Billings Field Office
Greater Sage-Grouse
Approved Resource Management Plan

Attachment 5

From the Record of Decision and Approved Resource Management Plan Amendments for the Rocky Mountain Region including the Greater Sage-Grouse Sub-Regions of: Lewistown, North Dakota, Northwest Colorado, and Wyoming and the Approved Resource Management Plans for: Billings, Buffalo, Cody, HiLine, Miles City, Pompeys Pillar National Monument, South Dakota, and Worland

Volume II of II

Prepared by

US Department of the Interior

Bureau of Land Management

Billings Field Office, Montana

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BLM

MISSION STATEMENT

The BLM manages more than 245 million acres of public land, the most of any Federal agency. This land, known as the National System of Public Lands, is primarily located in 12 Western states, including Alaska. The BLM also administers 700 million acres of sub-surface mineral estate throughout the nation. The BLM's mission is to manage and conserve the public lands for the use and enjoyment of present and future generations under our mandate of multiple-use and sustained yield. In Fiscal Year 2014, the BLM generated $5.2 billion in receipts from public lands.

BLM/MT/PL-15/011+1610

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VOLUME II

APPENDICES

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ACRONYMS AND ABBREVIATIONS

	Full Phrase
AML	appropriate management level
AMP	allotment management plan
ANS	aquatic nuisance species
APD	application for permit to drill
AQRV	air quality related values
ARMP	Approved Resource Management Plan
BA	biological assessment
BiFO	Billings Field Office
BLM	US Department of the Interior Bureau of Land Management
BMPs	best management practices
BSU	biologically significant unit (GRSG)
CFR	Code of Federal Regulations
COA	conditions of approval
COT	Conservation Objectives Team (GRSG)
CSU	controlled surface use
CWPP	community wildfire protection plan
DFC	desired future condition
DOI	Department of the Interior
EA	environmental assessment
EIS	environmental impact statement
EO	Executive Order
ESA	Endangered Species Act of 1973
ESR	emergency stabilization and rehabilitation
FEIS	final environmental impact statement
FLPMA	Federal Land Policy and Management Act
FRCC	fire regime condition class
GHMA	general habitat management area(s) (GRSG)
GRSG	Greater Sage-Grouse
HMA	herd management area
HMAP	herd management area plan
IPM	integrated pest management
LBA	lease by application
LCNHT	Lewis and Clark National Historic Trail
LN	lease notice
LWC	lands with wilderness characteristics
MDEQ	Montana Department of Environmental Quality
MIST	minimum impact suppression tactics
MLP	master leasing plan
MSIP	Montana State Implementation Plan
MTFWP	Montana Fish, Wildlife, and Parks
NEPA	National Environmental Policy Act of 1969
NHPA	National Historic Preservation Act
NHT	National Historic Trail

ACRONYMS AND ABBREVIATIONS *(continued)*

	Full Phrase
NM	National Monument
NOI	notice of intent
NRCS	US Dept. of Agriculture, Natural Resources Conservation Service
NRHP	National Register of Historic Places
NSO	no surface occupancy
NWSRS	National Wild and Scenic River System
OHV	off-highway vehicle
OSV	over-snow vehicle
PAC	priority areas for conservation
PFC	proper functioning condition
PFYC	potential fossil yield classification
PHMA	priority habitat management area(s) (GRSG)
PMWHR	Pryor Mountain Wild Horse Range
PPMN	Pompeys Pillar National Monument
R&PP	Recreation and Public Purposes Act
RFD	reasonably foreseeable development
RHMA	restoration habitat management area(s) (GRSG)
RMP	resource management plan
RMZ	recreation management zone
RNA	research natural area
ROD	record of decision
ROW	right-of-way
SFA	sagebrush focal area(s) (GRSG)
SRMA	special recreation management area
SRP	special recreation permit
SSS	special status species
T&E	threatened and endangered
TCP	traditional cultural property
TL	timing limitation
TMA	travel management area
USC	United States Code
USFS	US Department of Agriculture, Forest Service
USFWS	US Department of the Interior, Fish and Wildlife Service
USGS	US Department of the Interior, Geological Service
VRI	visual resource inventory
VRM	visual resource management
WAFWA	Western Association of Fish and Wildlife Agencies
WMA	wildlife management area
WSA	wilderness study area
WSR	wild and scenic river
WUI	wildland urban interface
YCT	Yellowstone cutthroat trout

Appendix N:
Special Recreation Management Areas (SRMA) and Extensive Recreation Management Areas (ERMA) Tables

N. SRMA and ERMA Tables

Special Recreation Management Areas

Four Dances Natural Area and ACEC Special Recreation Management Area		
Management Objectives:	• Provide dispersed recreation experiences accessible from Billings and the local community. • Provide wildlife habitat • Balance the widest range of beneficial uses with the least amount of degradation, possible without risking health and safety, and with a minimum of other undesirable or unintended consequences on other resources. • Protect historic, cultural and scenic values (Historic Will James Cabin)	
Outcomes		
Primary Activities: • Hiking • Running • Cross country skiing • Bird watching • Picnicking • Fishing • Exercising pets • Scenery and wildlife viewing • Yellowstone River access	**Experiences:** **Enjoying:** • Solitude • Family Recreation • Fishing • Exercise • Scenery • Escaping everyday responsibilities for awhile • Viewing historic building (Will James Cabin) • having access to close-to-home outdoor amenities • Appreciation of historic and pre-historic cultural resources.	**Benefits:** **Personal:** • Improved physical fitness • Restored mind from unwanted stress • Greater sense of overall wellness • Enhanced cultural resource stewardship ethic **Household and Community:** • Improved quality of life • Greater awareness of and appreciation for our cultural heritage • Greater appreciation for the area and outdoor-oriented lifestyle • Involvement in recreation and other land use decisions • Increased desirability as a place to live or retire. **Economic:** • Positive contributions to local-regional economic stability • Increased work productivity • Reduced health maintenance costs **Environmental:** • Increased resource stewardship and protection by communities

Four Dances Natural Area and ACEC Special Recreation Management Area

Setting Prescriptions

Physical:

- The area is Rural. The surrounding character of the landscape is considerably modified (20-40 acre ranchettes, communications towers and two private in-holdings within the boundaries). The most natural area occurs along the western edge of the SRMA with views of the urban/industrial core area of Billings easily accessible. The historic/rustic Will James cabin lies on the northern edge. Facilities include an unpaved parking lot, vault toilet and kiosk. One caretakers' residence could be allowed but could not disturb more than ½ acre nor change the VRM, Recreational Opportunity Spectrum (ROS) or ACEC Scenic values.

Social:

- Mostly small groups of 1-5 with occasional large group activities including Native American ceremonies.
- Could encounter 1-10 persons per day on weekends and 1-5 persons during week days.

Administrative:

- Day use only
- Closed to: horseback riding
- Closed to atvs/snowmobiles
- Closed to fireworks discharge
- OHV use limited to administrative use only
- Closed to hang gliding
- Closed to rock climbing
- Closed to paint ball
- Closed to discharging of firearms
- Closed to exercising pets off leash
- Closed to driving off road/cross country.
- Compliance with terms of conservation easments

Management Actions and Allowable Use Decisions

Recreation and Visitor Services:

- Facilitate targeted recreation opportunities:
  - Implement current travel management decisions.
- Maintain setting:
  - Developments would be managed to VRM class III
- Health, safety, resource protection, user conflict resolution
  - Closed to OHV
  - Closed to equestrian use
  - Closed to rock climbing
  - Closed to hang gliding
  - No discharge of firearms
  - No fuel-wood collection
  - No fireworks
  - The area may be closed during high fire danger
- Special Recreation Permit criteria:
  - Archery hunting may be allowed, if deemed necessary for wildlife population control by MTFWP. (An authorization from BLM would also be required).
  - Large Native American events for traditional uses may be allowed under BLM authorization, if not in conflict with basic management
  - Other permits considered if not in conflict with basic management.

Other Programs:

- Surface Use Controls:
  - Withdrawn from location or entry under US mining laws for 20 years.
  - No geophysical exploration
  - Closed to mineral leasing, exploration and development
  - Closed to mineral deposit
- Range Management:
  - Grazing would only be allowed to meet other resource objectives
- Fire and Fuels Management:
  - May be subject to closure during high fire danger
  - May be subject to fire and fuels management activities to restore and maintain forest health, reduce fire hazards, and maintain wildlife habitat.
- Visual Resource Management:
  - Manage as VRM class II
- Cultural Resource Management
  - Large Native American events for traditional uses may be allowed under BLM authorization, if not in conflict with basic management

Four Dances Natural Area and ACEC Special Recreation Management Area

Implementation Decisions

Management:	**Administrative:**	**Information and Education:**	**Monitoring:**
• A recreation area management plan (RAMP) will be developed. • The Will James cabin will be maintained according t the Secretary of Interior Standards • Develop system of multiple use trails. (Bicycle, foot, X-C ski) • Pets off-leash allowed in outside of concentrated use area (parking lot and restroom/trailhead.	• All motorized/mechanized use limited to specifically administrative use	• A comprehensive sign plan including information kiosks and route designation would be developed and implemented as part of the RAMP for this SRMA.	• Assure objectives are being met and prescribed settings are being maintained. • Monitor implemented actions and evaluate.

Sundance Lodge Special Recreation Management Area

Management Objectives:	Manage to minimize user conflicts and impacts to resources while providing opportunities for non-motorized activities. • Provide wildlife habitat • Protect historic, cultural, and scenic values. • Balance the widest range of beneficial uses with the least amount of degradation, possible without risking health and safety, and with a minimum of other undesirable or unintended consequences on other resources. • Provide dispersed recreation experiences accessible from Billings and surrounding local communities.

Outcomes

Primary Activities:	**Experiences:**	**Benefits:**
• Fishing • Hunting (archery and shotgun) • Canoeing • Hiking • Running • Cross country skiing • Bird watching • Horseback riding • Picnicking • Exercising pets off leash • Access to the Clark's Fork of the Yellowstone River • Wildlife viewing	**Enjoying:** • Solitude • Family Recreation • Fishing • Canoeing • Exercise • Exercising pets off leash • Scenery • Escaping everyday responsibilities for awhile • Having access to close-to-home outdoor amenities • Appreciation of historic and pre-historic cultural resources.	**Personal:** • Improved physical fitness • Restored mind from unwanted stress • Greater sense of overall wellness • Enhanced cultural resource stewardship ethic **Household and Community:** • Improved quality of life • Greater awareness of and appreciation for our cultural heritage • Greater appreciation for the area and outdoor-oriented lifestyle • Involvement in recreation and other land use decisions • Increased desirability as a place to live or retire. **Economic:** • Positive contributions to local-regional economic stability • Increased work productivity • Reduced health maintenance costs **Environmental:** • Increased resource stewardship and protection by communities

Sundance Lodge Special Recreation Management Area

Setting Prescriptions

Physical:

- The area has a "Rural Recreation" Rural Recreation Opportunity Spectrum management direction.
- The BLM maintains a storage barn/shop and equipment and supplies storage yard.
- The public use area contains a parking lot, trailhead kiosk, Block Management sign-in station, vault toilet and barriers and fences to exclude OHVs from the trail system. Open area are subject cultivation to provide wildlife habitat and maintain land use pattern.

Social:

- Mostly small groups of 1-5 with occasional large group activities including Native American ceremonies.
- Could encounter 1-10 persons per day on weekends and 1-5 persons during week days.

Administrative:

- OHV use including bicycles limited to administrative and authorized use only.
- Closed to discharge of rifles and pistols
- Closed to paintball activities
- Permanent tree stands prohibited
- Day use only
- Open campfires only in designated sites.
- Closed to fireworks discharge
- Closed to driving off road/cross country.

Management Actions and Allowable Use Decisions

Recreation and Visitor Services:

- Facilitate targeted recreation opportunities:
  - Cooperative management with Pheasants Forever facilitates bird populations and hunting
  - Cooperative management with Montana Fish Wildlife and Parks as a Block Management area close to urban populations.
- Maintain setting:
  - Day use only
- Health, safety, resource protection, user conflict resolution
  - OHV use including bicycles limited to administrative and authorized use only.
  - Closed to discharge of rifles and pistols
  - Closed to paintball activities
  - Permanent tree stands prohibited
  - May be subject to closure during high fire danger
- Special Recreation Permit criteria:
  - Use of shotguns, driving off highway vehicles, overnight camping and competitive events require approval from the Billings Field Office Manager

Other Programs:

Surface Use Controls:

- BLM does not have mineral rights for Sundance Lodge. NEPA for future development could address access routes, mining/drilling locations, but cannot deny access.
  - A surface use plan must be approved prior to permitting any surface disturbing activities.
- Range Management:
  - Grazing may be authorized for the purposes of weed control, vegetative management to reduce hazardous fuels, or to provide short-grass habitat and habitat diversity for wildlife.
- Fire and Fuels Management:
  - Fireworks are prohibited
  - Aggressive fire suppression would be used
  - Open campfires may be allowed in designated sites only.
  - Subject to fire and fuels management activities to restore and maintain forest health, reduce fire hazards, and maintain wildlife habitat.
- Visual Resource Management:
  - Managed as a VRM Class II criteria.

Sundance Lodge Special Recreation Management Area

Implementation Decisions

Management:

- A recreation area management plan (RAMP) will be developed.
- Prescribed fire, livestock grazing and vegetative thinning would be used to reduce hazardous fuels
- Parking lot may be modified
- Installation of a vault toilet –
- Use of BMPs
- Use of shotguns, driving off highway vehicles, overnight camping and competitive events require approval from the Billings Field Office Manager
- In-holdings may be eliminated if an opportunity for land tenure consolidation is presented.
- Farming may continue under the Cooperative habitat Agreement
- Area is available for environmental education programs.

Administrative:

- Bee keeping will require a permit.
- Farming may continue on cultivated areas
- Continue the agreement with Pheasants Forever and Montana Department of Fish Wildlife and Parks.
- Developments may include a parking lot, fully accessible toilet, a boat ramp
- Harvest of dead and down material will be permitted for personal use only if the material creates a safety/fire hazard or obstructs a trail, road, or parking area.
- Any visual alterations must meet VRM Class III criteria.
- Right away avoidance area

Information and Education:

- interpretive signs
- meeting facility

Monitoring:

- A trespass prevention, detection and abatement program will be developed consistent with laws and land use planning.

Shepherd Ah-Nei Special Recreation Management Area – OHV Use Area (RMZ 1) (976 acres)

Management Objectives:	**The objective of area management is to continue to provide opportunities for non-competitive motorized or mechanized trail riding for all ability levels local to the most populous urban area in Montana.** This area meets the criteria for unique value as the only lands within the BIFO managed to provide specifically designated ATV trails. It meets the importance criteria for its close proximity the Montana's most populous urban area. (RMZ 1) has a developed parking area and OHV trailhead and provides access to over 50 miles of designated OHV trails.

Outcomes

Primary Activities:

- OHV trail riding,
- mountain biking,

Experiences:

- Developing skills and abilities
- Testing endurance
- Enjoying risk-taking adventure
- Enjoying the closeness of friends and family
- Escaping everyday responsibilities for awhile
- Enjoying having access to close-to-home outdoor amenities

Benefits:

Personal:

- Improved physical fitness
- Better health maintenance
- Restored mind from unwanted stress
- Greater cultivation of outdoor-oriented lifestyle
- Improved outdoor knowledge, skills, and self-confidence
- Greater environmental awareness and sensitivity
- More well-informed and responsible visitors.

Household and Community:

- Involvement in recreation and other land use decisions
- Improved cultivation of aesthetic appreciation for the area and an outdoor-oriented lifestyle.
- Heightened sense of community satisfaction.

Economic:

- Positive contributions to local-regional economic stability.
- Increased desirability as a place to live or retire.
- Enhanced ability for visitors to find areas providing wanted recreation experiences and benefits.
- Increased local tax revenue from visitors.

Environmental:

- Greater retention of distinctive natural landscape features.
- Increased resource stewardship and protection by users

Shepherd Ah-Nei Special Recreation Management Area – OHV Use Area (RMZ 1) (976 acres)

Setting Prescriptions

Physical: Front country.

- mostly natural in appearance with structures limited to natural surface trails, fences, cattle guards, and stock tank/ troughs. Signs limited to route designations. Closed travel routes are blocked with buck and pole barricades.

Social: Front country.

- Group sizes less than 10, typically 5 or less per group.
- Could encounter up to 25-50 persons per day on weekends, +/- 10 persons on weekdays.

Administrative: Front country.

- Rules are posted and use may be temporarily restricted due to permitted events or resource concerns due to weather.
- Area accommodates multiple-use including grazing, OHV.
- OHVs restricted to designated routes per travel management plan.
- Day use only.
- Target shooting prohibited, hunting allowed.

Management Actions and Allowable Use Decisions

Recreation and Visitor Services:

- Facilitate targeted recreation opportunities:
  - Manage to provide OHV riding opportunities for all levels of non-competitive riding vehicles 50 inches wide or less.
  - Hunting allowed in conformance with MTFWP regulations.
  - Implement current travel management decisions.
- Maintain setting:
  - Restrict facilities development to OHV Use Area Parking area unless modified by RAMP.
  - Use on roads or certain non-motorized activities may be temporarily, seasonally or permanently curtailed as a result of identified emergent conditions or excessive resource damage.
- Health, safety, resource protection, user conflict resolution:
  - Close and restore all non-designated trails
  - Trapping prohibited.
  - No wood cutting.
  - No target shooting.
- Special Recreation Permit criteria:
  - Applications for SRPs may be delayed or denied and activities may be relocated when environmental analysis identifies unacceptable levels of change to resources or conflicts with other users that would result from permitted activities.
  - Until completion of the RAMP SRP applications will be considered on an individual basis.

Other Programs:

- Surface Use Controls:
- Oil and gas leasing, exploration and development would be allowed with an NSO stipulation
- Range Management:
- Surface disturbing activities related to facility development and maintenance would be subject to mitigation guidelines.
- Fire and Fuels Management:
- Area may be subject to fire and fuels management activities to restore and maintain forest health, reduce fire hazards, and maintain wildlife habitat
- Visual Resource Management:
  - Manage as Class II in RMZ 2 (3,664 acres), Class III in RMZ 1 (976 acres (OHV area))

Shepherd Ah-Nei Special Recreation Management Area – OHV Use Area (RMZ 1) (976 acres)

Implementation Decisions

Management:	Administrative:	Information and Education:	Monitoring:
• A recreation area management plan (RAMP) will be developed. • Specific SRP criteria will be developed in the RAMP.	• Designated uses for existing trails. • All motorized/mechanized use limited to specifically designated trails & roads only.	• A comprehensive sign plan including information kiosks and route designation would be developed and implemented as part of the RAMP for this SRMA.	• Assure objectives are being met and prescribed settings are being maintained. • Monitor implemented actions and evaluate.

Shepherd Ah-Nei Special Recreation Management Area – Equestrian/Non-Motorized Use Area (RMZ 2) (3,664 acres)

Management Objectives:	The objective of area management is to continue to provide and enhance opportunities for mountain biking equestrian riding, and hiking local to the most populous urban area in Montana. This area meets the criteria for unique value as the only lands within the BIFO with an extensive and existing system and use. It meets the importance criteria for its close proximity the Montana's most populous urban area. (RMZ 2) has a developed parking area and equestrian trailhead and provides access to over XXX acres of open ponderosa pine savannah with trails along previously existing closed motor vehicle routes

Outcomes

Primary Activities:

- Equestrian trail and cross country riding.
- Hiking
- Mountain biking
- Hunting

Experiences:

- Developing skills and abilities
- Testing endurance
- Enjoying risk-taking adventure
- Enjoying the closeness of friends and family
- Escaping everyday responsibilities for awhile
- Enjoying having access to close-to-home outdoor amenities

Benefits:

- Personal:
  - Improved physical fitness
  - Better health maintenance
  - Restored mind from unwanted stress
  - Greater cultivation of outdoor-oriented lifestyle
  - Improved outdoor knowledge, skills, and self-confidence
  - Greater environmental awareness and sensitivity
  - More well-informed and responsible visitors
- Household and Community:
  - Involvement in recreation and other land use decisions
  - Improved cultivation of aesthetic appreciation for the area and an outdoor-oriented lifestyle.
  - Heightened sense of community satisfaction
- Economic:
  - Positive contributions to local-regional economic stability.
  - Increased desirability as a place to live or retire.
  - Enhanced ability for visitors to find areas providing wanted recreation experiences and benefits.
  - Increased local tax revenue from visitors
- Environmental:
  - Greater retention of distinctive natural landscape features.
  - Increased resource stewardship and protection by users

Setting Prescriptions

Physical: Back and middle country.

- Mostly natural in appearance with structures limited to fences, cattle guards, and stock tank/ troughs.

Social: Middle country.

- Group sizes less than 10, typically 5 or less per group.
- Could encounter up to 10-15 persons per day on weekends, +/- 5 persons on weekdays.

Administrative: Front and middle country.

- Rules are posted and use may be temporarily restricted due to permitted events or resource concerns due to weather.
- Area accommodates multiple-use including grazing, OHV.
- OHVs restricted to designated routes per travel management plan.
- Day use only.
- Target shooting prohibited, hunting allowed.

Shepherd Ah-Nei Special Recreation Management Area – Equestrian/Non-Motorized Use Area (RMZ 2) (3,664 acres)

Management Actions and Allowable Use Decisions

Recreation and Visitor Services:

- Facilitate targeted recreation opportunities:
  - Hunting allowed in conformance with MTFWP regulations.
  - Implement current travel management decisions.
- Maintain setting:
  - Restrict facilities development to Entrance Parking Loop area unless modified by RAMP.
  - Use on roads or certain non-motorized activities may be temporarily, seasonally or permanently curtailed as a result of identified emergent conditions or excessive resource damage.
  - Continue cooperation with the Backcountry Horseman group and other interested parties to protect and enhance riding experiences.
- Health, safety, resource protection, user conflict resolution:
  - Close and restore all non-designated trails, improve designated trails to ensure they meet current management standards
  - Trapping prohibited.
  - No wood cutting.
  - No target shooting.
- Special Recreation Permit criteria:
  - Applications for SRPs may be delayed or denied and activities may be relocated when environmental analysis identifies unacceptable levels of change to resources or conflicts with other users that would result from permitted activities.
  - Until completion of the RAMP SRP applications will be considered on an individual basis.

