRUM	CY-moderate to rapid if soils are wet enough	CP-slow
GREEN	R020E	HARLAKE-MARVAN	CY-moderate to rapid if soils are wet enough	CY-moderate to rapid if soils are w enough

NA - not applicable  
SU - saline upland  
TCY - thin clayey  
DC - dense clay

CC - coarse clay  
CY - clayey  
SWC - shallow clay  
SWG - shallow gravel

SOIL CODES  
RANGE SITE ABBREVIATIONS  
 GR - thin silty  
 TSI - claypan  
 CP - silty  
 SI - silty

SOIL CODES  
 RANGE - More than half is claypan with the remainder mostly dense clay sites.  
 RED - Wetland - overstory of conifers  
 WHITE - Mostly dense clay with minor amounts of claypan sites  
 GREEN - Bottomland soils which are mostly overflow (water) and clayey with minor amounts of claypan sites  
 BROWN - Dominated by silty sites with minor amounts of other range sites  
 BLUE - Soils derived from shale. Mainly clayey, thin clayey and shallow clay sites  
 YELLOW - More than half is silty with the remainder claypan or dense clay sites  
 MACTENTA - Interbedded sandstone and shale

## Appendix 11. Guidelines for Livestock Management.

**Lewistown Guideline #1:** Grazing will be managed in a manner that will maintain the proper balance between soil, water, and vegetation over time. This balance varies with location and management objectives, historic use, and natural fluctuations, but acceptable levels of use can be developed that are compatible with resource objectives.

**Lewistown Guideline #2:** Manage grazing to maintain watershed vegetation, species richness, and flood plain function. Maintain riparian vegetative cover and structure to trap sediments during run-off events to build streambanks, recharge aquifers, and dissipate flood energy. Grazing management should promote deep-rooted herbaceous vegetation to enhance streambank stability. Where non-native species are contributing to proper functioning conditions, they are acceptable. Where potential for palatable woody shrub species (willows, dogwood, etc.) exists, promote their growth and expansion within riparian zones.

**Lewistown Guideline #3:** Pastures and allotments will be managed based on their sensitivity and suitability for livestock grazing. Where determinations have not been previously documented, suitability for grazing will be determined by: topography, slope, distance from water, vegetation habitat types and soils types must be considered when determining grazing suitability. Unsuitable areas should be excluded from grazing.

**Lewistown Guideline #4:** Management strategies for livestock grazing will ensure that long-term resource capabilities can be sustained. End of season stubble heights, streambank moisture content, and utilization of herbaceous and woody vegetation are critical factors which must be evaluated in any grazing strategy. These considerations are essential to achieving long-term vegetation or stream channel objectives and should be identified on a site-specific basis and used as terms and conditions.

**Lewistown Guideline #5:** 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. Management approaches will be identified on a site-specific basis and implemented through terms and conditions. Caution should be used to avoid early spring grazing use when soils and streambanks are wet and susceptible to compaction and physical damage that occurs with animal trampling. Likewise, late summer and fall treatments in woody shrub communities should be monitored closely to avoid excessive utilization.

**Lewistown Guideline #6:** The development of springs and seeps or other projects affecting water and associated resources shall be designed to protect the ecological functions and processes of those sites.

**Lewistown Guideline #7:** Locate facilities (e.g., corrals, water developments) away from riparian-wetland areas.

**Lewistown Guideline #8:** When provided, supplemental salt and minerals should not be placed adjacent to watering locations or in riparian-wetland areas so not to adversely impact streambank stability, riparian vegetation, water quality, or other sensitive areas (i.e., key wildlife wintering areas). Salt and minerals should be placed in upland sites to draw livestock away from watering areas or other sensitive areas and to contribute to more uniform grazing distribution.

**Lewistown Guideline #9:** Noxious weed control is essential and should include: cooperative agreements, public education, and integrated pest management (mechanical, biological, chemical).

**Lewistown Guideline #10:** Livestock management should utilize practices such as those referenced by the NRCS published prescribed grazing technical guide to maintain, restore or enhance water quality.

**Lewistown Guideline #11:** Grazing management should maintain or improve habitat for federally listed threatened, or endangered, and sensitive plant and animals.

**Lewistown Guideline #12:** Grazing management should maintain or promote the physical and biological conditions to sustain native populations and communities.

**Lewistown Guideline #13:** Grazing management should give priority to native species. Non-native plant species should only be used in those situations where native seed is not readily available in sufficient quantities, where native plant species cannot maintain or achieve the standards, or where non-native plant species provide an alternative for the management and protection of native rangelands.

**Lewistown Guideline #14:** Allotment monitoring determines how on-going management practices are affecting the rangeland. To do so, the evaluations should be based on: 1. Measurable management objectives; 2. Permanent and/or repeatable monitoring locations; and, 3. Short-term and long-term data.