Other Programs:

- Surface Use Controls:
  - Oil and gas leasing, exploration and development would be allowed with an NSO stipulation
- Range Management:
  - Surface disturbing activities related to facility development and maintenance would be subject to mitigation guidelines.
- Fire and Fuels Management:
  - Area may be subject to fire and fuels management activities to restore and maintain forest health, reduce fire hazards, and maintain wildlife habitat
- Visual Resource Management:
  - Manage as Class II in RMZ2 (3,664 acres), Class III in RMZ 1 (976 acres (OHV area))

Implementation Decisions

Management:

- A recreation area management plan (RAMP) will be developed.
- Specific SRP criteria will be developed in the RAMP.
- Non-motorized, mechanized or un-mechanized multiple use trails may be developed as part of implementation level planning through a Recreation Area Management Plan (RAMP)

Administrative:

- Designated uses for existing trails.
- All motorized/mechanized use limited to specifically administrative use, including grazing permittees engaged in grazing maintenance work.

Information and Education:

- A comprehensive sign plan including information kiosks and route designation would be developed and implemented as part of the RAMP for this SRMA.

Monitoring:

- Assure objectives are being met and prescribed settings are being maintained.
- Monitor implemented actions and evaluate.

Acton Special Recreation Management Area (3,697 acres)

Management Objectives:	**Objectives for the SRMA are to provide general unconfined recreational opportunities while protecting resources and controlling conflicts between user groups.** This area meets the criteria for importance as a large block of undeveloped land proximate to Montana's most populous urban area. It provides opportunities for hiking, mountain biking, big game and upland bird hunting, and limited primitive camping. The area topography provides for expansive views of undeveloped/rural landscapes as well as ample visual screening allowing for use by multiple individuals or groups without significant disturbance or conflict.

Outcomes

Primary Activities:

- OHV on roads,
- hiking,
- wildlife watching
- hunting for upland birds and big game,
- mountain bike riding,
- camping,
- paint-ball games.
- equestrian use
- Extreme Sports

Experiences:

- Enjoying frequent exercise
- Access to a range of physical challenge, including high risk.
- Escaping everyday responsibilities for a while
- Enjoying easy access to diverse recreation
- Developing skills, abilities and self-confidence
- Enjoying nature
- Autonomy
- Socializing
- Achievement
- Learning
- Escape pressures

Benefits:

- Personal:
  - Improved physical fitness
  - Better health maintenance
  - Restored mind from unwanted stress
  - Greater cultivation of outdoor-oriented lifestyle
  - Improved outdoor knowledge, skills, and self-confidence
  - Greater environmental awareness and sensitivity
  - More well-informed and responsible visitors
- Household and Community:
  - Involvement in recreation and other land use decisions
  - Improved cultivation of aesthetic appreciation for the area and an outdoor-oriented lifestyle.
  - Heightened sense of community satisfaction
- Economic:
  - Positive contributions to local-regional economic stability.
  - Increased desirability as a place to live or retire.
  - Enhanced ability for visitors to find areas providing wanted recreation experiences and benefits.
  - Increased local tax revenue from visitors
- Environmental:
  - Greater retention of distinctive natural landscape features.
  - Increased resource stewardship and protection by users

Acton Special Recreation Management Area (3,697 acres)

Setting Prescriptions

Physical: Back and middle country.

- Mostly natural in appearance with structures limited to fences, cattle guards, and stock tank/ troughs. Signs limited to route designations. Closed travel routes are blocked with buck and pole barricades. Dispersed campsites located throughout area receive light use.

Social: Middle Country.

- Group sizes less than 10, typically 3 or less per group.
- Could encounter up to 20-30 persons per day on weekends, +/- 5 persons on weekdays.

Administrative: Backcountry.

- Rules are posted and use may be temporarily restricted due to permitted events or resource concerns due to weather.
- Area accommodates multiple-use including grazing.
- OHVs restricted to designated routes per travel management plan.
- This area can be accessed in the front country area by ordinary highway vehicles; middle and backcountry areas are accessible by 4-wheel drive and ATVs UTVs and motorcycles.

Management Actions and Allowable Use Decisions

Recreation and Visitor Services:

- Facilitate targeted recreation opportunities:
  - Hunting allowed in conformance with MTFWP regulations.
  - Implement current travel management decisions.
- Maintain setting:
  - Restrict facilities development to Entrance Parking Loop area unless modified by RAMP.
  - Use on roads or certain non-motorized activities may be temporarily, seasonally or permanently curtailed as a result of identified emergent conditions or excessive resource damage.
- Health, safety, resource protection, user conflict resolution:
  - Close and restore all non-designated trails, improve designated trails to meet current management standards
  - Trapping prohibited.
  - No wood cutting.
  - No target shooting.
- Special Recreation Permit criteria:
  - Applications for SRPs may be delayed or denied and activities may be relocated when environmental analysis identifies unacceptable levels of change to resources or conflicts with other users that would result from permitted activities.
  - Until completion of the RAMP SRP applications will be considered on an individual case-by-case basis.
- Develop mountain biking opportunities for a range of skill levels. Include corss-country and gravity fed (downhill) trails with appropriate facilities.

Other Programs:

- Surface Use Controls:
  - Oil and gas leasing, exploration and development would be allowed with an NSO stipulation
- Range Management:
  - Surface disturbing activities related to facility development and maintenance would be subject to mitigation guidelines.
- Fire and Fuels Management:
  - Area may be subject to fire and fuels management activities to restore and maintain forest health, reduce fire hazards, and maintain wildlife habitat
- Visual Resource Management:
  - Manage as Class II in back and middle country, Class III in front country area.

Yellowstone River Corridor Special Recreation Management Area (6959 acres surface and minerals) – Main Stem River, RMZ 1

Management Objectives:	The goal is to manage these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes. • Provide wildlife habitat • Protect historic, cultural, and scenic values. • Balance the widest range of beneficial uses with the least amount of degradation, possible without risking health and safety, and with a minimum of other undesirable or unintended consequences on other resources. • Provide dispersed recreation experiences. The SRMA will be managed to protect and preserve the remarkable scenic, recreational, geological, fish and wildlife, historic, cultural, and other values along the longest free-flowing river in the lower 48 states.

Outcomes

Primary Activities:	**Experiences:**	**Benefits:**
• Boating • Fishing • Hiking • Hunting • Sightseeing • Viewing wildlife	• Access to a range of physical challenge • Escaping everyday responsibilities for a while • Enjoying easy access to diverse recreation • Developing skills, abilities and self-confidence • Enjoying nature • Autonomy • Socializing	• Personal: – Improved physical fitness – Better health maintenance – Restored mind from unwanted stress – Greater cultivation of outdoor-oriented lifestyle – Improved outdoor knowledge, skills, and self-confidence – Greater environmental awareness and sensitivity – More well-informed and responsible visitors • Household and Community: – Involvement in recreation and other land use decisions – Improved cultivation of aesthetic appreciation for the area and an outdoor-oriented lifestyle. – Heightened sense of community satisfaction • Economic: – Positive contributions to local-regional economic stability. – Increased desirability as a place to live or retire. – Enhanced ability for visitors to find areas providing wanted recreation experiences and benefits. – Increased local tax revenue from visitors • Environmental: – Greater retention of distinctive natural landscape features. – Increased resource stewardship and protection by users

Yellowstone River Corridor Special Recreation Management Area (6959 acres surface and minerals) – Main Stem River, RMZ 1

Setting Prescriptions

Physical: Rural to Front country.

- Within ½ mile of paved/primary roads and highways.
- Character of the natural landscape considerably modified (agriculture, residential or industrial).
- Modern facilities such as campgrounds, group shelters, boat launches, and occasional exhibits

Social: Front country.

- 15-29 encounters/day off travel routes (e.g., campgrounds) and 30 or more encounters/day on travel routes.
- 13-25 people per group.
- Small areas of alteration prevalent. Surface vegetation gone with compacted soils observed. Sounds of people regularly heard.

Administrative: Front country.

- Two-wheel drive vehicles predominant, but also four wheel drives and non-motorized, mechanized use.
- Basic maps, staff infrequently present (e.g. seasonally, high use periods) to provide on-site assistance
- Basic user regulations at key access points. Minimum use restrictions

Management Actions and Allowable Use Decisions

Recreation and Visitor Services:

- Facilitate targeted recreation opportunities:
  - Hunting allowed in conformance with MTFWP regulations.
  - Implement current travel management decisions.
- Maintain setting:
  - Restrict facilities development to Entrance Parking Loop area unless modified by RAMP.
  - Use on roads or certain non-motorized activities may be temporarily, seasonally or permanently curtailed as a result of identified emergent conditions or excessive resource damage.
- Health, safety, resource protection, user conflict resolution:
  - Close and restore all non-designated trails, improve designated trails to meet management standards
  - Trapping by permit only.
  - No wood cutting.
  - No target shooting.
- Special Recreation Permit criteria:
  - Until completion of the RAMP SRP applications will be considered on an individual case-by-case basis. The BLM will provide SRPs consistent with 43 CFR 2932.26 and the goal of managing these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes.

Other Programs:

- Surface Use Controls:
  - Oil and gas leasing, exploration and development would be allowed with an NSO stipulation
- Range Management:
  - Surface disturbing activities related to facility development and maintenance would be subject to mitigation guidelines.
- Fire and Fuels Management:
  - Area may be subject to fire and fuels management activities to restore and maintain forest health, reduce fire hazards, and maintain wildlife habitat
- Visual Resource Management:
  - Manage as Class II in back and middle country, Class III in front country area.

Yellowstone River Corridor Special Recreation Management Area (6959 acres surface and minerals) – Main Stem River, RMZ 1

Implementation Decisions

Management:	**Administrative:**	**Information and Education:**	**Monitoring:**
• A recreation area management plan (RAMP) will be developed. • Specific SRP criteria will be developed in the RAMP. • Non-motorized, mechanized or un-mechanized multiple use trails may be developed as part of implementation level planning through a Recreation Area Management Plan (RAMP)	• Designated uses for existing trails. • All motorized/mechanized use limited to specifically designated trails & roads only.	• A comprehensive sign plan including information kiosks and route designation would be developed and implemented as part of the RAMP for this SRMA.	• Assure objectives are being met and prescribed settings are being maintained. • Monitor implemented actions and evaluate.

Yellowstone River Corridor Special Recreation Management Area – Clark's Fork of the Yellowstone, RMZ 2 (3182 acres, surface and minerals)

Management Objectives:	The goal is to manage these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes. • Provide wildlife habitat • Protect historic, cultural, and scenic values. • Balance the widest range of beneficial uses with the least amount of degradation, possible without risking health and safety, and with a minimum of other undesirable or unintended consequences on other resources. • Provide dispersed recreation experiences. The SRMA will be managed to protect and preserve the remarkable scenic, recreational, geological, fish and wildlife, historic, cultural, and other values along the longest free-flowing river in the lower 48 states.

Outcomes

Primary Activities:	**Experiences:**	**Benefits:**
• Boating • Fishing • Hiking • Hunting • Sightseeing • Viewing wildlife	• Access to a range of physical challenge • Escaping everyday responsibilities for a while • Enjoying easy access to diverse recreation • Developing skills, abilities and self-confidence • Enjoying nature • Autonomy • Socializing	• Personal: – Improved physical fitness – Better health maintenance – Restored mind from unwanted stress – Greater cultivation of outdoor-oriented lifestyle – Improved outdoor knowledge, skills, and self-confidence – Greater environmental awareness and sensitivity – More well-informed and responsible visitors • Household and Community: – Involvement in recreation and other land use decisions – Improved cultivation of aesthetic appreciation for the area and an outdoor-oriented lifestyle. – Heightened sense of community satisfaction • Economic: – Positive contributions to local-regional economic stability. – Increased desirability as a place to live or retire. – Enhanced ability for visitors to find areas providing wanted recreation experiences and benefits. – Increased local tax revenue from visitors • Environmental: – Greater retention of distinctive natural landscape features. – Increased resource stewardship and protection by users

Yellowstone River Corridor Special Recreation Management Area – Clark's Fork of the Yellowstone, RMZ 2 (3182 acres, surface and minerals)

Setting Prescriptions

Physical: Rural to Front country.

- Within ½ mile of paved/primary roads and highways.
- Character of the natural landscape considerably modified (agriculture, residential or industrial).
- Modern facilities such as campgrounds, group shelters, boat launches, and occasional exhibits

Social: Front country.

- 15-29 encounters/day off travel routes (e.g., campgrounds) and 30 or more encounters/day on travel routes.
- 13-25 people per group.
- Small areas of alteration prevalent. Surface vegetation gone with compacted soils observed. Sounds of people regularly heard.

Administrative: Front country.

- Two-wheel drive vehicles predominant, but also four wheel drives and non-motorized, mechanized use.
- Basic maps, staff infrequently present (e.g. seasonally, high use periods) to provide on-site assistance
- Basic user regulations at key access points. Minimum use restrictions

Management Actions and Allowable Use Decisions

Recreation and Visitor Services:

- Facilitate targeted recreation opportunities:
  - Hunting allowed in conformance with MTFWP regulations.
  - Implement current travel management decisions.
- Maintain setting:
  - Restrict facilities development to Entrance Parking Loop area unless modified by RAMP.
  - Use on roads or certain non-motorized activities may be temporarily, seasonally or permanently curtailed as a result of identified emergent conditions or excessive resource damage.
- Health, safety, resource protection, user conflict resolution:
  - Close and restore all non-designated trails, improve designated trails to management standards
  - Trapping by permit only.
  - No wood cutting.
  - No target shooting.
- Special Recreation Permit criteria:
  - Until completion of the RAMP SRP applications will be considered on an individual basis. The BLM will provide SRPs consistent with 43 CFR 2932.26 and the goal of managing these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes.

Other Programs:

- Surface Use Controls:
  - Oil and gas leasing, exploration and development would be allowed with an NSO stipulation
- Range Management:
  - Surface disturbing activities related to facility development and maintenance would be subject to mitigation guidelines.
- Fire and Fuels Management:
  - Area may be subject to fire and fuels management activities to restore and maintain forest health, reduce fire hazards, and maintain wildlife habitat
- Visual Resource Management:
  - Manage as Class II in back and middle country, Class III in front country area.

Yellowstone River Corridor Special Recreation Management Area – Clark's Fork of the Yellowstone, RMZ 2 (3182 acres, surface and minerals)

Implementation Decisions

Management:	**Administrative:**	**Information and Education:**	**Monitoring:**
• A recreation area management plan (RAMP) will be developed. • Specific SRP criteria will be developed in the RAMP. • Non-motorized, mechanized or un-mechanized multiple use trails may be developed as part of implementation level planning through a Recreation Area Management Plan (RAMP)	• Designated uses for existing trails. • All motorized/mechanized use limited to specifically designated trails & roads only.	• A comprehensive sign plan including information kiosks and route designation would be developed and implemented as part of the RAMP for this SRMA.	• Assure objectives are being met and prescribed settings are being maintained. • Monitor implemented actions and evaluate

Mill Creek/Bundy Special Recreation Management Area

Management Objectives:	The goal is to manage these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes concurrent with other management priorities. • Provide wildlife habitat • Protect historic, cultural, and scenic values. • Balance the widest range of beneficial uses with the least amount of degradation, possible without risking health and safety, and with a minimum of other undesirable or unintended consequences on other resources. • Provide dispersed recreation experiences.

Outcomes

Primary Activities:	**Experiences:** **Enjoying:**	**Benefits:** **Personal:**
• Hiking • Running • Cross country skiing • Bird watching • Picnicking • Fishing • Exercising pets • Scenery and wildlife viewing • Yellowstone River access	• Solitude • Family Recreation • Fishing • Exercise • Scenery • Escaping everyday responsibilities for awhile • having access to close-to-home outdoor amenities	• Improved physical fitness • Restored mind from unwanted stress • Greater sense of overall wellness • Enhanced cultural resource stewardship ethic **Household and Community:** • Improved quality of life • Greater awareness of and appreciation for our natural landscapes • Greater appreciation for the area and outdoor-oriented lifestyle • Involvement in recreation and other land use decisions • Increased desirability as a place to live or retire. **Economic:** • Positive contributions to local-regional economic stability • Increased work productivity • Reduced health maintenance costs **Environmental:** • Increased resource stewardship and protection by communities

Setting Prescriptions

Physical:	**Social:**	**Administrative:**
• The area is Rural. The surrounding character of the landscape is considerably modified (20-40 acre ranchettes, communications towers and two private in-holdings within the boundaries). The most natural area occurs along the western edge of the SRMA with views of the urban/industrial core area of Billings easily accessible. The historic/rustic Will James cabin lies on the northern edge. Facilities include an unpaved parking lot, vault toilet and kiosk. One	• Mostly small groups of 1-5 with occasional large group activities • Could encounter 1-10 persons per day on weekends and 1-5 persons during week days.	• Day use only • Closed to fireworks discharge • OHV use limited to designated routes only • Closed to driving off road/cross country. • Compliance with terms of conservation easements

Mill Creek/Bundy Special Recreation Management Area

caretakers' residence could be allowed but could not disturb more than ½ acre nor change the VRM, Recreational Opportunity Spectrum (ROS) or ACEC Scenic values.		

Management Actions and Allowable Use Decisions

Recreation and Visitor Services:

- Facilitate targeted recreation opportunities:
  - Implement current travel management decisions.
- Maintain setting:
  - Developments would be managed to VRM class III
- Health, safety, resource protection, user conflict resolution
  - Limited to OHV designations
  - Open to equestrian use
  - Open to rock climbing
  - Open to hang gliding
  - Open to hunting No fuel-wood collection
  - No fireworks
  - The area may be closed during high fire danger
- Special Recreation Permit criteria:
  - None

Other Programs:

- Surface Use Controls:
  - Oil and gas leasing, exploration and development would be allowed with an NSO stipulation
- Range Management:
  - Surface disturbing activities related to facility development and maintenance would be subject to mitigation guidelines.
- Fire and Fuels Management:
  - Area may be subject to fire and fuels management activities to restore and maintain forest health, reduce fire hazards, and maintain wildlife habitat
- Visual Resource Management:
  - Manage as VRM class III
- Cultural Resource Management
  - Large Native American events for traditional uses may be allowed under BLM authorization, if not in conflict with basic management

Mill Creek/Bundy Special Recreation Management Area

Implementation Decisions

Management:

Recreation and Visitor Services:

- Facilitate targeted recreation opportunities:
  - A recreation area management plan (RAMP) will be developed.
  - May be divided in to RMZs during RAMP development.
  - Hunting allowed in conformance with MTFWP regulations.
  - Implement current travel management decisions.
- Maintain setting:
  - Manage these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes. This goal would allow BLM to provide dispersed recreation opportunities and ensure that visual quality characteristics reflect a predominantly primitive or natural landscape while providing a diversity of visitor experiences.
- Health, safety, resource protection, user conflict resolution
  - Trapping permitted.
- Special Recreation Permit criteria:
  - The BLM will provide SRPs for commercial outfitting and guiding (hunting) consistent with 43 CFR 2932.26 and the goal of managing these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes. Outfitters and other recreational users will be required to use weed-free feed on BLM land for their livestock as a part of the integrated weed management program.

Administrative:

- All motorized/mechanized use limited to specifically designated routes

Information and Education:

- A comprehensive sign plan including information kiosks and route designation would be developed and implemented as part of the RAMP for this SRMA.

Monitoring:

- Assure objectives are being met and prescribed settings are being maintained.
- Monitor implemented actions and evaluate

Pryor Mountain TMA Special Recreation Management Area

Management Objectives:

The goal is to manage these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes concurrent with other management priorities.

- Provide wildlife habitat
- Protect historic, cultural, and scenic values.
- Balance the widest range of beneficial uses with the least amount of degradation, possible without risking health and safety, and with a minimum of other undesirable or unintended consequences on other resources.
- Provide dispersed recreation experiences.

Outcomes

Primary Activities:

- Hiking
- Running
- Cross country skiing
- Bird watching
- Picnicking
- Fishing
- Exercising pets
- Scenery and wildlife viewing
- Wild Horse viewing
- Caving
- camping

Experiences:

Enjoying:

- Solitude
- Family Recreation
- Fishing
- Exercise
- Scenery
- Escaping everyday responsibilities for awhile
- having access to outdoor amenities

Benefits:

Personal:

- Improved physical fitness
- Restored mind from unwanted stress
- Greater sense of overall wellness
- Enhanced cultural resource stewardship ethic

Household and Community:

- Improved quality of life
- Greater awareness of and appreciation for our natural landscapes
- Greater appreciation for the area and outdoor-oriented lifestyle
- Involvement in recreation and other land use decisions
- Increased desirability as a place to live or retire.

Economic:

- Positive contributions to local-regional economic stability
- Increased work productivity
- Reduced health maintenance costs

Environmental:

- Increased resource stewardship and protection by communities

Setting Prescriptions

Physical:

- The area is remote. The surrounding character of the landscape is a considerably natural in condition.

Social:

- Mostly small groups of 1-5 with occasional large group activities
- Could encounter 1-10 persons per day on weekends and 1-5 persons during week days.

Administrative:

- Day use and overnight use
- Closed to fireworks discharge
- OHV use limited to designated routes only
- Closed to driving off road/cross country.
- Compliance with terms of conservation easements and IMP

Pryor Mountain TMA Special Recreation Management Area

Management Actions and Allowable Use Decisions

Recreation and Visitor Services:

- Facilitate targeted recreation opportunities:
  - Implement current travel management decisions.
- Maintain setting:
  - Developments would be managed to VRM class III
- Health, safety, resource protection, user conflict resolution
  - Limited to OHV designations
  - Open to equestrian use
  - Open to rock climbing, caving
  - Open to hang gliding
  - Open to hunting
  - No fuel-wood collection
  - No fireworks
  - The area may be closed during high fire danger
- Special Recreation Permit criteria:
  - The BLM will provide SRPs for commercial outfitting and guiding (hunting) consistent with 43 CFR 2932.26 and the goal of managing these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes. Outfitters and other recreational users will be required to use weed-free feed on BLM land for their livestock as a part of the integrated weed management program.

Other Programs:

- Surface Use Controls:
  - Oil and gas leasing, exploration and development would be allowed with an NSO stipulation
- Range Management:
  - Surface disturbing activities related to facility development and maintenance would be subject to mitigation guidelines.
- Fire and Fuels Management:
  - Area may be subject to fire and fuels management activities to restore and maintain forest health, reduce fire hazards, and maintain wildlife habitat
- Visual Resource Management:
  - Manage as VRM Class II inside ACECs and LWCs and VRM Class I inside WSAs. .

Implementation Decisions

Management:

Recreation and Visitor Services:

- Facilitate targeted recreation opportunities:
  - A recreation area management plan (RAMP) will be developed.
  - May be divided in to RMZs during RAMP development.
  - Hunting allowed in conformance with MTFWP regulations.
  - Implement current travel management decisions.
- Maintain setting:
  - Manage these lands for a variety of sustainable visitor experiences

Administrative:

- All motorized/mechanized use limited to specifically designated routes

Information and Education:

- A comprehensive sign plan including information kiosks and route designation would be developed and implemented as part of the RAMP for this SRMA.

Monitoring:

- Assure objectives are being met and prescribed settings are being maintained.
- Monitor implemented actions and evaluate.

Pryor Mountain TMA Special Recreation Management Area			
in mostly primitive and natural landscapes. This goal would allow BLM to provide dispersed recreation opportunities and ensure that visual quality characteristics reflect a predominantly primitive or natural landscape while providing a diversity of visitor experiences. • Health, safety, resource protection, user conflict resolution – Trapping permitted. – SRPs allowed			

Extensive Recreation Management Areas:

Mill Creek/Bundy Extensive Recreation Management Area (34,239 acres)		
Management Objectives	The goal is to manage these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes concurrent with other management priorities. • Provide wildlife habitat • Protect historic, cultural, and scenic values. • Balance the widest range of beneficial uses with the least amount of degradation, possible without risking health and safety, and with a minimum of other undesirable or unintended consequences on other resources. • Provide dispersed recreation experiences.	
Outcomes		
Primary Activities: • Hiking • hunting • Bird watching • Picnicking • Fishing • Exercising pets • Equestrian use • Scenery and wildlife viewing •Yellowstone River access	**Experiences:** Enjoying: • Solitude • Family Recreation • Hunting • Fishing • Exercise • Scenery • Escaping everyday responsibilities for awhile • having access to close-to-home outdoor amenities	**Benefits:** **Personal:** • Improved physical fitness • Restored mind from unwanted stress • Greater sense of overall wellness • Enhanced cultural and natural resource stewardship ethic Household and Community: • Improved quality of life • Greater awareness of and appreciation for our natural landscapes • Greater appreciation for the area and outdoor-oriented lifestyle • Involvement in recreation and other land use decisions • Increased desirability as a place to live or retire. **Economic:** • Positive contributions to local-regional economic stability • Increased work productivity • Reduced health maintenance costs **Environmental:** • Increased resource stewardship and protection by communities

Mill Creek/Bundy Extensive Recreation Management Area (34,239 acres)

Setting Prescriptions

Physical:

•Mostly natural in appearance with structures limited to fences, cattle guards, and stock tank/ troughs. Signs limited to route designations.

Social:

• Mostly small groups of 1-5 with occasional large group activities

• Could encounter 1-10 persons per day on weekends and 1-5 persons during week days.

Administrative:

•Two-wheel drive vehicles predominant, but also four wheel drives and non-motorized, mechanized use.

•Basic maps, staff infrequently present (e.g. seasonally, high use periods) to provide on-site assistance

•Basic user regulations at key access points. Minimum use restrictions

•Rules are posted and use may be temporarily restricted due to permitted events or resource concerns due to weather.

•Area accommodates multiple-use including grazing.

• OHVs restricted to designated routes per travel management plan.

• This area can be accessed in the front country area by ordinary highway vehicles; middle and backcountry areas are accessible by 4-wheel drive and ATVs, UTVs, and motorcycles. Land access can be restricted by private land ownership

Management Actions and Allowable Use Decisions

Recreation and Visitor Services:

- Facilitate targeted recreation opportunities:
  - Implement current travel management decisions.
- Maintain setting:
  - Developments would be managed to VRM Class III
- Health, safety, resource protection, user conflict resolution
  - Limited to OHV designations
  - Open to equestrian use
  - Open to rock climbing
  - Open to hang gliding
  - Open to hunting
  - No fuel-wood collection
  - No fireworks
  - The area may be closed during high fire danger
- Special Recreation Permit criteria:
  - None

Other Programs:

- Surface Use Controls:
  - Oil and gas leasing, exploration and development would be allowed with an NSO stipulation
- Range Management:
  - Surface disturbing activities related to facility development and maintenance would be subject to mitigation guidelines.
  - Fire and Fuels Management:
  - Area may be subject to fire and fuels management activities to restore and maintain forest health, reduce fire hazards, and maintain wildlife habitat
- Fire and Fuels Management:
  - Area may be subject to fire and fuels management activities to restore and maintain forest health, reduce fire hazards, and maintain wildlife habitat
- Cultural Resource Management
- - Large Native American events for traditional uses may be allowed under BLM authorization, if not in conflict with basic management

Mill Creek/Bundy Extensive Recreation Management Area (34,239 acres)	
	• Visual Resource Management: – Manage as Class II and Class III.

17 Mile Recreation Area (2,080 acres)

Management Objectives:	The goal is to manage these lands for a sustainable visitor experience in mostly primitive and natural landscapes concurrent with other management priorities. • Provide wildlife habitat • Protect historic, cultural, and scenic values. • Balance beneficial uses with the least amount of degradation, possible without risking health and safety, and with a minimum of other undesirable or unintended consequences on other resources. • Provide dispersed recreation experiences.

Management Actions and Allowable Use Decisions

Recreation and Visitor Services:

- Facilitate targeted recreation opportunities:
  - A recreation area management plan (RAMP) will be developed.
  - Hunting allowed in conformance with MTFWP regulations.
  - Implement current travel management decisions.
- Maintain setting:
  - Manage these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes. This goal would allow BLM to provide dispersed recreation opportunities and ensure that visual quality characteristics reflect a predominantly primitive or natural landscape while providing a diversity of visitor experiences.
- Health, safety, resource protection, user conflict resolution
  - Trapping permitted.
- Special Recreation Permit criteria:
  - The BLM will provide SRPs for commercial outfitting and guiding consistent with 43 CFR 2932.26 and the goal of managing these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes.

Other Programs:

Interdisciplinary plans would be developed only when and where necessary to address emerging issues affecting public lands users or resources.

- Surface Use Controls:
  - Oil and gas leasing, exploration and development would be allowed with an NSO stipulation
- Range Management:
  - Surface disturbing activities related to facility development and maintenance would be subject to mitigation guidelines.
- Fire and Fuels Management:
  - May be subject to closure during high fire danger
  - May be subject to fire and fuels management activities to restore and maintain rangeland health, reduce fire hazards, and maintain wildlife habitat.
- Visual Resource Management:
  - Manage as Class III

Horsethief Extensive Recreation Management Area (12,261 acres)

Management Objectives:	The goal is to manage these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes concurrent with other management priorities. • Provide wildlife habitat • Protect historic, cultural, and scenic values. • Balance the widest range of beneficial uses with the least amount of degradation, possible without risking health and safety, and with a minimum of other undesirable or unintended consequences on other resources. • Provide dispersed recreation experiences.

Management Actions and Allowable Use Decisions

Recreation and Visitor Services:

- Facilitate targeted recreation opportunities:
  - A recreation area management plan (RAMP) will be developed.
  - Hunting allowed in conformance with MTFWP regulations.
  - Implement current travel management decisions.
- Maintain setting:
  - Manage these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes. This goal would allow BLM to provide dispersed recreation opportunities and ensure that visual quality characteristics reflect a predominantly primitive or natural landscape while providing a diversity of visitor experiences.
- Health, safety, resource protection, user conflict resolution
  - Trapping permitted.
- Special Recreation Permit criteria:
  - The BLM will provide SRPs for commercial outfitting and guiding (hunting) consistent with 43 CFR 2932.26 and the goal of managing these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes.

Other Programs:

- Surface Use Controls:
  - Oil and gas leasing, exploration and development would be allowed with an NSO stipulation
- Range Management:
  - Surface disturbing activities related to facility development and maintenance would be subject to mitigation guidelines.
- Fire and Fuels Management:
  - Area may be subject to fire and fuels management activities to restore and maintain forest health, reduce fire hazards, and maintain wildlife habitat
- Visual Resource Management:
  - Manage as Class III.

Asparagus Point Recreation Management Area (158 acres)

Management Objectives:	The goal is to manage these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes concurrent with other management priorities. • Provide wildlife habitat • Protect historic, cultural, and scenic values. • Balance the widest range of beneficial uses with the least amount of degradation, possible without risking health and safety, and with a minimum of other undesirable or unintended consequences on other resources. • Provide dispersed recreation experiences.

Management Actions and Allowable Use Decisions

Recreation and Visitor Services:

- Facilitate targeted recreation opportunities:
  - A recreation area management plan (RAMP) will be developed.
  - Hunting allowed in conformance with MTFWP regulations.
  - Implement current travel management decisions.
- Maintain setting:
  - Manage these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes. This goal would allow BLM to provide dispersed recreation opportunities and ensure that visual quality characteristics reflect a predominantly primitive or natural landscape while providing a diversity of visitor experiences.
- Health, safety, resource protection, user conflict resolution
  - Trapping permitted.
- Special Recreation Permit criteria:
  - The BLM will provide SRPs for commercial outfitting and guiding (hunting) consistent with 43 CFR 2932.26 and the goal of managing these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes.

Other Programs:

- Surface Use Controls:
  - Oil and gas leasing, exploration and development would be allowed with an NSO stipulation
- Range Management:
  - Surface disturbing activities related to facility development and maintenance would be subject to mitigation guidelines.
  - Close to grazing the floodplain north and east of the access road. (approximately 26 acres)
- Fire and Fuels Management:
  - Area may be subject to fire and fuels management activities to restore and maintain forest health, reduce fire hazards, and maintain wildlife habitat
- Visual Resource Management:
  - Manage as Class III.

South Hills Recreation Management Area (1,357 acres)

Management Objectives:	The goal is to manage these lands for a variety of sustainable visitor experiences concurrent with other management priorities. • Provide recreational opportunities within the Urban Interface area. • Minimize conflicts with adjacent subdivisions. • Provide dispersed recreation experiences. • Mitigate soil erosion on steep slopes. • Provide wildlife habitat.

Management Actions and Allowable Use Decisions

Recreation and Visitor Services:

- Facilitate targeted recreation opportunities:
  - A recreation area management plan (RAMP) will be developed.
  - Hunting allowed in conformance with MTFWP regulations.
  - Implement current travel management decisions.
- Maintain setting:
  - Manage these lands for a variety of sustainable visitor experiences in an urban interface environment. This goal would allow BLM to provide dispersed recreation opportunities and reduce conflicts with adjacent subdivision.
- Health, safety, resource protection, user conflict resolution
  - Trapping permitted.
  - Firearms prohibited.
  - OHVs limited to two-wheeled motorcycles
  - Day Use Area only.
- Special Recreation Permit criteria:
  - The BLM will provide SRPs for commercial outfitting and guiding (hunting) consistent with 43 CFR 2932.26 and the goal of managing these lands for a variety of sustainable visitor experiences in mostly primitive and natural landscapes.

Other Programs:

- Surface Use Controls:
  - Oil and gas leasing, exploration and development would be allowed with an NSO stipulation
- Range Management:
  - Allotment 5517, Southland Estates
  - Surface disturbing activities related to facility development and maintenance would be subject to mitigation guidelines.
- Fire and Fuels Management:
  - Area may be subject to fire and fuels management activities to restore and maintain forest health, reduce fire hazards, and maintain wildlife habitat
- Visual Resource Management:
  - Manage as Class III.
- Lands and Realty
  - Valid ROW(s) for waterline(s)
  - New utility ROWs would be underground.

Special Recreation Management Areas (SRMA), Extensive Recreation Management Areas (ERMA) by Alternatives

SRMAs	Alternative A	Acres	Alternative B	Acres	Alternative C	Acres	Alternative D	Acres
Four Dances Natural Area ACEC	X	784	X	784	X	784	X	784
Sundance Lodge Recreation Area	X	387	X	387	X	387	X	387
Shepherd Ah-Nei		0	X	4,680	X	4,680	X	4,680
Acton Recreation Area		0	X	3,697	X	3,697	X	3,697
Asparagus Point		0		0	X	158	X	158
Bundy Island		0	X	98		0		0
Horsethief TMA		0			X	12,261	X	12,261
Mill Creek/Bundy TMA		0		0	X	34,239		0
Pryor Mountain TMA		0	X	81,277	X	81,277	X	81,277
17 Mile		0		0	X	2,080		0
South Hills TMA		0		0	X	1,357	X	1,357
Yellowstone River Corridor		0		0	X	6,311	X	6,311
# SRMAs / Acres	2 SRMAs / 1,171 acres		6 SRMAs / 90,783 acres		11 SRMAs / 147,181 acres		9 SRMAs / 110,862 acres	
ERMAs								
Shepherd Ah-Nei	X	4,680		0		0		0
Acton Recreation Area	X	3,697		0		0		0
South Hills TMA	X	1,357	X	1,357		0		0
Horsethief TMA	X	12,261	X	12,261		0		0
17 Mile	X	2,080	X	2,080		0	X	2,080
Asparagus Point	X	158	X	158		0		0
Yellowstone River Corridor		0	X	6,213		0		0
Mill Creek Area		0		0		0	X	34,239
# ERMAs / Acres	7 ERMAs / 105,460 acres		5 ERMAs / 7,668 acres		0 ERMAs / 0 acres		2 ERMAs / 36,319 acres	
Non-Designated Areas (public lands not identified as SRMAs or ERMAs)	All lands not designated as SRMAs will be managed as ERMAs (327,518 acres)		327,421 acres		288,495 acres		322,418 acres	

Appendix O:
Visual Resource Management Program

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O. Visual Resource Management Program

O.1 Background

The Bureau of Land Management (BLM) is entrusted with the care of 264 million acres of public lands containing many outstanding scenic landscapes. By law, BLM is responsible for managing these public lands for multiple uses. But BLM is also responsible for ensuring that the scenic values of these public lands are considered before allowing uses that may have negative visual impacts. BLM accomplishes this through its Visual Resource Management (VRM) system, a system which involves inventorying scenic values and establishing management objectives for those values through the resource management planning process, and then evaluating proposed activities to determine whether they conform to the management objectives. BLM has established VRM coordinators in each state and provides training in VRM so that this system is implemented effectively and consistently throughout the Bureau. The Bureau's VRM system helps to ensure that the actions taken on the public lands today will benefit the landscape and adjacent communities in the future.

Responsibility

Over the past several years, the Western States have experienced rapid growth and development, and the public lands have been increasingly used for outdoor recreation and tourism. Many rural communities are reliant on tourism to sustain their economies. As a result, the management of the scenic values of public lands has become a much more important aspect of natural resource management to BLM.

BLM's responsibility to manage the scenic resources of the public lands is established by law:

- **The Federal Land Policy and Management Act of 1976 (FLPMA)** states, "...public lands will be managed in a manner which will protect the quality of the scenic (visual) values of these lands."
- **The National Environmental Policy Act of 1969 (NEPA)** requires that measures be taken to "...assure for all Americans...aesthetically pleasing surroundings...."

This responsibility is reinforced by BLM's mission statement:

- "It is the mission of the Bureau of Land Management to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations."

BLM's policy is that it has a basic stewardship responsibility to identify and protect visual values on all BLM lands. This policy is described in BLM Manual Section 8400 - Visual Resource Management. BLM has reemphasized this policy in various other internal directives as well, including Information Bulletin No. 98-135 and Instruction Memorandum No. 98-164.

In order to meet its responsibility to maintain the scenic values of the public lands, BLM has developed a VRM system that addresses the following:

- Different levels of scenic values require different levels of management. For example, management of an area with high scenic value might be focused on preserving the existing character of the landscape, and management of an area with little scenic value might allow for major modifications to the landscape. Determining how an area should be managed first requires an assessment of the area's scenic values.
- Assessing scenic values and determining visual impacts can be a somewhat subjective process. Objectivity and consistency can be greatly increased by using the basic design elements of form, line, color, and texture, which have often been used to describe and evaluate landscapes, to also describe proposed projects. Projects that repeat these design elements are usually in harmony with their surroundings; those that don't create contrast. By adjusting project designs so the elements are repeated, visual impacts can be minimized.

BLM's VRM system provides a way to identify and evaluate scenic values to determine the appropriate levels of management. It also provides a way to analyze potential visual impacts and apply visual design techniques to ensure that surface-disturbing activities are in harmony with their surroundings.

Basically, BLM's VRM system consists of two stages:

- Inventory (Visual Resource Inventory)
- Analysis (Visual Resource Contrast Rating)

O.2 Inventory

The inventory stage involves identifying the visual resources of an area and assigning them to inventory classes using BLM's visual resource inventory process. The process involves rating the visual appeal of a tract of land, measuring public concern for scenic quality, and determining whether the tract of land is visible from travel routes or observation points. The process is described in detail in BLM Handbook H-8410-1, Visual Resource Inventory. The results of the visual resource inventory become an important component of BLM's Resource Management Plan (RMP) for the area. The RMP establishes how the public lands will be used and allocated for different purposes, and it is developed through public participation and collaboration. Visual values are considered throughout the RMP process, and the area's visual resources are then assigned to management classes with established objectives:

- **Class I Objective:** To preserve the existing character of the landscape. The level of change to the characteristic landscape should be very low and must not attract attention
- **Class II Objective:** To retain the existing character of the landscape. The level of change to the characteristic landscape should be low

- **Class III Objective:** To partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate.
- **Class IV Objective:** To provide for management activities which require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high.

O.3 Analysis

The analysis stage involves determining whether the potential visual impacts from proposed surface-disturbing activities or developments will meet the management objectives established for the area, or whether design adjustments will be required. A visual contrast rating process is used for this analysis, which involves comparing the project features with the major features in the existing landscape using the basic design elements of form, line, color, and texture. This process is described in BLM Handbook H-8431-1, Visual Resource Contrast Rating. The analysis can then be used as a guide for resolving visual impacts. Once every attempt is made to reduce visual impacts, BLM managers can decide whether to accept or deny project proposals. Managers also have the option of attaching additional mitigation stipulations to bring the proposal into compliance

O.4 Design Techniques

There are numerous design techniques that can be used to reduce the visual impacts from surface-disturbing projects. The techniques described here should be used in conjunction with BLM's visual resource contrast rating process wherein both the existing landscape and the proposed development or activity are analyzed for their basic elements of form, line, color, and texture (FLCT).

This discussion of design techniques is broken down into two categories:

- **Design fundamentals** are general design principles that can be used for all forms of activity or development, regardless of the resource value being addressed. Applying these three fundamentals will help solve most visual design problems:
  - Proper siting or location
  - Reducing unnecessary disturbance
  - Repeating the elements of form, line, color, and texture
- **Design strategies** are more specific activities that can be applied to address visual design problems. Not all of these strategies will be applicable to every proposed project or activity:
  - Color selection
  - Earthwork

- Vegetative manipulation
- Structures
- Reclamation/restoration
- Linear alignment design considerations

The fundamentals and strategies are all interrelated, and when used together, can help resolve visual impacts from proposed activities or developments.

The techniques presented here are only a portion of the many design techniques available to help reduce the visual impacts resulting from surface-disturbing activities or projects. Further research into planning and design references and/or consultation with professional designers and engineers will help to further reduce the visual impacts of any development.

Appendix P:
Air Quality Resource Management Plan: Adaptive Management Strategy for Oil and Gas Resources

Table of Contents

List of Tables

Acronyms

APD	Application for Permits to Drill
AQRV	Air quality related value
AQTW	Air Quality Technical Workgroup
ARMP	Air Resource Management Plan
ARTSD	Air Resource Technical Support Document
BACT	Best available control technology
BiFO	Billings Field Office
BLM	Bureau of Land Management
CAMx	Comprehensive Air Quality Model with Extensions
CBNG	Coal bed natural gas
CFR	Code of Federal Regulations
CO	Carbon monoxide
EPA	U.S. Environmental Protection Agency
FS	U.S. Forest Service
FLPMA	Federal Land Policy and Management Act
FLIR	Forward looking infrared
FWS	U.S. Fish and Wildlife Service
hp	Horsepower
IWG	Interagency Working Group
IR	Indian Reservation
MAAQS	Montana Ambient Air Quality Standards
MAQP	Montana Air Quality Permits
$\mu g/m^3$	Micrograms per cubic meter
MDEQ	Montana Department of Environmental Quality
MOU	Memorandum of Understanding
NAA	Nonattainment area
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NO	Nitric oxide
NO_2	Nitrogen dioxide
NO_x	Nitrogen oxides
NPS	National Park Service
NSR	New Source Review
O_3	Ozone
Pb	Lead
PGM	Photochemical grid modeling
PM_{10}	Particulate matter with a diameter less than or equal to 10 microns
$PM_{2.5}$	Particulate matter with a diameter less than or equal to 2.5 microns
POD	Plan of Development
ppb	Parts per billion
ppm	Parts per million
PSD	Prevention of Significant Deterioration
REC	Reduced emissions completion
ROD	Record of Decision
RMP	Resource Management Plan
SEIS	Supplemental Environmental Impact Statement
SLAMS	State or Local Air Monitoring Station
SO_2	Sulfur dioxide
tpy	Tons per year
USDI	U.S. Department of the Interior
VOC	Volatile organic compound
WRAP	Western Regional Air Partnership
WRF	Weather and Research Forecasting

1.0 INTRODUCTION

1.1 Purpose of the Air Resource Management Plan

The Bureau of Land Management (BLM) Billings Field Office (BiFO) Air Resource Management Plan (ARMP) for oil and gas activities describes the air quality adaptive management strategy that would be used to assess future air quality and Air Quality Related Values (AQRVs) and identify mitigation measures to address unacceptable impacts that may could potentially be associated with future oil and gas development. The adaptive management strategy focuses on oil and gas activity because aggregated emissions from multiple small sources at well sites can potentially cause significant air quality and AQRV impacts under certain circumstances.