Appendix 12. Potential Natural Communities for Ecological Sites.

Ecological Site	Soils Series	Desirable Plant Community	Desirable Plant Species
Shallow Clay (SwC)	Dilts Lisam	80 % Grass 10 % Forbs 10 % Shrubs	Western Wheatgrass Plains Reedgrass Plains Muhly Green Needlegrass American Vetch Prairie Clovers Winterfat Nuttall Saltbush
Dense Clay (DC)	Vaeda Tealette Bowdoin Vanda	85 % Grass 5 % Forbs 10 % Shrubs	Western Wheatgrass Green Needlegrass Nutt Alkali Grass Cusick Bluegrass American Vetch Nuttalls Saltbush Big Sagebrush
Clayey (Cy)	Bascovey Julin Marvan Harlem Eithridge	85 % Grass 10 % Forbs 5 % Shrubs	Western Wheatgrass Green Needlegrass Thickspike Wheatgrass Bluebunch Wheatgrass Plains Muhly American Vetch Twogrooved Milkvetch Winterfat
Claypan (Cp)	Elfoam Thoeny Absher Weingart Gerdrum Creed	85 % Grass 10 % Forbs 5 % Shrubs	Western Wheatgrass Thickspike Wheatgrass Green Needlegrass Prairie Junegrass Needle & Thread Alkali Sacaton American Vetch Nuttall Saltbush Greasewood
Saline Upland (SU)	Nobe	65 % Grass 5 % Forbs 30 % Shrubs	Alkali Sacaton Western Wheatgrass Inland Saltgrass Nuttall Saltbush Greasewood
Saline Lowland (SL)	Nobe Absher	75 % Grass 5 % Forbs 20 % Shrubs	Alkali Sacaton Western Wheatgrass Nutt Alkali Grass Basin Wildrye Greasewood Nuttall Saltbush
Thin Clayey (Tcy)	Sunburst		Western Wheatgrass Green Needlegrass Bluebunch Wheatgrass Little Bluestem Plains Muhly
Shallow (Sw)	Cabbart	60 % Grass 10 % Forbs 5 % Shrubs 25 % Trees	Bluebunch Wheatgrass Western Wheatgrass Plains Muhly Green Needlegrass Needle & Thread Prairie Clover Winterfat Skunkbrush

Ecological Site	Soils Series	Desirable Plant Community	Desirable Plant Species
Overflow (OV)	Harlem Marvan Nishon Havre	80 % Grass 5 % Forbs 15 % Shrubs	Green Needlegrass Western Wheatgrass Basin Wildrye Slender Wheatgrass Canby Bluegrass Sedges American Vetch Two Groove Milkvetch Perennial Sunflower Silver Sagebrush Chokecherry Serviceberry
Wet Meadow (WM)	Dimmick		Slough Grass Spike Sedge Reeds
Silty (SI)	Kevin Scobey Phillips Telstad Joplin Yamac Evanston Havre Attewan	85 % Grass 10 % Forbs 5 % Shrubs	Western Wheatgrass Needle & Thread Green Needlegrass Plains Muhly Bluebunch Wheatgrass Little Bluestem American vetch Winter Vetch Silver Sage
Thin Silty (Tsi)	Hillon	75 % Grass 5 % Forbs 15 % Shrubs 5 % Trees	Western Wheatgrass Needle & Thread Green Needlegrass Plains Muhly Little Bluestem American Vetch Prairie Clover Winterfat
Sandy (SY)	Twilight	85 % Grass 10 % Forbs 5 % Shrubs	Western Wheatgrass Needle & Thread Prairie Sandreed Indian Ricegrass Little Bluestem Prairie Clover Skunkbush

## Appendix 13. Disposal Tracts

Parcel No.	Acres	Exchange	Acres
P-141	941.80		
P-174	120.00		
P-175	80.00		
P-176	40.00		
P-177	440.11	3rd phase CBSA	440.11
P-179	360.00	3rd phase CBSA	360.00
P-180	2,414.52	3rd phase CBSA	640.00
P-181	600.00		
P-182	815.23		
P-183	245.04		
	6,056.70		1,440.11

above table shows the public land within the Beauchamp Watershed that were identified for disposal by the approved  
 ips Resource Area Resource Management Plan (September, 1994). The table also shows if the disposal parcel is involved  
 ... a current land exchange. Parcels P-177, P-179 and a portion of P-180 are currently involved in the third phase of an exchange  
 with the Department of Natural Resource and Conservation (formerly know as the Department of State Lands) in support of the  
 Crow Boundary Settlement Act of 1994 (CBSA). On February 1, 1999 individuals holding grazing authorizations for parcels P-  
 177, P-179 and P-180 were notified about the CBSA project, given some background information and provided with a 2-year  
 prior notification that the grazing authorization may be canceled.