The BLM works collaboratively with the Montana Department of Environmental Quality (MDEQ) to promote air quality monitoring near oil and gas activity areas and will work closely with the MDEQ on any future emission mitigation considered under this ARMP. Many of these small oil and gas emission sources are not required to obtain air quality permits from the Montana Department of Environmental Quality (MDEQ), unlike large stationary sources such as coal mines that are permitted and inspected by the MDEQ. The oil and gas adaptive management strategy was prepared by the BLM in collaboration with or with input from the U.S. Environmental Protection Agency (EPA) and three federal land management agencies under the Memorandum of Understanding Among the U.S. Department of Agriculture [USDA], U.S. Department of the Interior [DOI], and U.S. Environmental Protection Agency, Regarding Air Quality Analyses and Mitigation for Federal Oil and Gas Decisions Through the National Environmental Policy Act [NEPA] Process (DOIUSDA 2011). This Memorandum of Agreement (MOU) is described in more detail in Section 1.4 of this appendix. Although not a signatory to the MOU, the MDEQ participates in the Air Quality Technical Workgroup (AQTW) that was established to implement the MOU process for the Proposed Resource Management Plan (PRMP) and Environmental Impact Statement (EIS).

This agreement is described in more detail in Section 1.4.

As described in Chapter 3 of the PRMP/EIS, the MDEQ and EPA implement the Clean Air Act within non-tribal portions of the planning area, while EPA implements the Act in tribal areas. State and federal emission control regulations and air quality permitting programs apply to many oil and gas sources. However, some of the smallest oil and gas emission sources are not required to obtain air quality permits. Facilities that have the potential to emit less than 25 tons per year of a regulated air pollutant are generally not required to obtain state or federal air quality permits or register their facilities with MDEQ. At these smallest facilities, certain activities and equipment are subject to state and federal emission control regulations. The ARMP provides a means for the BLM to satisfy its statutory responsibility under NEPA and FLPMA to protect air quality and other natural resources. Under the ARMP, the BLM will take appropriate management action if monitoring data for local areas with BLM-authorized oil and gas activity indicate that additional emission reductions may be needed to maintain good air quality. Due to the fragmentation of surface and mineral estate within the planning area, the BLM and MDEQ would seek a consistent emission control approach throughout an area of concern.

The ARMP includes both near-term actions and long-term actions. In the near-term, the ARMP sets forth initial actions to maintain good air quality until regional modeling can be performed to further assess potential impacts to air quality and AQRVs. In the long-term, the ARMP provides ongoing management strategies to assess and adapt to new air quality and AQRV ambient monitoring and modeling data during the life of this Resource Management Plan (RMP).

The ARMP includes a multifaceted approach involving the following activities.

- Oil and gas activity assessment
- Ambient air quality monitoring support
- Air quality and AQRV assessment
- Future air quality and AQRV modeling
- Mitigation

Pollutant emissions addressed by the ARMP include the criteria air pollutants listed below.

- Carbon monoxide (CO)
- Nitrogen dioxide (NO_2)
- Ozone (O_3)
- Particulate matter with a diameter less than or equal to 10 microns (PM_{10})
- Particulate matter with a diameter less than or equal to 2.5 microns ($PM_{2.5}$)
- Sulfur dioxide (SO_2)

Lead emissions are not included because high concentrations of this pollutant are unlikely to occur from oil and gas development within the planning area.

The ARMP also addresses modeling and mitigation for the following AQRV assessments.

- Deposition of sulfur and nitrogen
- Lake acid neutralizing capacity
- Visibility

The adaptive management strategy for oil and gas resources provides the flexibility to respond to changing conditions that could not have been predicted during RMP development. The strategy also allows for the use of new technology and methods that may minimize or reduce impacts.

1.2 Revision of the Air Resource Management Plan

This ARMP may be modified as necessary to comply with law, regulation, and policy and to address new information and changing circumstances. Changes to the goals or objectives set forth in the BiFO RMP/EIS would require maintenance or amendment of the RMP while changes to implementation, including modifying this ARMP, may be made without amending the RMP.

1.3 Current Air Quality

Based on available monitoring data in the BiFO, air quality is generally good, except for industrial areas influenced by emissions from some refineries. See Chapter 3 for a description of air quality within the BiFO. Federal air quality standards for criteria air pollutants are known as National Ambient Air Quality Standards (NAAQS), while state-based standards are known as the Montana Ambient Air Quality Standards (MAAQS).

1.4 Background of the AQTW and the MOU Regarding Air Quality Analyses and Mitigation for Federal Oil and Gas Decisions Through the NEPA Process

The Air Quality Technical Workgroup (AQTW) is required to include representatives from the following agencies: the BLM, EPA, U.S. Forest Service (FS), U.S. Fish and Wildlife Service (FWS), and the National Park Service (NPS). Each of these agencies is a party to the *Memorandum of Understanding*

Among the U.S. Department of Agriculture, U.S. Department of the Interior, and U.S. Environmental Protection Agency, Regarding Air Quality Analyses and Mitigation for Federal Oil and Gas Decisions Through the National Environmental Policy Act Process (USDA 2011) (herein referred to as the MOU). This agreement is designed to ". . . facilitate the completion of NEPA environmental analyses for Federal land use planning and oil and gas development decisions [USDA 2011]." Additional entities may also participate in the AQTW, such as the MDEQ and tribal entities.

The BLM asked the MDEQ to join the AQTW. The MDEQ has primary authority to protect air quality within the state. Although the MDEQ is not a signatory to the national MOU, successful air quality management of BLM-authorized oil and gas activities depends on a close working relationship between the BLM and the MDEQ. The two agencies have worked together to improve air quality monitoring and will continue to cooperate by sharing data, planning modeling efforts, and working together to identify emission reduction measures needed to maintain good air quality in areas with oil and gas activity.

The MOU sets forth collaborative procedures that the AQTW agencies use to analyze potential air quality and AQRV impacts. The agencies also work together to identify potential mitigation measures that may be needed to reduce impacts to air quality and AQRVs. The lead agency (the BLM in this case), in collaboration with the other agencies, has the responsibility to identify reasonable mitigation and control measures to address adverse impacts to air quality. Mitigation measures may also address impacts to AQRVs at Class I areas and at sensitive Class II areas that have been identified by the BLM, FS, FWS, and NPS.

The AQTW provided input to this ARMP and will continue to work collaboratively on future modeling efforts associated with this RMP. Provisions of the MOU continue to apply to future oil and gas activities in the planning area. In some cases, air quality and AQRV modeling performed under this ARMP may be sufficient to address modeling needs for future oil and gas projects that would otherwise require additional modeling under the MOU. However, the ARMP in no way replaces provisions of the MOU. Determinations of existing modeling adequacy for future oil and gas activities that trigger the MOU would be made collaboratively by the AQTW using the procedures included in the MOU.

1.5 MDEQ Air Quality Management and BLM Mitigation Measures

Primary air quality management authority and responsibility for the planning area rest with the MDEQ (for non-tribal areas of the planning area) and the EPA for tribal areas. However, the BLM also plays a role in protecting air resources under the Federal Land Policy and Management Act (FLPMA) and NEPA. Due to the nature of NEPA analyses for land use planning, the BLM's air resource management role is forward-looking because air resource impacts are analyzed for future activities that may or may not occur.

1.5.1 MDEQ Air Quality Programs

The MDEQ has been delegated Federal Clean Air Act authority from EPA to regulate air quality and air emissions requirements within the non-tribal areas of Montana. The MDEQ also implements state ambient air quality standards for additional air pollutants and has established more stringent standards for some criteria air pollutants, as shown in Table 1. As part of NAAQS implementation, the MDEQ operates air quality monitors through Montana.

The MDEQ has State Implementation Plan approved New Source Review (NSR) permitting programs, which include Prevention of Significant Deterioration (PSD), Nonattainment Area (NAA), and minor source programs. The MDEQ's PSD and NAA permitting programs impose controls on major stationary sources in order to control emissions of regulated pollutants. Emission controls are typically required through the application of Best Available Control Technology (BACT) or Lowest Achievable Emission Rate, depending on the applicable NSR permitting program. In addition, the MDEQ implements a minor

source NSR permitting program (e.g., minor source Montana Air Quality Permits [MAQP] and registrations). The MDEQ's minor source NSR program requires sources with a potential to emit greater than 25 tons per year (tpy) of any regulated air pollutant to apply for a permit to construct pursuant to the MAQP requirements or register with the MDEQ pursuant to the registration requirements under the Administrative Rules of Montana (ARM). To ensure compliance with the NAAQS, MDEQ's minor NSR program contains regulatory requirements that track activity and require the application of BACT. Additionally, the ARM require reasonable precautions to limit fugitive particulate emissions from all activities in Montana (i.e., permitted, registered, and those facilities that do not require a permit/registration). MDEQ's NSR program not only provides the emission benefits necessary to attain Montana's air quality goals, but also includes many features that provide regulatory certainty while still allowing flexibility in the implementation of Montana's air quality programs.

1.5.2 MDEQ Oil and Gas Emission Control Requirements

The MDEQ minor source permitting and registration program for oil and gas facilities includes a robust set of emission controls. MDEQ rules require oil or gas well facilities to control emissions from the time the well is completed until the source is registered or permitted. Facilities that choose to register must meet the emission control requirements contained in Administrative Rules of Montana (ARM) 17.8.17. If a source cannot meet these requirements it must apply for an MAQP. The MAQP requires a case-by-case BACT analysis. A case-by-case BACT analysis may include design, equipment, work practice, or operational standards in place of or in combination with an emission limitation.

Examples of MDEQ emission control requirements for oil and gas facilities (defined as those with a potential to emit more than 25 tpy of any airborne pollutant) include the following measures to limit emissions.

- Each piece of oil or gas well facility equipment containing volatile organic compound (VOC) vapors (as defined in the permitting or registration regulations) with a potential to emit 15 tpy or more must be routed to a gas pipeline or to air pollution control equipment with 95 percent or greater control efficiency (registered facilities). This requirement applies to the following equipment.
  - Oil and gas wellhead production equipment including, but not limited to, wellhead assemblies, amine units, prime mover engines, phase separators, heater treatment units, dehydrator units, storage tanks, and connector tubing
  - Transport vehicle loading operations
- Hydrocarbon liquids must be loaded into transport vehicles using submerged fill technology.
- Stationary internal combustion engines greater than 85 brake horsepower must be equipped with nonselective catalytic reduction (for rich burn engines) or oxidation catalytic reduction (for lean burn engines) or equivalent emission reduction technologies.
- Piping components containing VOCs must be inspected for leaks each month. The first attempt to repair any leaking VOC equipment must occur within 5 days and the repair must be completed no later than 15 days after the leak is initially detected unless facility shutdown is required. Facilities are required to maintain monthly leak inspection and repair records.

Although MDEQ emission control requirements do not mention greenhouse gas (GHG) emissions, the VOC emission control measures would also reduce methane emissions, while the engine emission controls would reduce nitrous oxide emissions.

The MDEQ oil and gas emission control requirements have successfully protected air quality throughout the planning area, as evidenced by ambient air quality monitoring data that indicate good air quality in oil and gas activity areas.

1.5.3 BLM Air Resource Management and MDEQ Coordination

The BLM's authority to address air resources derives primarily from FLPMA and NEPA. Under FLPMA, the BLM must "provide for compliance with applicable pollution control laws, including State and Federal air, water, noise, or other pollution standards or implementation plans" in the development and revision of land use plans (Section 202 (c)(8)). FLPMA also authorizes the BLM to manage public lands "in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values" (Section 102 (8)).

Under NEPA, the BLM ensures that information on the potential environmental and human impact of Federal actions is available to public officials and citizens before decisions are made and before actions are taken. One of the purposes of the Act is to "promote efforts which will prevent or eliminate damage to the environment and biosphere," and to promote human health and welfare (Section 2). NEPA requires that BLM and other federal agencies prepare a detailed statement on the environmental impact of the proposed action for major Federal actions expected to significantly affect the quality of the human environment (Section 102 (C)).

The BLM's authority under the Clean Air Act primarily derives from the requirement that BLM-authorized activities comply with the Clean Air Act. BLM-authorized activities may not violate the Clean Air Act or federal and state regulations and State Implementation Plans issued to implement the Act. When air quality or AQRV modeling performed during NEPA analysis predicts potential violations of the Clean Air Act or unacceptable AQRV impacts, the BLM evaluates the data and determines whether mitigation measures are needed. For example, the initial mitigation measure requiring drill rig engines to meet Tier 4 emission standards reduces NO_2 emissions and was demonstrated via modeling to prevent NAAQS violations from multiple large drill rig engines that may operate on one well pad. The mitigation measure includes an exception that allows use of drill rig engines meeting Tier 1, 2, or 3 emission standards if future modeling or near-field monitoring demonstrates compliance with the NAAQS.

When determining whether mitigation measures are needed, the BLM reviews current and proposed federal, state, and local regulations to determine whether mitigation will occur due to other agency actions. If the BLM determines that additional mitigation is needed while implementing this ARMP, the BLM will work closely with the MDEQ to coordinate future mitigation measures for BLM-authorized activities.

1.6 Relationship to the Montana SEIS ROD ARMP

This ARMP integrates and supplements earlier ARMP provisions within the *Record of Decision (ROD) for the Supplement to the Montana Statewide Oil and Gas Environmental Impact Statement and Amendment of the Powder River and Billings Resource Management Plans* (BLM 2008b). Provisions of the Montana Statewide Supplemental Environmental Impact Statement (SEIS) ARMP are currently in effect and were developed to address substantial predicted growth in coal bed natural gas (CBNG) drilling and production in the Powder River Basin. Based on extensive air quality and AQRV far-field modeling, predicted impacts described in the Supplemental Air Quality Analysis (BLM 2007, BLM 2008a) were associated primarily with projected emission increases from the operation of additional compressor engines. Consequently, increases in total compression horsepower were determined to be an indicator of oil and gas activity growth that could potentially degrade air quality and AQRVs.

ARMP provisions included in the SEIS ROD are summarized below.

- Emission Mitigation

  - Fugitive dust controls are required to reduce PM_{10} and $PM_{2.5}$ emissions from unpaved roads.

  - The number of wells connected to each compressor must be maximized and natural-gas-fired or electrical compressors or generators are required.

  - Operators within 5 miles of the Northern Cheyenne Indian Reservation (IR) and the Crow IR may be required to restrict the timing or location of CBNG development if monitoring or modeling by the MDEQ finds their CBNG development is causing or threatening to cause noncompliance with applicable local, state, tribal, and federal air quality laws, regulations, and standards, as well as state implementation plans developed by the MDEQ.

- Activity and Emission Monitoring

  - Compression horsepower associated with CBNG is required to be reviewed.

  - Annual emission inventory reports for CBNG operations are required to be submitted by operators.

- Ambient Air Quality Monitoring

  - The BLM will develop monitoring plans to track regional cumulative impacts to air quality and establish programmatic mitigation at predetermined action levels.

  - Ambient concentration data from the Billings St. Luke's monitoring site (and potential future sites) will be used to meet ambient monitoring requirements included in Table MON-1 of the SEIS ROD.

- Air Quality Impact Review

  - Oil and gas operators are required to provide information necessary for the BLM to conduct an analysis of air quality impacts when submitting exploration Applications for Permits to Drill (APDs) or field development project plans for CBNG development. BLM uses the information to determine the individual and cumulative impact on tribal air quality; disclose the analysis results in the appropriate NEPA document; and consult with the Tribe when the analysis shows impacts from a specific drilling or development proposal.

  - An Interagency Working Group (IWG) was formed consisting of the BLM, EPA, NPS, and FS and other federal agencies, state agencies, and tribal authorities to address CBNG development in the Montana portion of the Powder River Basin and its impacts to air quality. In addition to other resource responsibilities, the IWG is responsible for developing and recommending the monitoring and mitigation measures needed for each agency to ensure its actions achieve compliance with applicable air quality standards across jurisdictional boundaries.

- Air Quality and Visibility Modeling

  - The MDEQ agreed to complete an annual cumulative air quality impact model to track air quality impacts of CBNG development, including relevant CBNG development in Wyoming.

- The BLM and the MDEQ will perform additional visibility modeling to assess visibility impacts when horsepower (hp) requirements for new CBNG wells in the Montana portion of the Powder River Basin exceed 133,956 hp.

The above requirements are being integrated into this ARMP. Some provisions are being updated to reflect the current state of knowledge, while other provisions are being expanded to provide for a more comprehensive adaptive management strategy. Modeling provisions within the SEIS ARMP are being revised to reflect an improved modeling approach (described in Section 5.0) that would provide a more comprehensive assessment of visibility and criteria pollutants, including ozone. CBNG development in the Montana portion of the Powder River Basin did not materialize as predicted at the time of the SEIS. According to the MDEQ, CBNG compression within the Montana portion of the Powder River Basin has decreased by 1,676 hp since January 1, 2010 (MDEQ 2011). Due to the lack of CBNG development and with no new compression equipment emissions to model, the MDEQ determined that additional ambient air quality monitoring would be the best air quality indicator. With funding provided by the BLM, two new monitoring stations were installed in the Powder River Basin east of the planning area near Birney (Rosebud County) and Broadus (Powder River County) in 2009.

The remainder of this ARMP describes each of the provisions being carried forward from the SEIS ARMP.

2.0 OIL AND GAS ACTIVITY ASSESSMENT

Each year, the BLM would track the number and locations of new oil and gas wells drilled on federal mineral estate and the number of new and abandoned producing wells on federal mineral estate. These numbers would be compared to the planning area Reasonably Foreseeable Development (RFD) and to the level of oil and gas development identified in the proposed alternative.

In addition, the BLM would estimate oil and gas emissions from federal mineral estate every three years for oil and gas wells drilled and producing after the ROD is signed. Emission estimates would be based on well types, well numbers, and knowledge of typical equipment and operations. Emission estimation methods are expected to improve over time as better data become available. The emission estimates would also account for implemented mitigation measures and for new emission control regulations as they become effective. Each three-year oil and gas emission inventory would be compared to emission estimates for the RFD and the proposed alternative. The BLM would collect additional data related to oil and gas equipment and operations to improve emission inventory quality. One area identified for improvement involves acquiring better data on oil and gas equipment used in the planning area. In order to improve fugitive dust emission estimates, the number, type, and length of vehicle trips in high-activity areas would also be assessed.

For the portion of the Powder River Basin located in the BIFO, increases in compressor horsepower would be tracked annually using data provided by the MDEQ.

Each three-year oil and gas emission inventory would be compared to emission estimates for the RFD and the proposed alternative.

3.0 AMBIENT AIR QUALITY MONITORING SUPPORT

The MDEQ Air Resources Management Bureau has primary responsibility for siting and operating ambient air quality monitors within Montana and for reporting monitoring data to the EPA and to the public. As described in its annual Air Quality Monitoring Network Plan (MDEQ 2012), the MDEQ identifies monitoring objectives for assessing ambient concentrations of criteria air pollutants and assessing compliance with the NAAQS and MAAQS.

MDEQ-operated monitors in the planning area are limited to two monitors located in Billings. Of these, $PM_{2.5}$ concentration data from the Billings St. Luke's monitor (20-111-0085) would be considered to be representative of air quality in the planning area. The Billings Coburn Road monitor (30-111-0066) measures SO_2 concentrations near two refineries within 3 kilometers of the monitoring site. Due to the close proximity of the refineries, SO_2 concentrations from the Coburn Road site are not representative of SO_2 concentrations in rural oil and gas activity areas and data from this monitor would not be reviewed under this plan.

Due to the area's low concentrations of NO_2, ozone, and PM_{10}, these pollutants are not currently monitored in the planning area. If, in future years, additional MDEQ-operated monitoring stations are installed and operated for the purpose of assessing air quality impacts from oil and gas activity, ambient monitoring data from these monitors would be used for ambient air quality assessments under this plan.

4.0 AIR QUALITY AND AQRV ASSESSMENT

The BLM would assess air quality and AQRVs on an annual basis using quality-assured data from the EPA, MDEQ, FS, FWS, NPS, and other sources. In addition, if ozone monitoring data become available for the planning area, a preliminary assessment of ozone concentrations would be performed on a weekly basis using data provided by the MDEQ.

4.1 Annual NAAQS and MAAQS Assessment

Based on the representative monitor(s) listed in Section 3.0, the BLM would assess air quality monitoring data annually and would share the results of the assessment with the MDEQ and AQTW. The purposes of the annual assessment are to compare monitored data to NAAQS and MAAQS and to identify seasonal and long-term trends in air pollutant concentrations. The BLM would complete the annual assessment by May 31 of each year in order to ensure that quality-assured data are available for review. Monitoring data associated with exceptional events, typically due to wildfires, would be excluded from the assessment.

NAAQS and MAAQS are provided in Table 1. Montana standards are shown only if they are more stringent than the NAAQS.

Although most of the pollutants are not currently monitored in the planning area, the standards are provided to illustrate the framework for assessing monitoring data that may become available in the future. The standards shown in Table 1 would be revised to reflect future regulatory changes.

The BLM would use design values to compare ambient monitoring data to the NAAQS. Design values reflect the form of the NAAQS; they define the statistical metric used to compare monitoring data to federal standards. Depending on the pollutant and averaging time being assessed, a NAAQS is typically stated in terms of the maximum or second maximum concentration, average concentration, or a percentile of the standard. The form of a standard also states whether the design value is determined based on one or more years of monitoring data. EPA-calculated design values serve a critically important regulatory purpose; they determine whether areas are designated attainment or nonattainment. As such, EPA's design value determinations may take more than one year to finalize.

In order to review air quality trends more quickly, the BLM would determine "mitigation design values" by May 31 of each year for the previous calendar year(s). The mitigation design value would be a metric calculated by the MDEQ or BLM that uses procedures similar to EPA's regulatory design value calculation methodology, with the advantage that the MDEQ/BLM-calculated mitigation design values can be determined more quickly. The timing allows the MDEQ adequate time to quality assure monitoring data. However, the MDEQ may not yet have EPA concurrence on data that have been flagged by the MDEQ due to exceptional events, such as wildfires. Consequently, the MDEQ/BLM-calculated mitigation design values would exclude monitoring data associated with MDEQ-identified exceptional events. Each BLM annual assessment would look back the requisite number of years for each pollutant and include data from the time period prior to ROD issuance for the first several annual BLM assessments. Additional information concerning design value calculations is provided in Section 6.2.3. The BLM will work closely with the MDEQ to ensure that only data certified by the MDEQ and procedures consistent with MDEQ procedures are used in design value calculations.

Table 1. Ambient Air Quality Standards

Pollutant	Averaging Period	Federal NAAQS [1]			MAAQS [2]
		Concentration	Standard Type	Form of NAAQS Primary Standard	Concentration
CO	1-hour	35 ppm	Primary	Second maximum	23 ppm[5]
	8-hour	9 ppm	Primary	Second maximum	---
NO_2	1-hour	100 ppb	Primary	3-year average of the 98th percentile concentrations	0.30 ppm
	Annual	53 ppb	Primary, Secondary	Annual mean	0.05 ppm [7]
Ozone	1-hour	---	---	---	0.12 ppm [7]
	8-hour	0.075 ppm	Primary, Secondary	3-year average of the fourth highest daily maximum 8-hour average	---
$PM_{2.5}$	24-hour	35 µg/m^3	Primary, Secondary [3]	3-year average of the 98th percentile concentration	---
	Annual	12.0 µg/m^3	Primary	3-year average of the annual mean	---
	Annual	15.0 µg/m^3 [3]	Secondary	3-year average of the annual mean	---
PM_{10}	24-hour	150 µg/m^3	Primary, Secondary	NTBE more than one per year on average over 3 years	---
	Annual	Revoked [4]	---	---	50 µg/m^3 [5]
SO_2	1-hour	75 ppb	Primary	3-year average of the 99th percentile concentrations	0.50 ppm
	3-hour	0.5 ppm	Secondary	---	---
	24-hour	---	Primary	---	0.10 ppm[5]
	Annual	---	Primary	---	0.02 ppm[6]

CO carbon monoxide
µg/m^3 micrograms per cubic meter
MAAQS Montana Ambient Air Quality Standards
NAAQS National Ambient Air Quality Standards
NO_2 nitrogen dioxide
NTBE Not to be exceeded
$PM_{2.5}$ particulate matter less than or equal to 2.5 microns
PM_{10} particulate matter less than or equal to 10 microns
ppb parts per billion
ppm parts per million
SO_2 sulfur dioxide

[1] NAAQS are codified in Title 40 of the Code of Federal Regulations (CFR), Part 50.
[2] Montana AAQS are codified in Title 17, Chapter 8, Subchapter 2 of the Ambient Air Quality in the Administrative Rules of Montana.
[3] EPA proposed a new secondary standard for $PM_{2.5}$ visibility of 28 or 30 deciviews (equivalent to 24 or 19 kilometers [15 or 12 miles] standard visual range).
[5] The annual PM_{10} NAAQS was revoked October 17, 2006.
[6] Based on annual second maximum.
[7] Not to be exceeded in the averaging period specified.
[8] State violation when exceeded more than once during any 12 consecutive months.

4.2 Preliminary Ozone Assessment

If an MDEQ-operated ozone monitor is installed and operated in the planning area, the BLM would perform weekly preliminary ozone concentration reviews to determine if high ozone events occur. If a high-ozone event occurs, the BLM would document meteorological and other conditions that may have contributed to the event. Because high-ozone events in other rural parts of the nation are not well understood and contributing factors can be site-specific, the BLM would gather data to develop baseline information relevant to any high-ozone events that may occur within the planning area. Relevant baseline

information includes capturing meteorological data for each event, determining the amount of snow on the ground (if applicable), and identifying any other data that may help describe circumstances associated with the event. For the purposes of this effort, high-ozone events would be defined to be days for which the maximum 8-hour average ozone concentration is at or above 0.065 ppm.

In order to quickly ascertain relevant circumstances, the preliminary ozone assessments would use non-quality-assured data provided by the MDEQ. As part of the annual NAAQS assessment, quality-assured ozone data would be reviewed to determine if the preliminary ozone monitoring data were valid or if monitored high ozone concentrations were due to monitor malfunctions.

If high-ozone events occur within the planning area, a summary of events and a discussion of relevant meteorological data and circumstances would be developed as part of the annual NAAQS assessment. These summaries and the underlying data may provide important information that can be used to predict potential occurrences of high-ozone events and to identify mitigation measures and/or proactive measures that could prevent future events.

4.3 Annual AQRV Assessment

Federal land managers track the status, condition, and trends of AQRVs for Class I and sensitive Class II areas under their jurisdictions. Consequently, the BLM would request visibility, sulfur and nitrogen deposition, and lake acid neutralizing capacity data from the FS, FWS, and NPS and would include agency-submitted data in the BLM's annual review of AQRV trends. The annual review would also include AQRV data from any Class I or sensitive Class II areas under BLM jurisdiction.

Based on these reviews, the BLM would maintain an awareness of AQRV trends. However, it should be noted that the reviews would not necessarily link AQRV trends to oil and gas development. AQRV impacts are often associated with pollutants that can be transported long distances from many different types of sources. For example, visibility degradation in eastern Montana primarily results from large stationary sources such as electric generating units and cement kilns, as addressed in the Montana Regional Haze Federal Implementation Plan (EPA 2012b).

Photochemical grid modeling (PGM) would be completed after the ROD is signed and would provide additional information concerning the potential impact BLM-authorized of oil and gas emissions and cumulative emissions on AQRVs.

5.0 FUTURE MODELING

The BLM committed to perform PGM in order to assess regional air quality and AQRV impacts. Due to insufficient monitoring and regional emissions data available during development of the RMP, PGM will not be completed prior to issuance of the RMP/EIS and the ROD. In order to complete PGM expeditiously, the BLM began data acquisition and initiated steps needed to proceed with PGM. When PGM is completed and the results assessed, the BLM may identify additional emission mitigation measures for oil and gas activity.

5.1 Photochemical Grid Modeling

Comprehensive regional air quality and AQRV regional modeling of emission sources within the BiFO and surrounding areas requires PGM. This type of modeling can predict ozone and regional haze impacts, for which major pollutants and precursors can be transported many hundreds of miles.

5.1.1 Data Acquisition

PGM requires three main types of concurrent data: meteorological data, ambient monitoring data, and comprehensive emission data. BLM's analysis determined that the latter two types of data need to be augmented and updated prior to performing PGM.

5.1.1.1 Additional Monitoring

Ambient monitoring data throughout the regional PGM domain (which would extend throughout most of Montana and into adjacent states) are needed in order to validate model performance, which is assessed by modeling a previous year and comparing the model's predicted concentrations to actual monitored concentrations.

In cooperation with the MDEQ, the BLM funded two new monitoring stations in north-central Montana and would provide staffing and additional funding to operate the monitors. One monitor is located near Malta in Phillips County and the other is located in Lewistown (Fergus County). Both monitors became operational in July 2012 and measure ambient concentrations of nitric oxide (NO), NO_2, nitrogen oxides (NO_x, an ozone precursor), ozone, PM_{10}, and $PM_{2.5}$. These data would be particularly helpful in assessing the photochemical grid model's ability to accurately predict concentrations of these pollutants and its ability to accurately predict regional haze and visibility impacts.

5.1.1.2 Updating Emission Inventories

Comprehensive emission inventories are also critically important in predicting cumulative air quality and AQRV impacts. Current oil and gas regional emission inventories for Montana and the Dakotas are known to lack important emission sources, particularly sources of volatile organic compounds (VOCs), which contribute to ozone formation. The existing oil and gas inventories for the Williston and Central Montana Basins represent the year 2002 and were developed as part of the Western Regional Air Partnership (WRAP) Phase II inventory. Since then, 2006 Phase III emission inventories have been developed for oil and gas basins within Colorado, Utah, Wyoming, and New Mexico, but have not yet been completed for Montana, North Dakota, and South Dakota. The Phase III inventories have more comprehensive emission inventories of VOC sources at oil and gas facilities.

The BLM Montana and Dakotas State Office is providing financial assistance to the WRAP so that Phase III oil and gas emission inventories can be completed in 2013 for the Williston Basin and the Central Montana Basin. These inventories would represent calendar year 2011 emissions. In addition to covering

the planning area, the inventories would include comprehensive recent emission estimates for oil and gas activity in North Dakota and South Dakota.

5.1.2 PGM Schedule

In order to use a full 12 months of ambient monitoring data from the new Malta and Lewistown monitors, the baseline year for PGM is expected to be 2013 or may be a 12-month period beginning in late 2012 and ending in 2013. PGM planning began in 2012 and development of the PGM modeling protocol was completed in 2013. Modeling activities will begin in 2014 and should be completed in mid-2015. Review and assessment of PGM results would be completed in fall 2015. Table 2 provides the planned data acquisition and PGM schedule.

Table 2. Data Acquisition and PGM Schedule

Task / Subtask	Completion Date
Pre-Modeling Emission Inventory and Protocol Development	
Develop Weather Research Forecasting (WRF) and PGM Protocol	4/15/2013
"WRAP" Williston and Great Plains Basin Inventory *	3/31/2014
Base Year Modeling and Evaluation *	
WRF Modeling	5/8/2014
Draft WRF Model Evaluation	6/5/2014
AQTW, MDEQ, and IWG WRF Evaluation Review	7/10/2014
Emission Modeling (Base and Future Year) & Report	9/9/2014 (base year) 12/11/2014 (future year)
AQTW, MDEQ, and IWG Emission Modeling Review	10/2/2014 (base year) 1/7/2015 (future year)
Base Year Photochemical Grid Modeling	8/28/2014
Draft Base Year PGM Evaluation	11/17/2014
AQTW, MDEQ, and IWG PGM Evaluation Review	12/1/2014
Finalize WRF and PGM Evaluations	12/15/2014
Emission Modeling Reports	1/21/2015
Future Year Modeling and Evaluation *	
Future Year Photochemical Grid Modeling	3/8/2015
Analyze Air Quality and AQRV Impacts	3/29/2015
Draft ARTSD	4/19/2015
AQTW, MDEQ, and IWG ARTSD Review	6/19/2015
Finalize ARTSD	7/1/2015

* Duration and dates are subject to revision; they are estimated to provide the general timing of future modeling activities.

AQTW = Air Quality Technical Workgroup
ARTSD = Air Resource Technical Support Document
IWG = Interagency Working Group
MDEQ = Montana Department of Environmental Quality
PGM = Photochemical grid modeling
RFP = Request for Proposal
WRF = Weather Research and Forecasting Model
WRAP = Western Regional Air Partnership

The Weather Research and Forecasting (WRF) model would be used to model meteorological conditions. The Comprehensive Air Quality Model with Extensions (CAMx) would be used for photochemical grid

modeling. In addition, multiple models would be used to develop and process emission inventories for input into the photochemical grid model. When modeling is completed, an Air Resource Technical Support Document (ARTSD) would be developed.

Initial PGM would include future year modeling for a year between 2017 and 2030. The specific year would be determined by the BLM based on the ability to predict future regional oil and gas emissions in the Williston and Central Montana Basins. After initial PGM is completed, the BLM would begin an assessment process to determine when or if additional PGM updates are needed. Factors to be considered in determining when additional PGM would be needed include: 1) the adequacy of the adaptive management strategy to maintain good air quality, and 2) the level of BLM-authorized oil and gas activity and emissions compared to modeled levels.

5.1.3 MDEQ and AQTW and IWG Review and Input to PGM

Throughout the PGM data collection and modeling process, the BLM would work collaboratively with the MDEQ and the, with the IWG, and with other agencies or Tribes that request to be involved in the PGM effort. These collaborators provided technical review and comment on the draft modeling protocol, and will provide input on the WRF and PGM performance evaluations, and on the draft ARTSD. Substantial time has been included in the schedule shown in Table 2 to allow adequate review and comment periods during the PGM process.

5.1.4 Availability of PGM Results

Future PGM results would be presented in the final ARTSD and in a summary of the results. The ARTSD and summary document would be posted on the BiFO BLM website. In addition, the modeling protocol document would be provided via the website when the photochemical modeling ARTSD is made available. Outreach information regarding the availability of the results would be made through the AQTW, IWG, and other agencies involved in the PGM process, as well as other interested parties.

5.2 Post- PGM Modeling

To the extent that future emission increases are within the levels modeled with PGM or other modeling and are proximate to modeled emission locations, far-field air quality and AQRV impact analysis may incorporate by reference PGM and other modeling results. The BLM and the AQTW would determine whether previous modeling is sufficient to satisfy MOU requirements. This air quality management approach is consistent with the MOU (USDA 2011) and allows for efficient air quality and AQRV impact analysis.

If additional modeling is performed after PGM is complete, an assessment of air quality and AQRV impacts would be made and, if necessary, additional mitigation measures may be identified.

6.0 MITIGATION

Air quality and AQRV impact mitigation would involve two types of mitigation: 1) initial mitigation measures that become effective when the ROD is signed, and 2) enhanced mitigation measures that may be identified based on future ambient monitoring data or modeling results.

6.1 Initial Mitigation Actions

The following air quality mitigation measures would be applied upon issuance of the ROD through leasing documents and project-specific NEPA documents. To the extent practical, emission reductions associated with these mitigation measures have been included in the emission inventory.

1. Design and construct roads and well pads to reduce the amount of fugitive dust generated by traffic or other activities. During construction activities, apply water, apply dust-suppression chemicals, apply gravel, or use other control methods to achieve 50 percent fugitive dust control efficiency, except when ground is wet or frozen.

2. Use water or other BLM-approved dust suppression during drilling, completion, and well workover operations for dust abatement on access roads, as needed, to achieve a 50 percent fugitive dust control efficiency, except when ground is wet or frozen.

3. Use water or other BLM-approved dust suppression in high traffic areas during production operations for dust abatement, as needed, to achieve 50 percent fugitive dust control efficiency, except when ground is wet or frozen. Operators would work with local government agencies to improve dust suppression on roads.

4. For oil and gas Project Plans of Development (PODs), oil and gas operators would establish speed limits for project-required unpaved roads in and adjacent to the project area; oil and gas operator employees would comply with these speed limits.

5. For oil and gas Project PODs, oil and gas operators would be encouraged to reduce surface disturbance, vehicle traffic, and fugitive dust emissions by consolidating facilities (e.g., using multi-well pads, storage vessels) when feasible.

6. Diesel drill rig and completion engines greater than 200 hp would meet Tier 4 emission standards for non-road diesel engines. Alternatively, oil and gas operators may use drill rig and completion engines that exceed Tier 4 emission standards if modeling or monitoring at the project level or programmatic level demonstrates compliance with the NAAQS and protection of AQRVs.

7. For hydraulically fractured gas wells that do not qualify as “low pressure wells”, “wildcat,” or “delineation” wells, oil and gas operators would comply with reduced emissions completion (REC) requirements specified in Subpart OOOO, Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution (40 CFR §60.5375) within six months of ROD issuance.

8. Non-road diesel engines would be required to use ultra-low sulfur diesel fuel (15 ppmw) as required by 40 CFR §80.610(e)(3)(iii).

9. Natural-gas-fired or electrical compressors or generators would be required at compressor stations in the Powder River Basin.

10. CBNG operators proposing a POD within 5 miles of the Northern Cheyenne IR or the Crow IR would be required to provide the information necessary for BLM to conduct an analysis of air quality impacts. The BLM would use the information to determine the impact on air quality in the Northern Cheyenne IR and the Crow IR, disclose the analysis results and subsequent mitigation in the appropriate NEPA document, and consult with the Tribes when the analysis shows that air quality or AQRV impacts are anticipated from a specific development proposal.

11. CBNG operators within 5 miles of the Northern Cheyenne IR and the Crow IR may be required to restrict the timing or location of CBNG development if monitoring or modeling by the MDEQ finds their CBNG development is causing or threatening to cause noncompliance with applicable local, state, tribal, and federal air quality laws, regulations, and standards, as well as state implementation plans developed by the MDEQ.

6.2 Monitoring-Based Mitigation

Enhanced mitigation would be evaluated and implemented if ambient monitoring data at monitor(s) located in oil and gas activity areas within the planning area indicate that pollutant concentrations are approaching or threatening the NAQQS or MAAQS. Prior to completion of initial PGM, monitoring-based thresholds would be based on evaluation of exceedances of the NAAQS, as described in Section 6.2.1. After completion of initial PGM, monitoring-based thresholds would be based on BLM-calculated design values, as described in Section 6.2.3.

6.2.1 Monitoring-Based Thresholds Before PGM Completion

Based on requests from EPA during the MOU review process, the BLM would review NAAQS exceedances and determine if enhanced mitigation would be warranted during the interim period between ROD issuance and PGM completion. The BLM would require enhanced mitigation for BLM-authorized oil and gas activities if there is a monitored exceedance of the NAAQS at the St. Luke's monitor, unless the BLM determines that enhanced mitigation is not warranted after completing specified steps as outlined below and in Section 6.2.2.

1. The BLM would notify the EPA and the MDEQ within 30 days after St. Luke's monitoring data showing an exceedance has been posted on EPA's Air Quality System (AQS). The notification would state that the BLM is reviewing the exceedance according to this procedure.

2. After consulting with the MDEQ, the BLM would determine whether an exceptional event[1] may have caused the exceedance.

- If the MDEQ informs the BLM that an exceptional event likely caused the exceedance, the BLM would provide a letter to that effect to the EPA. No further action would be necessary.

- If an exceptional event did not cause the exceedance or if MDEQ would not submit an exceptional event waiver to EPA, the BLM would perform Step 3.

[1] The BLM would not formally decide that an exceptional event occurred as this decision would be made by MDEQ. Until a final determination of an exceptional event is presented to EPA by MDEQ, and the EPA has concurred, the BLM would assume that an exceptional event occurred based on a stated intention by the MDEQ to submit an exceptional event waiver.

3. The BLM would conduct a screening level analysis[2] to determine the likely source and location of the exceedance and whether mitigation is needed.

- If the screening analysis indicates that the exceedance was not caused by BLM-authorized oil and gas source(s) within the planning area or indicates that the BLM-authorized oil and gas source(s) within the planning did not contribute to the exceedance, the BLM would convey this finding in writing to the MDEQ and EPA for review and comment. No further action would be necessary.

- If the screening analysis indicates that the exceedance was caused or contributed to by BLM-authorized oil and gas sources inside the planning area, the BLM would perform Step 4.

4. The BLM would consult with the MDEQ and EPA to determine whether there is a need for: 1) a refined attribution analysis (e.g., attribution test using CAMx ozone source attribution technology or anthropogenic precursor's culpability assessment) or 2) mitigation on BLM-authorized oil and gas emission sources within the planning area. If the refined analysis:

- Is warranted, BLM would perform the refined analysis within 6 months of completing Step 3 in consultation with MDEQ and EPA.
- Indicates that the exceedance was not caused or contributed to by BLM-authorized oil and gas sources inside the planning area, the BLM would provide that recommendation to the MDEQ and EPA for review and comment. No further action would be necessary.
- Indicates that the exceedance was caused by BLM-authorized oil and gas sources within the planning area, the BLM would evaluate enhanced mitigation measures, as described in Section 6.2.2.

6.2.2 Determination of Enhanced Mitigation Measures Before PGM Completion

If a NAAQS exceedance occurs prior to completion of PGM and the refined analysis in Step 4 above determined that the exceedance was caused by BLM-authorized oil and gas sources within the planning area, enhanced mitigation measures would be evaluated and selected by the BLM, in cooperation with the MDEQ, IWG, and AQTW, when appropriate. Preference would be given to mitigation methods that the MDEQ intends to impose as new regulations or air quality permitting provisions. Selected mitigation measures would be implemented within one year after the BLM decision to apply additional mitigation.

Potential enhanced mitigation measures include the measures listed below based on current information concerning potential emission reduction technologies. Additional measures or equivalent methods or emission restrictions may be identified in the future.

- Drilling and/or blowdown activity restrictions based on meteorological conditions
- Construction activity restrictions based on meteorological conditions
- Centralization of gathering facilities
- Electric drill rigs

[2] Publically available web based applications suggested by EPA to identify sources of air pollution and potential impacts include the following sites: trajectory analysis tools like HySplit (http://ready.arl.noaa.gov/), air quality data at the EPA's AQS site (http://airnow.gov), state regulatory agency sites and airnowtech.org, an interactive snow site (http://www.nohrsc.nws.gov/interactive/html/map.html), daily ozone modeling (http://airquality.weather.gov/), daily ozone and $PM_{2.5}$ modeling site (http://www.getbluesky.org/), and daily satellite imagery site (http://ge.ssec.wisc.edu/modis-today/).

If data necessary to conduct a screening level analysis is not available, the BLM would consult with the MDEQ and the EPA regarding source attribution and the need for mitigation.

- Field electrification for compressors and/or pumpjack engines
- Plunger lift systems with smart automation
- Oil tank load out vapor recovery
- VOC controls on tanks with a potential to emit less than 5 tons per year
- Selective catalytic reduction on non-drill rig stationary engines
- Reduced emission completions beyond those required by EPA regulations, if determined to be technically and economically feasible
- Well pad density limitations
- Reducing the total number of drill rigs operating simultaneously
- Seasonally reducing or ceasing drilling during specified periods
- Using only lower-emitting drill and completion rig engines during specified time periods
- Using natural gas-fired drill and completion rig engines
- Replacing internal combustion engines with gas turbines for natural gas compression
- Employing a monthly forward looking infrared (FLIR) leak detection program to reduce VOCs
- Tank load out vapor recovery
- Enhanced VOC emission controls with 95% control efficiency on additional production equipment having a potential to emit of greater than 5 tons/year
- Enhanced direct inspection and maintenance program

6.2.3 Monitoring-Based Thresholds After PGM Completion

By May 31 of each year following completion of PGM, the BLM would calculate design values for each pollutant monitored at a federal reference monitor within the planning area and identified as a representative monitor in Section 6.2.1. The design value would be calculated based on calendar year monitoring data available at the time. For pollutants requiring three years of monitoring data for design value calculation, data from the appropriate prior period would be used. For example, based on PGM completion in mid-2015, the first annual design value calculation would be performed by May 31, 2016 and would include monitoring data for calendar years 2013, 2014, and 2015 for three-year design values and on monitoring data for calendar year 2015 for single-year design values. BLM design value calculations would exclude data associated with MDEQ-identified exceptional events and would be performed in accordance with EPA regulations and guidance.

Calculation methods would, to the extent possible, follow EPA procedures provided in the following appendices within Title 40 of the Code of Federal Regulations (CFR), Part 50 in effect as of December 1, 2012. These procedures may be updated by future EPA regulations and this section of the ARMP would be revised to reflect changing regulations.

- NO_2 (Appendix S)
- O_3 (appendix P)
- PM_{10} (Appendix K)
- $PM_{2.5}$ (Appendix N)
- SO_2 (Appendix T)

BLM design value calculations would exclude data associated with exceptional events identified by MDEQ.

6.2.4 Determination of Enhanced Mitigation Measures After PGM Completion

If the air quality assessment described in Section 6.2.3 indicates that a BLM-calculated design value is greater than 85 percent of a NAAQS, enhanced mitigation measures addressing that pollutant or pollutant precursor would be evaluated and selected by the BLM, in cooperation with the MDEQ, IWG, and EPA, when appropriate. Potential enhanced mitigation measures include the measures listed above in Section 6.1, as well as additional measures that may be identified in the future.

6.3 Modeling-Based Mitigation

6.3.1 Modeling-Based Thresholds

Future modeling would assess air quality and AQRV impacts from future BLM-authorized oil and gas activity and would include regional PGM and project-specific modeling. Modeling-based thresholds for evaluating enhanced mitigation would include potential future impacts on NAAQS or MAAQS or impacts above specific levels of concern for AQRVs in Class I or sensitive Class II areas (as identified on a case-by-case basis by MDEQ or a federal land management or tribal agency).

6.3.2 Modeling-Based Enhanced Mitigation Measures

If BLM-authorized oil and gas activity is predicted to cause or contribute to impacts above the thresholds described above, the BLM would facilitate an interagency process to ensure that a comprehensive strategy is developed to manage air quality impacts from future oil and gas development within the region. The local, state, federal, and Tribal agencies involved in the regulation of air quality and the authorization of oil and gas development would evaluate modeling results from future modeling studies and identify potential air quality concerns and necessary reductions in air emissions. If the modeling predicts significant impacts, these agencies would use their respective authorities to implement enhanced emission control strategies, operating limitations, equipment standards, and/or pacing of development as necessary to ensure continued compliance with applicable ambient air quality standards, including the enhanced mitigation measures listed in Section 6.2.2, other future mitigation measures identified through BLM's adaptive management strategy, or reasonable mitigation measures suggested by the MDEQ, IWG, or AQTW. If necessary, implementation of mitigation measures would occur within one year of obtaining final modeling results for mitigation measures that conform to currently implemented land use planning decisions and constraints.

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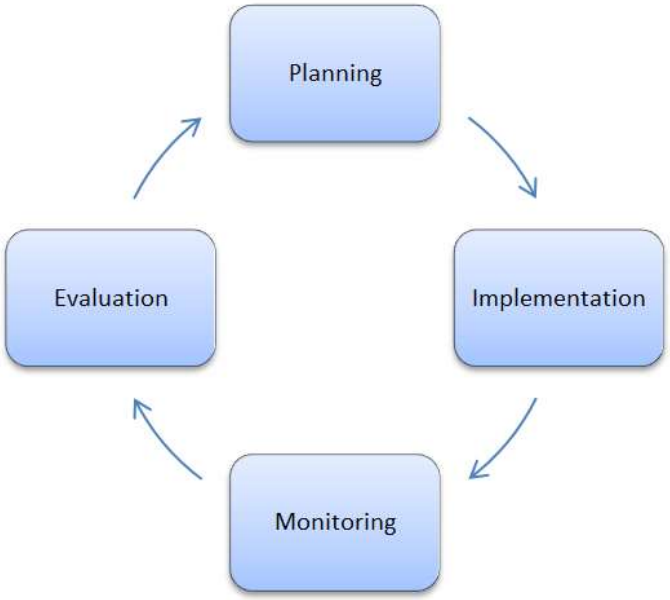
Appendix Q:
Implementation and Monitoring

Q. Implementation and Monitoring

Plan implementation is a continuous process occurring over the life of the resource management plan that will consider changing circumstances and new information through monitoring. The goal is to maintain a dynamic resource management plan that is evaluated and amended if necessary on an issue-by-issue basis.

The implementation and monitoring process for the Billings Field Office and Pompeys Pillar National Monument (NM) involves four major steps: planning, implementation, monitoring, evaluation, and adjustments, as necessary. Planning involves a great amount of time and resources to identify issues and management opportunities to address those issues. During the planning process, the scope of the issue is identified and management goals, objectives and actions are defined to address the issues. Once the planning process is completed, decisions are implemented, monitored, and evaluated over a period of time to determine if goals are being met and if management actions are achieving the desired objective or standard. Results of monitoring are documented and communicated to appropriate parties, and management objectives and actions are modified based on results, if necessary.



Planning

The Proposed Resource Management Plan (RMP) and Final Environmental Impact Statement (EIS) is approved once the Record of Decision (ROD) is signed. An Approved Plan will also be available that will include all the approved decisions from the RMP.

The BLM regulation in 43 CFR 1610.5-4 provides that land use plan decisions and supporting components can be maintained to reflect minor changes in data. Maintenance is limited to further refining, documenting, or clarifying a previously approved decision incorporated in the

plan. Maintenance must not expand the scope of resource uses or restrictions or change the terms, conditions, and decisions of the Approved Plan.

Land use plan decisions are changed through either a plan amendment or a plan revision. The process for conducting plan amendments is essentially the same as the land use planning process used in developing RMPs. The primary difference is that circumstances may allow for completing a plan amendment through the environmental assessment (EA) process, rather than through an EIS. Plan amendments (43 CFR 1610.5-5) change one or more of the terms, conditions, or decisions of an approved land use plan. Plan amendments are most often prompted by the need to consider a proposal or action that does not conform to the plan; implement new or revised policy that changes land use plan decisions; respond to new, intensified, or changed uses on BLM land; and consider significant new information from resource assessments, monitoring, or scientific studies that change land use plan decisions.

Implementation

Implementation of the resource management plan (RMP) begins once the Record of Decision and Approved Plan for the Proposed RMP/Final EIS is signed.

Decisions made through the RMP planning process are implemented over a period of time. Some of the decisions are immediate and go into effect with the Record of Decision. These include decisions such as the road designations and lands available for disposal through exchange. Some decisions would be implemented after a site-specific environmental review is completed. Examples include range improvements, recreation sites, or approval of an application for permit to drill a natural gas well. Other decisions include guidance that would be applied during site-specific analysis or activity planning.

Any future proposals or management actions will be reviewed against the Approved Plan to determine if the proposal would be in conformance with the RMP. While the Final EIS for the Billings and Pompeys Pillar NM RMP provides the compliance with NEPA for the broad-scale decisions to be made in the Record of Decision, it does not replace the requirement to comply with NEPA for implementation actions. Proposed actions fall into one of five categories: (1) actions that are exempt from NEPA; (2) actions that are categorically excluded; (3) actions that are covered by an existing NEPA environmental document; (4) actions that require preparation of an environmental assessment (EA) to determine if an environmental impact statement (EIS) is needed; or (5) actions that require preparation of an EIS. The NEPA procedural, documentation, and public involvement requirements are different for each category.

Activity level planning will address any proposed new activities and long-term permitted activities that need to be brought into compliance with plan decisions, subject to valid existing rights. Monitoring of these activities will then determine the effectiveness of applying the land use plan direction. Where land use plan actions or best management practices are not effective, modifications could occur without amendment or revision of the plan as long as assumptions and impacts disclosed in the analysis remain valid and broad-scale goals and objectives are not changed. This approach uses on-the-ground monitoring, review of scientific information, and consideration of practical experience and common sense to adjust management and modify implementation of the plan to reach the desired outcome.

As part of this process, the BLM will review management actions and the plan periodically to determine whether the objectives set forth in this document are being met. Where they are not being met, the BLM will consider adjustments of appropriate scope. Where the BLM considers taking or approving actions which will alter or not conform to overall direction of the plan, the BLM will prepare a plan amendment and environmental analysis of appropriate scope.

In addition, during the life of the Approved Plan, the BLM expects that new information gathered from field inventories and assessments, research, other agency studies, and other sources will update baseline data or support new management techniques, best management practices, and scientific principles. To the extent that such new information or actions address issues covered in the plan, the BLM will integrate the data through plan maintenance.

Monitoring

Monitoring is the repeated measurement of activities and conditions over time. Monitoring data gathered over time is examined and used to draw conclusions on whether management actions are meeting stated objectives, and if not, why. Conclusions are then used to make recommendations on whether to continue current management or what changes need to be made in management practices to meet objectives.

Monitoring determines whether planned activities have been implemented in the manner prescribed by the plan. This monitoring documents BLM's progress toward full implementation of the land use plan decision. There are no specific thresholds or indicators required for this type of monitoring.

Monitoring also is used to determine if the implementation of activities has achieved the desired goals and objectives. This requires knowledge of the objectives established in the RMP as well as indicators that can be measured. Indicators are established by technical specialists in order to address specific questions, and thus avoid collection of unnecessary data. Success is measured against the benchmark of achieving desired future conditions established by the plan.

Monitoring is also used to ascertain whether a cause-and-effect relationship exists among management activities or resources being managed. It confirms whether the predicted results occurred and if assumptions and models used to develop the plan are correct. This type of monitoring is often done by contract with another agency, academic institution, or other entity, and is usually expensive and time consuming since results are not known for many years.

Regulations at 43 CFR 1610.4-9 require that the proposed plan establish intervals and standards, as appropriate, for monitoring and evaluation of the plan, based on the sensitivity of the resource decisions involved. Progress in meeting the plan objectives and adherence to the management framework established by the plan is reviewed periodically. CEQ regulations implementing NEPA state that agencies may provide for monitoring to assure that their decisions are carried out and should do so in important cases (40 CFR 1505.2(c)). To meet these requirements, the BLM will prepare periodic reports on the implementation of the RMP.

Evaluation

Evaluation is a process in which the plan and monitoring data are reviewed to see if management goals and objectives are being met and if management direction is sound.

Land use plan evaluations will be used by BLM to determine if the decisions in the RMP, supported by the accompanying NEPA analysis, are still valid. Evaluation of the RMP will generally be conducted every five years, unless unexpected actions, new information, or significant changes in other plans, legislation, or litigation triggers an evaluation. Land use plan evaluations determine if decisions are being implemented, whether mitigation measures are satisfactory, whether there are significant changes in the related plans of other entities, whether there is new data of significance to the plan, and if decisions should be changed through amendment or revision.

Based on a Record of Decision and Approved Plan released in the spring of 2014, the following evaluation schedule would be followed for the Billings and Pompeys Pillar National Monument RMP/EIS:

Fall 2019

Fall 2024

Fall 2029

Fall 2034

Evaluations will follow the protocols established by the BLM Land Use Planning Handbook H-1601-1 in effect at the time the evaluation is initiated.

INTRODUCTION

For each resource, there are a series of items that will be monitored. Each item is evaluated by location, technique for data gathering, unit of measure, frequency, remedial action trigger, and management option (Table 1). The monitoring and evaluation plan states the event that will be evaluated and lists the key resources that will be managed in the planning area. If an adverse impact can be corrected by a management action within the scope of this plan, the change will be implemented. If the adverse impact can be corrected only by a management action that is outside the scope of this plan, the management change will be a formal amendment.

TABLE 1. MONITORING TABLE

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
AIR RESOURCES AND CLIMATE							
Air Resources and Climate	Gaseous and particulate regulated air pollutants and air quality related values (AQRVs), such as acid deposition, lake acidification, and visibility	Area-wide	Air quality photochemical grid modeling	Micrograms/cubic meter (µg/$m^{3)}$ and parts per million (ppm) concentrations (as µg/m^3)	Modeling will be performed when adequate data are available to validate model performance (see the *Air Resources and Climate Appendix*)	Predicted exceedances of National Ambient Air Quality Standards (NAAQS) or Montana Ambient Air Quality Standards (MAAQS) or unacceptable impacts to AQRVs	Implement additional emission controls or operating limits
	Gaseous and particulate regulated air pollutants	Area-wide	Continued automated sampling and analysis	µg/m^3 and ppm concentrations (as µg/m^3)	Continuous	Measured exceedances of NAAQS or MAAQS	Implement additional emission controls or operating limits
	Climate indicators including temperature, precipitation, precipitation timing and intensity, snowfall, snow pack, albedo, greenhouse gas	Area-wide	Analysis of existing climatic data and climate change data available from the National Oceanic and Atmospheric Administration, the Western	Degrees Fahrenheit (°F), degrees Celsius (°C), inches, feet, unitless (albedo), ppm, parts per billion	Annual	None (actions triggered based on resource-specific concerns)	Provide annual updates summarizing recent climate trends to Bureau of Land Management (BLM) resource management

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
	(GHG) concentrations		Regional Climate Center, United States Environmental Protection Agency (USEPA), and other reliable sources of information				personnel
SOILS							
Soils	Soil erosion, uplands	Area-wide where management activities are occurring or expected to occur	Visual observation, photo point, rangeland health assessment, surface aggregate stability test, silt fence, and surveyed erosion pins	Soil loss in tons per acre	Site will be visually examined quarterly. Where erosion is considered excessive, measurements of site characteristics will be taken to determine rate of soil loss.	Visual evidence of pedestal, wind scour, rill greater than 3 inches, active headcutting gully, or sheet erosion. Soil or site stability indicators are not similar to reference rangeland health conditions. Change in surface aggregate stability to a lower class. Loss of soil exceeding 10	Report exceedance to the BLM, Montana Department of Environmental Quality (MDEQ), or USEPA. Enforcement action would be taken.

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
						tons per acre per year	
Soils (cont'd)	Soil erosion, streambanks, riparian areas, and floodplains	Area-wide along rivers and tributaries where management activities are occurring or expected to occur	Visual observation, photo point, rangeland health or proper functioning condition assessments, silt fence, and surveyed erosion pins	Area affected in square feet or acres	Site would be visually examined quarterly. Where streambank erosion is considered excessive, measurements of site characteristics will be taken to determine soil loss.	Visual evidence of active headcutting, channelization beyond natural conditions, or bank slump. Proper functioning condition (PFC) rated functional-at-risk with a downward trend or nonfunctional. A 10% increase in streambank loss.	Report exceedance to the BLM, MDEQ, or USEPA. Enforcement action would be taken.
	Soil salinization and sodification	Area-wide where management activities were occurring or expected to occur	Visual observation, measurement of soil characteristics such as (electrical conductivity (EC), sodium adsorption ratio (SAR),	Area affected in square feet or acres	Site would be visually examined quarterly. Where impacts to soil or vegetation were observed, measurements of site	A 20% increase in levels in EC, SAR, or exchange sodium percentage (EC greater than 8, SAR greater than 8, exchangeable	Report exceedance to the BLM, MDEQ, or USEPA. Enforcement action would be taken.

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
			exchange sodium percentage, and pH		characteristics would be taken to determine salinity and sodicity levels.	sodium percentage greater than 10, or pH greater than 8.5)	
Soils (cont'd)	Compaction	Area-wide where management activities were occurring or expected to occur	Visual inspection, penetrometer, or ratio of penetration resistance or bulk density to that of the reference area	Lbs. per square inch, mass per volume	Site would be visually examined 1 to 2 times yearly; where compaction is considered excessive, measurements would be taken.	When an area has a 10% increase in density or ratio of penetration resistance or bulk density to that of the reference area greater than 1 and the compacted area exceeds 10% of surface disturbance	Decompact or close access to compacted site until area recovers from compaction
	Rutting	Area-wide where management activities were occurring or expected to occur	Visual observation and measured depth of rut	Inches	Site would be visually examined 1 to 2 times yearly. Where rutting is considered excessive, measurements would be taken.	Ruts exceed 4 inches in depth	Close access to rutted site until soil conditions are not susceptible to rutting and are repaired.

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
Soils (cont'd)	Subsidence of fill material	Areas where management activities required fill material	Visual observation and measured depth of subsidence	Feet	Site would be visually examined 1 to 2 times yearly. Where slumping or piping is considered excessive, measurements would be taken.	10% increase in slumping or piping depth	Close access to site until area is reclaimed
WATER							
Water	Surface water quality and quantity	In watersheds expected to be affected, potentially affected, or down gradient from CBNG surface discharge points or regionally at the monitoring stations identified by the interagency working group (refer to *Final Supplement to the Montana Statewide Oil and Gas Environmental Impact*	As determined by the interagency working group (refer to the FSEIS) or water quality parameters, temperature, and discharge or stage measurements	As determined by the interagency working group (refer to the FSEIS) or feet, cubic feet per second (cfs), and standard quantitative measurements of water quality (e.g., milligrams per liter [mg/L], pH, µS/cm, and °C)	As determined by the interagency working group or based on activity plan schedule (refer to the FSEIS)	Exceedance of any parameter above the State of Montana surface water quality standards or identified BLM thresholds (refer to the FSEIS)	Report exceedances to the MDEQ, which would determine cause and take appropriate actions if monitoring indicates that BLM thresholds were met or exceeded, Untreated discharge of CBNG water from federal wells would no longer be allowed upstream from that station.

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
		Statement and Proposed Amendment of the Powder River and Billings Resource Management Plans [FSEIS]). Note that the 10% of 7Q10 criteria for untreated CBNG water would apply unless stations upstream and downstream from proposed outfalls are monitored (refer to the FSEIS).					Previous approvals may be modified.
Water (cont'd)	Groundwater drawdown	Regionally at locations determined by the interagency working group (refer to the FSEIS)	Monitoring wells would be finished in bedrock units; especially coal seams expected to be developed for CBNG.	Depth to water reported in hundredths of feet	Depth to water measurements would be made approximately monthly to establish an initial baseline. Measurements would be	A 20-foot decrease in static water level from seasonally adjusted mean static water level (determined from baseline data) (refer to	If falling water levels were determined to be caused by CBNG activity, operators must offer water well mitigation agreements to all landowners

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
					made approximately quarterly thereafter unless a greater frequency was determined to be necessary. Monitoring would continue until at least 80% recovery of static water level was achieved.	the FSEIS)	with water sources in the defined drawdown area (20 feet or greater drawdown) of their development. Hydrologic barriers, such as injection wells, may be an option in some cases to prevent drainage of American Indian gas and water resources.
Water (cont'd)	Groundwater quality and quantity	Alluvial groundwater would be monitored in stream valleys topographically down gradient from CBNG surface discharge points. Since discharge to ephemeral streams would not be allowed,	Monitoring wells would be finished in the alluvium. Depth to water measurements and water quality parameters, including (but not limited to) pH, EC, water temperature, common ions (Na, Mg, Ca,	Standard quantitative measurements of water quality and static water level (mg/L, °C, µS/cm, and hundredths of feet)	Depth to water measurements would be made approximately monthly to establish an initial baseline. Depth to water would then be collected approximately quarterly thereafter.	A change in groundwater chemistry that affects its class of use or rise in static groundwater levels of 5 feet or more that may cause impacts at the ground surface (refer to the FSEIS)	If impacts were determined to result from CBNG development, direct discharge of CBNG water into waterways in the watershed may be discontinued until modified

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
		these wells would be along larger streams (refer to the FSEIS).	K, HCO_3, CI, SO_4) would be obtained.		Water quality samples would be taken approximately annually unless more frequent monitoring is needed. Monitoring would continue until at least 80% recovery of static water level was achieved.		water management plans were submitted and approved (refer to the FSEIS).
Water (cont'd)	Groundwater quality and quantity	Operators would install monitoring wells adjacent to impoundments (refer to the FSEIS).	A monitoring well would be installed within the first permeable unit and within the first groundwater encountered (up to 50 feet total depth) to determine effectiveness of infiltration; if evaporation basins were leaking, a water quality sample of the	Depth to water (feet to water reported in hundredths of feet). Water quality samples would be collected if rises in groundwater were observed or if water were observed in a previously dry zone.	Wells would be gauged monthly for the first year and quarterly thereafter unless a rise was observed. If a rise were observed, monitoring would be monthly. Water quality samples would be collected whenever the water level is above	A rise of 1 foot or more in static water levels above seasonally adjusted mean water levels (determined from the first year of data) or a change in the class of use in the groundwater (refer to the FSEIS).	Any change in class of use would be reported to the MDEQ. Operators may be required to install additional monitoring wells further downgradient, or discharge into impoundments may be required to cease until a revised water

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
			first groundwater (if encountered) would be collected to determine class of use.		baseline. Monitoring would continue at least until the end of CBNG water discharge into the impoundment.		management plan is submitted and approved (refer to the FSEIS)
Water (cont'd)	Springs	A network of springs determined to be fed by the regional flow system would be identified along coal outcrops in the CBNG development area (refer to the FSEIS)	Spring discharge and water quality parameters, including (but not limited to) pH, EC, water temperature, and common ions (Na, Mg, Ca, K, HCO_3, CI, SO_4), would be determined from existing springs.	Discharge cubic feet per second (cfs), pH, EC (µS/cm), and water temperature (°C) would be determined in the field. Standard quantitative measurements of water quality also would be used (mg/L).	Field measurement of discharge, pH, EC, and water temperature would be determined approximately quarterly. An initial water quality sample would be collected; additional samples would be analyzed if substantial changes in the field parameters were observed.	A 50% decrease in spring discharge below seasonally adjusted mean (determined in the first 3 years) or a significant change in water quality that affects its beneficial use (refer to the FSEIS).	If decreased spring discharges or water quality were determined to result from CBNG activity, operators must offer spring mitigation agreements to landowners who use the spring. If the affected spring were identified as important wildlife habitat, adaptive management practices would be used at the

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
							landscape level to improve spring ecosystems. Hydrologic barriers, such as injection wells, may be an option in some cases to prevent drainage of American Indian gas and water resources (refer to the FSEIS).
Water (cont'd)	Streambank or channel alteration	Any federal area-wide action in which potential impacts from management activities are occurring or expected to occur	Monumented cross sections, longitudinal profile, visual inspection, photo point, PFC, surveyed erosion pins, and any suitable methods as described in *Grazing Management Processes and Strategies for Riparian-wetland Areas*	Area affected in square feet or acres	Based on activity plan schedule and a minimum of once every 10 years	Trend away from objective, a 10% increase in streambank or channel alteration, exceedance of any parameter above the State of Montana surface water quality standards for sediment, total	Activities would be required to be altered or discontinued in order to provide environmental factors for increasing functionality or conditions of the streams. Exceedance would be reported to BLM, MDEQ, or USEPA and

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
			(Wyman et al. 2006), *Bureau of Land Management Prairie Stream Surveys: Study Plan* (BLM 2010k), and *Stream Channel Reference Sites: An Illustrated Guide to Field Technique* (Harrelson, Rawlins, and Potyondy 1994).			suspended solids, or turbidity without a variance.	enforcement action would be taken.
Water (cont'd)	Surface water quality and quantity	Any federal area-wide action in which potential impacts from management activities are occurring or expected to occur	Water quality parameters, temperature, discharge, or stage measurements	Feet, cfs, or standard quantitative measurements of water quality (e.g., mg/L, pH, µS/cm, °C)	Based on activity plan schedule	Exceedance of any parameter above the State of Montana surface water quality standards	Activities would be required to be altered or discontinued. Exceedance would be reported to BLM, MDEQ, or USEPA and enforcement action would be taken.
Water, Indian trust	Groundwater	Adjacent to the Northern Cheyenne and	Sampling of dedicated monitoring	Standard quantitative measurements of	Field measurements six times	Where site-specific studies show a	The BLM would require the operators

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
		Crow Indian Reservations	wells in the zones of extraction and zones above and below the expected activity; wells are to be placed in the affected areas to areas unaffected by management activities	water quality and measurement of depth in feet	annually prior to production activities and continued throughout the activity period and for the duration of 95% of the recovery of pre-development conditions	potential to affect Reservation groundwater, the tribe would be consulted as to appropriate protection measures and where continuous monitoring showed a drawdown of groundwater attributed to CBNG production.	to modify federal CBNG production. Mitigation options would include reducing production rates, shutting in the well or wells, establishing a hydrologic barrier, or providing compensation to the affected tribe.
Water, Indian trust	Groundwater	Adjacent to the Northern Cheyenne and Crow Reservations	Monitoring wells would be established near the mouth of streams containing alluvium	Measurements of depth in feet	Water level measurements would be taken monthly prior to production activity and during development and water quality measurements would be taken 4 times per year	A 20% rise in the water table above its seasonally adjusted elevation, or a 2-unit increase in the SAR value	Discontinue CBNG evaporative ponds in that watershed or require ponds to be lined

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
VEGETATION							
Trees and shrubs	Functional habitat within desired conditions	Site-specific and landscape-level	Visual observation, photos, utilization, browse-evaluation, trend	Cover, diversity, and composition.	Varies and designed to address objectives	Failure to meet Rangeland Health Standards. Trend moving away from management objectives.	Change in livestock season-of-use, timing, intensity, frequency, and duration
Herbaceous	Functional habitat within desired conditions.	Site-specific and landscape-level	Utilization, visual observation, photos, and trend	Cover, diversity, and composition.	Varies and designed to address objectives	Failure to meet Rangeland Health Standards or trend moving away from management objectives	Change in livestock season-of-use, timing, intensity, frequency, and duration
Riparian and Wetland	Functional rating and trend	Priority allotments with allotment management plans and areas rated as non-functional or functional-at risk with downward trend	Lotic and lentic standard PFC checklist and multiple indicators monitoring techniques (see *Riparian Area Management, A User Guide to Assessing Proper Functioning Condition and the Supporting Science for*	Miles or acres based on functional rating and trend	Once every 5 to 10 years based on priority of non-functional and functional-at risk with downward trend areas	Trend away from objective or when no improvement occurs in areas rated as non-functional and functional-at risk with downward trend	Management changes would address causes of degradation. If impacts to management changes did not maintain or improve riparian and wetland functionality, additional monitoring or project revision would

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
			Lotic Areas, TR 1737-15 [Prichard 1998] and *Riparian Area Management A User Guide to Assessing Proper Functioning Condition and the Supporting Science for Lentic Areas*, TR 1737-16 [Prichard et al. 1999])				be required. Oil and gas operators would be required to alter activities in order to provide environmental factors for maintaining or improving functionality of riparian and wetland areas.
Noxious and Invasive Species	Infestations	Inventoried infestation	Photo points, geographic information systems (GIS) data, mapping, and National Invasive Species Information Management System	Infestation size, presence or absence	Annually or every 3 to 5 years and prioritized by species location and treatment method.	Expansion of weeds, Early Detection Rapid Response, new infestations in areas of high public use, and public accessible areas	Change in control method or combine multiple control methods and strategies
FISH AND WILDLIFE							
Fisheries and aquatic wildlife in prairie streams	Habitat conditions and index of biological integrity	All locations within Miles City Field Office (MCFO)	*Bureau of Land Management Prairie Stream Surveys: Study Plan* (BLM	300 meter stream study reaches	Every 5 years (all sites or streams) As needed: as	Decrease in index of biological integrity score, habitat	Management changes would address causes of degradation. If impacts to

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
		prairie stream survey protocol and locations as needed due to degraded habitat, allotment inspections, pre- and post-development, or as other needs arise	2010k) and index of biological integrity approach following *Development and evaluation of a fish assemblage index of biotic integrity for Northwestern Great Plains streams* (Bramblett, Johnson, Zale, and Heggem 2005) and *Fish and Habitat Sampling Protocol for Prairie Streams* (Bramblett 2003)		determined by a decrease in riparian conditions (e.g. declining PFC rating), water quality or water resource parameters indicate a decline in habitat conditions, or land-use or development plans indicate a potential for deleterious impacts to habitat	parameters, decreased riparian function, or allotment failing to meet Standards for Rangeland Health	management changes did not maintain or improve prairie stream aquatic wildlife habitat, additional monitoring or project revision would be required. Oil and gas operators would be required to alter activities in order to provide environmental factors for maintaining or improving prairie stream aquatic wildlife habitat.
Fisheries and aquatic wildlife in sport-fish reservoirs	Habitat conditions and surveys by Montana Fish, Wildlife, and Parks (MFWP)	Designated sport-fish reservoirs	Gill netting and trapping conducted by MFWP	Acres of reservoir	1 to 5 years or determined by MFWP	Decrease in population sizes due to factors related to resource use	Management changes would address causes of degradation. If impacts of management changes did not maintain or improve sport-

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
							fish reservoir habitat, additional monitoring or project revision would be required. Oil and gas operators would be required to alter activities to provide environmental factors for maintaining or improving sport-fish reservoir habitat.
Upland game birds and migratory bird species	Use and trend	Sharp-tailed and sage- grouse leks or winter grounds and migratory bird species habitats	Field inspect leks/breeding bird surveys and strategies outlined in the Wildlife Appendix	Number of males/numbers and species of migratory birds	Monitoring will be tied to yearly (varies per species, 1-5 years for migratory bird species) planning with MFWP or based upon project specific need or existing requirements	Varies and is project-specific (i.e., downward trend in lek attendance)	Extension of timing or project location or re-location, stipulations or COAs, and off-site mitigation

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
Threatened and Endangered species and other special status wildlife species habitat	Habitat use and trends	Black-tailed prairie dog colonies, interior least terns, and special status species raptor nests	Field surveys that include aerial, boat, or ground survey methodologies	Acres and number of prairie dog colonies, least tern numbers and nesting sites, and raptor nest site surveys	Monitoring will be tied to yearly planning with MFWP or based upon project-specific need or existing requirements	Varies and is project- specific	Extension of timing or project location re- location; stipulations or COAs; off-site mitigation
Upland game bird: sage and sharp-tailed grouse	Habitat condition or baseline data collection	Sage-grouse nesting, brood-rearing, winter grounds, and sharp-tailed grouse habitats	Methodologies such as line point intercept and other methodologies as outlined in the *Management Plan and Conservation Strategies for Sage Grouse in Montana-Final* (Montana Sage Grouse Work Group 2005)	Existing habitat conditions, height of residual vegetation, cover, species diversity, and potential habitat trends	Monitoring will be tied to grazing permit renewals, existing conditions, and allotments that contain a high percentage of BLM-administered lands and other actions that cause direct or indirect habitat loss	Varies and is project- specific	Mitigate potential effects of habitat conditions or loss or require changes to livestock season-of-use
Wildland Fire Management and Ecology							
Wildland Fire Management and Ecology	Fire Regime and Condition Class (FR/CC)	Area-wide	FR/CC Standard Landscape Worksheet	Composition of departure and condition classes compared to reference conditions	Field measurements evaluated on a 10-year cycle	A change in the direction of trend away from management	Implement additional vegetation or habitat treatments

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
CULTURAL RESOURCES							
Cultural Resources	Random sample of 10 additional sites	Area-wide	Site inspection	Site, surrounding area	Annually	Any noticeable trend indicating increased disturbance, natural or human-caused	For any noticeable trend indicating increased disturbance (natural or human-caused), halt activity affecting sites, increase frequency and number of sites monitored (if sites are being impacted), increase monitoring of nearby sites, and evaluate damage to sites

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
Cultural Resources (cont'd)	Site degradation caused by human activity	Significant cultural sites and area-wide	Inspection of area disturbed	Site, surrounding area	Annually	Any noticeable trend indicating increased disturbance (natural or human-caused), such as excavations	Closure of areas surrounding site to prevent further disturbance to significant cultural resources (may require an RMP amendment); for any noticeable trend indicating increased disturbance (natural or human-caused), halt activity affecting sites, increase frequency and number of sites monitored (if sites are being impacted), increase monitoring of nearby sites, and evaluate damage to sites

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
Cultural Resources (cont'd)	Environmental degradation, such as erosion or trampling	Significant cultural sites and area-wide	Inspection of displaced or altered area	Site, surrounding area	Annually	Accelerated loss or damage to significant cultural material	Closure of areas surrounding site to prevent further disturbance to significant cultural resources (may require an RMP amendment; for any noticeable trend indicating increased disturbance (natural or human- caused), halt activity affecting sites, increase frequency and number of sites monitored (if sites are being impacted), increase monitoring of nearby sites, and evaluate damage to sites

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
PALEONTOLOGICAL RESOURCES							
Paleontological Resources	Significant paleontological localities	Area-wide	Inspection of disturbed area	Degradation caused by human or natural activities that lead to loss of significant fossil resources	Annually	Loss or damage to significant fossil resources	Closure of areas surrounding site to prevent further disturbance to significant fossil resources (may require an RMP amendment)
	Random sample of 5 additional sites	Area-wide	Inspection of disturbed area	Degradation caused by human or natural activities that lead to loss of significant fossil resources	Annually	Loss or damage to significant fossil resources	Closure of areas surrounding site to prevent further disturbance to significant fossil resources (may require an RMP amendment)
	Locality degradation caused by human activity	Significant paleontological localities	Inspection of area disturbed	Percentage of locality	Annually	Any noticeable trend indicating increased disturbance such as excavations	Closure of areas surrounding site to prevent further disturbance to significant fossil resources (may require an RMP amendment)

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
Paleontological Resources (cont'd)	Environmental degradation, such as erosion or trampling	Significant paleontological localities	Inspection of displaced or altered area	Number of fossils	Annually	Accelerated loss or damage to significant fossils	Closure of areas surrounding site to prevent further disturbance to significant fossil resources (may require an RMP amendment)
VISUAL RESOURCE MANAGEMENT (VRM)							
VRM I	(see *Wilderness* in this table)						
VRM II	VRM II	See Map #	Field visit	Photo points	Once every 1 to 5 years	Unanticipated or unacceptable effects or conflicts occurring	Require mitigation; signing; increase enforcement visits; and replan for area (may require an RMP amendment)
VRM III/IV	Large scale-surface disturbing project	Planning area	Field visit or key observation points	Photos	As the need arises	Large-scale surface-disturbing project on landscape	Require mitigation
LANDS WITH WILDERNESS CHARACTERISTICS							
CAVE AND KARSTS							

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
FORESTRY AND WOODLAND PRODUCTS							
Forestry and Woodland Products (cont'd)	Reforestation	BiFO	Site inspection and stocking surveys	Trees per acre and visual evaluation of tree vigor	Initial survey 10 years after harvest or wildfire; subsequent survey after 15 years to determine if artificial regeneration is necessary	Less than 150 trees per acre; trees greater than 4.6 inches diameter at breast height	Planting of nursery stock or broadcast seeding
	Silvicultural treatments	BiFO	Site inspection	Trees per acre; basal area per acre; volume per acre (thousand board feet per acre); and size classes; visual evaluation of forest health	Pre- and post-treatment	Obtain current stand data information and evaluate effects of treatments	Stocking surveys, stand exams, forest inventory, permanent plots, and photo points
	Forest health	BiFO	National Agricultural Imagery Program photography, aerial detection surveys, site visits	Visual evaluation	Annually	Evaluate insect and disease damage and tree mortality levels	Silvicultural treatments, sanitation harvest, chemical application (e.g., verbenone, carbaryl)
	Roads	BiFO	Site Inspection	Visual Evaluation	Pre- and post-treatment	Damage to road surface (e.g., rutting, erosion, sediment	Culvert replacement or installation, rolling dips, proper

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
						delivery, or culvert washouts)	drainage and road placement, reconstruction, cut and fill slope stabilization, surface blading, grass seeding, armoring, road closures, timing restrictions, and other activities (see Montana BMPs in the *Forestry and Woodland Products Appendix*)
MINERALS							
Coal	Exploration license	Area-wide	Site inspection	Exploration license	The regulations at 43 Code of Federal Regulations (CFR) 3480.06(d)(4) require inspections of exploration and production as frequently as necessary,	Non-compliance with the terms and conditions of the exploration license, or operating regulations; poor reclamation; or	Require compliance with terms and conditions of the license, require appropriate reclamation, and eliminate environmental degradation

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
Coal (cont.)					but at least quarterly. Exploration license areas must be inspected for compliance with site-specific stipulations, terms and conditions of the license, and reclamation success prior to bond release. Because exploration licenses expire after 2 years license areas are typically inspected after expiration of the license but prior to bond release (or sooner if requested by the proponent).	environmental degradation	
Oil, Gas, and Geothermal	Geophysical notice of intent (NOI)	Area-wide	Line or area inspection	Operations conducted in compliance with	Minimum of once during operations	Violation of regulations, change from	Issue certified letter with corrective

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
				NOI		approved NOI	action and timeframe; bond release cannot occur until violations are corrected
Oil, Gas, and Geothermal (cont'd)	Application for permit to drill operations (surface and technical inspections)	Area-wide	Site inspection	Operations conducted in compliance with applications for permit to drill	Surface Inspections: construction, drilling, and production – Minimum of once and as necessary Interim and final reclamation – minimum of once and until reclamation is complete Technical inspection: drilling and production –	Violations of regulations, change from approved applications for permit to drill	Issue a written order or an incident of non-compliance with timeframe to correct violations or shut in operations

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
					minimum of once and as necessary		
Oil, Gas, and Geothermal (cont'd)	Sundry notice	Area-wide	Site inspection	Operations conducted in compliance with approved sundry notice	As necessary	Violations of regulations, change from approved sundry notice	Issue a written order or an incident of non-compliance with timeframe to correct or shut in operations
	Oil and gas drainage	Area-wide	Drainage evaluation	Radius of drainage	As necessary	The BLM determines that federal oil or gas is being drained (physically removed) by an off-lease well.	Notify lessee of drainage situation. Require lease protection, compensatory royalty, or relinquishment
	Produced water disposal	Area-wide	Site inspection	Operations conducted in compliance with permit	Minimum of once annually or as necessary	Violation of regulations or change from approved permit	Issue a written order or an incident of non-compliance with timeframe to correct or shut in operations
	Spill	Area-wide	Site inspection	Spill area cleaned up and reclaimed	Minimum of once after event and as necessary	Violation of regulations or change from approved permit	Issue a written order or an incident of non-compliance

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
							with timeframe for correction
Locatable Minerals	NOIs	Area-wide	Site inspection	NOI	At least four times each year, the responsible field office would inspect an operation if the operator uses cyanide or other leachates or where there is significant potential for acidic or deleterious drainage(43 CFR 3809.600(b). active notices and plans that do not involve leachates should be inspected at least two times per year. These inspection frequencies are minimums; field offices are encouraged to conduct inspections on a more frequent basis where it	Non-compliance with the terms and conditions of the NOI or Plan of Operations, surface management regulations, poor reclamation, or environmental degradation	Require compliance with the terms and conditions of the NOI or Plan of Operations, surface management regulations, and require that reclamation was appropriately completed and environmental degradation did not occur.

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
					is deemed necessary. MBiFO currently has no plans or notices that use leachates.		
Mineral Materials	Permits and contracts	Area-wide	Site visit	Permits and contracts	Inspections are required at least once per year for sales less than 5,000 cubic yards and twice per year for sales larger than 5,000 cubic yards.	Non-compliance with the terms and conditions of the permit or contract, regulations, poor reclamation, or environmental degradation	Require compliance with the terms and conditions of the permit or contract, regulations, and require that reclamation was appropriately completed and environmental degradation did not occur.

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
RECREATION							
Recreation	General recreation use	Area-wide with emphasis on dispersed use of undeveloped recreational sites (extensive recreation management areas)	Area inspection to look for vandalism and resource abuse and to install photo points	Site condition	Twice a year (e.g., once in June and once in October) and photograph annually	User conflicts, resource degradation, or safety hazards	Signing, fencing or other mitigation measures
	Concentrated recreation use and demand	Special recreation management areas and sites with recreation facilities	Visitor registration, traffic counters, estimates, and photo points	Visitor days and site condition	Visitor registration boxes and counters checked once monthly (at the minimum) and weekly or biweekly during heavy use periods; photograph annually	Increased visitor use per year or sustained use that requires additional or improved facilities	Monitor more frequently and signing, fencing, or other mitigation measures
		Area-wide commercial and competitive activities (special recreation permits)	Administrative review and site inspection or reviews for permittees with permit stipulations	Permit stipulations, resource condition, and success of reclamation	On site during competitive events, periodic site inspection for commercial operations,	Violation of permit stipulations, irreparable resource damage, and compromised visitor safety	Monitor more frequently and signing, fencing, or other mitigation measures

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
					and administrative review annually	and recreation experience	
RENEWABLE ENERGY							
Renewable Energy	Rights-of-way (ROWs)	Area-wide	Site inspection	ROW	Minimum of once during or for construction within 5 years of issuance, then in the 20th year after issuance and every 10 years thereafter; before release or collection of a bond; before renewal termination or relinquishment acceptance; or as required by specific terms and conditions in the ROW grant or the plan of development (POD) or regulations	Nonuse of the ROW or violation of ROW grant stipulations, the terms of the POD, or regulations	Require compliance with ROW grant stipulations, POD terms, or regulations with possible suspension or termination for non-compliance or nonuse

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
TRAVEL MANAGEMENT AND OHV							
Travel Management and OHV (cont'd)	Track progress on implementation or planning signing, and mapping	Planning-area-wide	Field trips and localized public meetings	Verify minimized resource damage, user conflicts, and new user-created roads	Annual	Effects not anticipated in EIS or unacceptable effects	Require further mitigation or reclamation; consider replanning area (may require an RMP amendment)
REALTY, CADASTRAL SURVEY, AND LANDS							
Realty, Cadastral Survey, and Lands	ROWs	Area-wide	Site inspection	ROW	Minimum of once during or for construction within 2 years of issuance for Mineral Leasing Act reviews and within 5 years of issuance for Federal Land and Policy Management Act reviews, then in the 20th year after issuance and every 10 years thereafter; before release or collection of a bond; before renewal termination or	Nonuse of the ROW or violation of ROW grant stipulations, the terms of the POD, or regulations	Require compliance with ROW grant stipulations, POD terms, or regulations with possible suspension or termination for non-compliance or nonuse

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
					relinquishment acceptance; or as required by specific terms and conditions in the ROW grant or the POD or regulations		
Realty, Cadastral Survey, and Lands (cont'd)	2920 Land Use Permits and Leases	Area-wide	Site inspection	Lease or Permit	Minimum of once during or for construction within 2 years of issuance; before release or collection of a bond; before renewal termination or relinquishment acceptance; or as required by specific terms and conditions in the lease or permit or the POD or regulations	Nonuse of the lease or permit or violation of lease or permit stipulations, the terms of the POD, or regulations	Require compliance with lease or permit stipulations, POD terms, or regulations with possible suspension or termination for non-compliance or nonuse
	Other Land Use Authorizations	Area-wide	Site inspection	Use Authorization	Minimum of once during or for construction; before release or collection of a bond;	Nonuse of the authorization or violation of authorization stipulations, the terms of the POD, or	Require compliance with authorization stipulations, POD terms, or regulations;

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
					before renewal termination or relinquishment acceptance; or as required by specific terms and conditions in the authorization or the POD or regulations	regulations	with possible suspension or termination for non-compliance or nonuse
Realty, Cadastral Survey, and Lands (cont'd)	Commercial film permits						

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
SPECIAL DESIGNATION AREAS							
ACECs	Cultural ACECs	Area-wide	Site inspection	Sites receiving most public visitation, surrounding area	Annually	Any noticeable trend indicating increased disturbance, natural or human-caused	Increase frequency of monitoring to ensure ACEC values are not being impaired
	Paleontological ACECs	Bridger Fossil Area	Site inspection	Site, surrounding area	Annually	Any noticeable trend indicating increased disturbance, natural or human-caused	Increase frequency of monitoring to ensure ACEC values are not being impaired

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
ACECs (cont'd)	Geologic and Scenic ACECs	Area-wide	Site inspection	Site, surrounding area	Annually	Any noticeable trend indicating increased disturbance, natural or human-caused	Increase frequency of monitoring to ensure ACEC values are not being impaired
	Research Natural Areas & SS plants	Area-wide	Site inspection	Site, surrounding area	Annually	Any noticeable trend indicating increased disturbance, natural or human-caused	Increase frequency of monitoring to ensure ACEC values are not being impaired
National Historic Trails	Lewis & Clark NHT and Nez Perce NHT	Area wide	Area inspection to look for vandalism, resource abuse, and to install photo points	Site condition	Annually	User conflicts, resource degradation, or safety hazards	Signing; site mitigation; more restrictive management (may require a resource management plan [RMP]
Pryor Mountain Wild Horse Range	PMWHR	PMWHR / Territory	• Wild horse inventory • Flight, vehicle, and foot review • Range monitoring	• Number of animals • Rangeland Health	Annually	Wild horse population and use patterns	• Fertility control • Removal • Water and habitat projects for distribution

Element	Item	Location	Technique	Unit of Measure	Frequency and Duration	Remedial Action Trigger	Management Options
Wilderness Study Areas	WSAs	WSAs	Flight, vehicle, and foot review	Surface disturbance	Once per month if the area is accessible unless an alternate schedule is approved by the State Director	Unauthorized actions	Require reclamation or possible civil or criminal action and public notification
Wild and Scenic Rivers	WSR	Area-wide	Vehicle and foot review	Site, surrounding area	Annually		
SPECIAL DESIGNATION AREAS							

Appendix R:
Bureau of Land Management Billings Field Office and Pompeys Pillar National Monument Sign Plan

BUREAU of LAND MANAGEMENT

BILLINGS FIELD OFFICE and

POMPEYS PILLAR NATIONAL MONUMENT

SIGN PLAN

February, 2013

Submitted By: Tim FINGER — Feb 4, 2013

Billings Field Office Sign Coordinator — Date

Reviewed By: _____ — 2/6/13

Pompeys Pillar National Monument Manager — Date

Reviewed By: Craig R Wanke — 2-5-2013

Billings Field Office Assistant Manager — Date

Approved By: _____ — 2-7-13

Billings Field Office Manager — Date

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Introduction

The purpose of this Plan is to establish concise and consistent direction and guidance for the sign maintenance program, and outline the responsibilities of the Field Office/Monument staff and State Office Sign Coordinators for the maintenance of signage utilized on all public lands, waters and facilities managed by the Billings Field Office (BiFO).

Effective communication requires the clear, concise delivery of an understandable message through a powerful medium. Signs are one of the avenues for conveying information to the public about the Bureau of Land Management (BLM). They are a key factor in the way the public views the BLM's competency to manage the public lands and waters under its jurisdiction. Signs on the BLM-managed public lands and waters are our "silent employees."

A comprehensive sign program fosters safety, facilitates the management of an area, provides a learning opportunity for visitors, and offers a positive image and identity for all entities involved in the management of that area. On public lands managed by the Billings Field Office, this Plan conforms with and implements the National Sign Guidebook, which established standards and guidelines for signs and the BLM's National Sign Program.

Purpose of Plan

This Plan:

1. Describes the different types of signs and the locations where they are to be used.

2. Outlines the design standards.

3. Provides specific design standards that apply to certain types of signs, including material and specification requirements.

3. Identifies procurement procedures.

4. delineates the inventory and maintenance strategies.

5. Set schedules for implementation

5. Provides reference material and other resources.

Sign Policy/Action

This Plan provides guidance and direction for ensuring that the physical condition of BLM signage is such that it can accurately identify public lands, promote the safety of the public while visiting public lands, provide visitors with information and direction, mitigate user and management issues, and providing for the regular maintenance and professional appearance of BLM signage.

The following principles were used in formulating the Billings Field Office/Pompeys Pillar National Monument Sign Plan and are also consistent with the basis of the Bureau of Land Management National Sign Program:

1. Signs must deliver understandable messages to visitors. Each sign should address a single topic and not include jargon or technical terms. Messages should not be mixed.

2. The established BLM logo must be used, where appropriate.

3. Signs must comply with the Uniform Federal Accessibility Standards (UFAS) and the Americans with Disabilities Act Accessibility Guidelines (ADAAG). Sections 4.1 and 4.30 from both standards provide specific guidance for signs.

4. Signing situations related to vehicular and pedestrian traffic should follow the specifications established in the Manual on Uniform Traffic Control Devices (MUTCD), published by the Federal Highway Administration.

5. BLM-approved international symbols and established signing industry standards must be used for sign design, fabrication, installation, and maintenance.

6. Signs must comply with pertinent Federal, State, and local laws, as appropriate.

7. The standards and guidelines in the BLM National Sign Guidebook (December 2004) must be applied consistently to ensure that areas are safe and to enhance visitors' experiences on the BLM's public lands and waters.

8. Whenever possible, signs should be used in conjunction with other media, such as maps, brochures, interpretive materials, etc. These will use interchangeable layouts, designs, text, maps, and images as much as possible.

Sign Inventory

The first step in an effective sign maintenance program is to have an accurate and current inventory. From this inventory those signs that are damaged, deteriorated, missing or down, can then be identified. A schedule can then be developed to replace these signs making it possible to estimate labor and material costs to install or repair these signs to a good condition. The inventory also provides a baseline for a condition assessment program to ensure that signs are inspected on a regular basis. These assessments will assist in identifying regular maintenance needs so future budgets can be planned and scheduled maintenance can be performed.

The Billings Field Office has a substantial, but incomplete inventory at this time, so a completion of the inventory is a high priority. Billings Field Office has numerous special emphasis areas such as WSAs, ACEC's, SRMA's, OHV areas, Wild Horse Range, etc.. These areas will have a

high priority for signing. The Billings Field Office has divided the Field Office into more manageable components for easier work. These areas are described as follows:

Pompeys Pillar National Monument: This land parcel includes the 51 acre National Monument and its related infrastructure and the adjacent ACEC for a total of 432 acres.

Big Horn County, Montana: All public lands located within Big Horn County, which includes only small isolated parcels of public lands. However BLM does work closely offsite with other agencies located in this area, such as the Crow Indian Reservation, the Northern Cheyenne Indian Reservation, and the Little Big Horn Battlefield National Monument. Administrative Sites: This includes the Britton Springs facility, the Bridger Fire Station, Field Office, Interagency Fire Center at Billings Airport, Sundance Lodge facility, etc..

Carbon County: This land mass includes the Pryor Mountains region, the Beartooth front region, and the large blocks of public lands between them, which overall includes several Travel Management Areas, ACECs, the Pryor Mountain Wild Horse Range, and several WSAs.

Golden Valley County: This area includes public lands on a portion of the Snowy Mountains and small blocks of public land elsewhere. It has a segment of the Nez Perce National Historic Trail on it as well, located on private lands.

Musselshell County: This area has blocks of public lands of varying size interspersed with private lands.

Stillwater County: Small block of public lands, some receiving public use, other isolated and inaccessible.

Wheatland County: Small and isolated tracts of public lands.

Yellowstone County: This area has a limited public land base, but has intensive use at popular Recreation Areas with a large urban interface.

Big Horn County, Wyoming: The Billings Field Office manages/administers 4,300 acres of public land in Big Horn County, Wyoming, which includes the southernmost part of the Pryor Mountain Wild Horse Range. The BLM works closely with the National Park Service as a portion of the Pryor Mountain Wild Horse Range (PMWHR) is located on the Big Horn Canyon National Recreation Area. The Pryor Mountains and Big Horn Tack-On WSAs both extend into Wyoming.

The BiFO staff will use Form 9130-4, "Sign Inventory/Maintenance Form", to ensure a consistent inventory of all signs. Staff will enter information from this form into the Facility Inventory Maintenance Management System database since funding to maintain signs are obtained through this system. The inventory may also be entered into a GIS system either from a hard copy or through data collection with a GPS unit. Digital photographs may be taken and

attached to the inventory sheets or entered directly into the GIS database. Staff will include all of the following items on an inventory form or in a GIS database for each sign:

a. Date inventoried and name of person conducting the inventory;

b. Location (initially identified on a map or as mileage from a starting point);

c. All language on the sign;

d. Size, color, and shape of sign (height, length, etc.);

e. Size,

f. Sign material;

g. Condition of sign (good, deteriorated, damaged, missing/down, or obsolete);

h. Type of post and attachment system (4X4 treated lumber, metal fence post, etc.);

i. Condition of post (good, deteriorated, damaged, missing/down, obsolete); and

j. Notes (poor location, accessibility issues, vegetation or terrain features blocking view of sign, or anything else that must be addressed later in the planning process).

When the inventory is complete, BiFO Staff will place all sign locations on a map of the area, with the detailed information cross-referenced to the Facilities Inventory Maintenance Management System. The map may consist of the several "bite-size" area maps used during the inventory (such as for the Pompeys Pillar NM/ACEC). Eventually, BiFO intends to combine all inventory data on one large map to facilitate the coordination of signs across the entire Field Office.

A working file will be established and maintained by the Field Office Sign Coordinator. Included in this file will be the inventory data, schedule of implementation, Review results, a copy of this plan, Inventory Form, sign examples and designs, encroachment permits, and any relevant communication and directives.

Sign Review

Each sign should be reviewed every 5 years to answer the following questions and determine compliance with the Sign Plan:

a. Is the sign consistent with existing planning documentation (resource management, activity, or project plans, etc.)?

b. Is this sign needed? Does it serve a purpose? Is it one of several in an area? Have things changed in this location so that the sign is no longer necessary?

c. Is the sign effective? Is the message inappropriate or confusing? Is lettering too small to be read from a high-speed vehicle?

d. Is the location of the sign still appropriate?

e. Are sign and post materials appropriate for year-round conditions, protection from vandalism, etc.?

f. Does the sign complement the rest of the signs in the area?

g. What is the condition of the sign? Even if the message is appropriate and the location is a good one, is the sign faded? Is it time to replace it?

h. Is each sign meeting required rules and regulations, such as MUTCD, UFAS/ADAAG, etc.?

Sign maintenance will be planned and scheduled annually during preparation of the annual work plan so it can be performed on a regular basis. Sign condition assessments should be performed on signs at the minimum of once every 5 years. See tentative Schedule below for details.

Billings Field Office/Pompeys Pillar NM Sign Plan Schedule				
Area (by priority)	Initial Inventory Dates	Review Dates		Notes
Pompeys Pillar NM	2013	2018	2023	Follow-up local project plan under development by staff
Administrative Sites	No record	2013		
Yellowstone County	2008 - 2009	2014	2019	High Priority for inclusion in Activity-level Plans (TMA, SRMA, etc.)
Carbon County	2008-2010	2014	2019	High Priority for inclusion in Activity-level Plans (TMA, SRMA, etc.)
Musselshell County	2008	2013	2018	Medium Priority for Activity-level Plans (TMA, ACEC)
Golden Valley County	2008	2013		Low priority. No or limited public access to public lands
Stillwater County	2013	2018		Low Priority - No or limited public access to public lands
Wheatland County	Not done			Low Priority- No signs – no public

				access
Big Horn County, MT	Not done			Low Priority - No signs – no surface public lands
Big Horn County, WY	2008 -2010	2014	2019	Small amount of data – included with Carbon County

It intended that condition assessments be performed in conjunction with other assessments such as recreation sites, administrative sites, roads and trails, in an effort to increase efficiency and reduce the resources needed to perform similar actions within the same area.

Condition assessments will be performed to determine the condition and effectiveness of BLM signage. This includes evaluating the legibility, appearance, visibility, reflectivity, verification of location, condition of the sign support structure, and condition of the sign itself using the following condition ratings: Good, Deteriorated, Damaged, Missing/Down, Obsolete. The following information, at a minimum, should be collected while performing a sign condition assessment. The sign ID number (the unique identification number assigned within the sign data base for each sign), inspectors name and the date of inspection, the condition rating of the sign, and the condition rating of the sign support structure, and a current digital photo of the sign.

The following definitions of the Condition Ratings should assist in determining the condition of a sign.

Good – The sign may have experienced some weathering, but its lettering and symbols are legible. The sign is intact, with no holes or broken portions. It may need some cleaning to eliminate accumulated dirt and some minor touch up painting. No vegetation or other objects obscure the sign.

Deteriorated – The sign has been extensively impacted by weathering, requiring extensive cleaning and painting to restore it to its original condition. Lettering and symbols are just legible, and reflectivity is about half of what it was when the sign was installed new. Vegetation may also be starting to encroach on the sign. There may also be minor damage to the sign. These signs should be scheduled to be repaired or replaced; vegetation should also be cleared to restore visibility. Signs that are not able to be restored or repaired should be scheduled to be replaced.

Damaged – The sign is weathered to the point that its message is no longer legible. It has severe damage from holes or other vandalism. The sign may be repaired temporarily, but it should be replaced as soon as possible.

Missing/Down – The sign is either missing or damaged beyond repair. If a sign is still needed, a replacement sign should be ordered immediately.

Obsolete – The sign message is outdated or incorrect. Sign should be updated or removed as soon as possible.

If any action is taken on a sign, that action should be noted and the information added to that specific sign's record within the sign data base. This is to ensure the information contained within the data base is kept current. Actions include:

1.) Install, which is the initial placement and positioning of a sign.

2.) Inspect which is to view or examine officially, checking for structural integrity and whether the sign message is legible.

3.) Replace, which is the exchange of a sign with one that is identical to the sign that was originally placed.

4.) Repair, is the fixing or restoring of a sign to a good or sound condition, from a damaged or deteriorated condition.

Sign Categories

Following the BLM Nationwide standards, BiFO signs are grouped into the following categories: identification signs; guide signs; informational signs; traffic control devices; regulatory, warning, and safety signs; and a miscellaneous group that includes temporary, specialty and special event signs. Each of these categories has its own requirements and functions. Messages should not be mixed on a single sign or in a grouping of signs if it leads to sign clutter.

A. Identification Signs. Identification signs help to orient the visitor, project the presence and image of the BLM to the visitor, and identify important areas, facilities, and visitor amenities. These signs also provide public land visitors with a ready recognition of BLM facilities, projects, and services. Messages are primarily text and should be limited to key ideas and information. These signs should not contain any interpretation. If an area is cooperatively managed, an identification sign may display the names/logos of the other entities.

   Identification signs must be the standard truncated shape, be recreation brown in color, and include the BLM emblem of proportional size.

B. Administrative Signs. These signs are used to identify office buildings, field stations, such as Britton Springs visitor centers such as at Pompeys Pillar NM, etc., and must include a raised emblem.

   All Administration signs must be the standard truncated shape, be recreation brown in color, and include the BLM emblem of proportional size.

C. Feature Signs (Kiosks). The BiFO has a standard design and layout for Kiosks, which includes a map on the left side, resource information and regulations on the right, and contact numbers on the bottom. There is a brown banner along the top with the name of the site in the middle and a BLM logo and American Flag on either side. Kiosks are located only at high use areas, specifically at parking lots, trailheads, staging areas or entrance portals where vehicle pull-outs are available.

   The Pompeys Pillar National Monument has its own but similar design and layout for its Kiosks.

D. Area Signs. These signs designate the primary entrances to a popular land area, facility, or group of facilities. Area signs are located along primary access routes serving each area. This includes Pompey Pillar National Monuments, the South Hills Off-highway Vehicle (OHV) area, and the other BiFO Special Recreation Areas. The emblem may be raised on this type of sign, depending on the significance of the area.

   These signs are recreation brown in color, and include the BLM emblem of proportional size.

E. Guide Signs. Guide signs direct the visitor to a specific destination, such as facilities, projects, features, or points of interest. These signs will typically use arrows and distance indicators. These signs must be truncated in shape, be recreation brown, and contain the BLM emblem, unless a different shape is dictated by another jurisdictional agency such as a State highway department for a highway right-of-way. International symbols may be used when possible to provide supplemental information in a simple, concise manner. Directional signs will be located to provide the visitor adequate time to make a decision. Reassurance markers (route markers) may be placed along roads and trails, typically at the beginning, at the end, at intersections, or periodically along the route. The type of sign will vary depending on the project, such as large square Nez Perce NHT signs to brown fiberglass route markers along BLM designated roads and trails. As a general standard, the BiFO will use brown for direction, red or yellow for warning, and white for informational along travel routes.

F. Informational/Interpretive/Regulatory Signs/Panels. Informational signs which provide limited educational opportunities and identify unique and unusual features as well as appropriate regulations. They enhance the public's awareness and appreciation of the public lands and waters. The BFO will use this type of sign at entrance portals and high destination area such as the Four Dances Natural Area/ACEC and Sundance Recreation Areas, Pompey Pillar NM, etc.

   Specifically, the information should be based on a solid theme and central message.

Graphics, poetry, or other art forms may be used to illustrate the theme. Stories or descriptions of events unfolding should be used to teach concepts instead of identifying straight facts. Titles should use five words or less to identify the point or idea. Subtitles should be used to identify the theme and introduce text paragraphs. Appropriate colors reflecting the surrounding environment should be incorporated into the design. Letters should be at least 24 points in size. Entire text blocks should not be in all capital letters. Text should be written to convey a simple message. Graphics should be clear, easy to identify, and complement the text.

Regulatory signs should be legible and plainly displayed from any approach to a facility or feature, whether the visitor is on foot or in a vehicle. When appropriate, signs should be erected to assist in controlling authorized use, in deterring unauthorized entry and use, or in precluding accidental entry. The size, color, lettering, and the interval of posting must be appropriate for each situation.

The message on Regulatory Signs should be positive rather than prohibitive or negative, and should explain the reason for the restrictions to enhance the visitor's understanding. Signs should be rectangular, unless otherwise directed by a higher authority (MUTCD), and do not have to display the BLM emblem.

G. Accessibility. These signs identify particular areas or facilities/programs that are universally accessible. There are four areas or facilities where the International Symbol of Accessibility (ISA) is required to be posted according to the two Federal Accessibility Standards (the Uniform Federal Accessibility Standards (UFAS) and the Americans with Disabilities Act Accessibility Guidelines (ADAAG)). The four areas/facilities requiring the ISA (ADAAG Section 4.1.2.(7) are accessible parking spaces, accessible restrooms, accessible loading zone, and any accessible entrance to a building. The BiFO will mark and maintain these as the highest priority field office wide.

H. Miscellaneous Signs. Temporary signs may be necessary at construction sites, fires, etc., and will be used only for specific periods of time. They are temporary, highlight special conditions or hazards, and may include seasonal messages or special precautions. They will be placed at appropriate high-visibility areas and removed when no longer necessary. Signs should be mounted appropriately and not fastened to trees or other natural features.

Signs used under emergency responses have no specific guidelines and will be designed and constructed as needed by the BiFO staff, with as much input and assistance form other affected parties as practical, given the circumstances.

The temporary use of banners and signs designating a special, one-time public event on the BLM public lands and waters is allowed. Although there are no specific guidelines, the National Sign Center may be contacted to design and create banners for special events, such as National Public Lands Day, National Trails Day, National Fishing and Boating Week, Great Outdoors Week, the Clark Days Commemoration, etc.

I. General Purpose Signs. These are signs that are not specific to the BLM. Stop signs, speed limit and other traffic signs and Occupational Safety and Health (OSHA) signs are examples of signs that fall into this category.

   OSHA signs must conform to the Occupational Safety and Health Standards (29 CFR 1910.145). BLM Staff are required to acquire them from Prison Industries or locally if not available and if permitted by the State Sign Coordinator.

   Traffic signs have very stringent requirements and must be designed and installed in accordance with the Manual on Uniform Traffic Control Devices (MUTCD). These signs include any type of vehicular-related traffic control messages. Traffic control devices must be justified by legal warrants signed by a professionally registered engineer as specified in MUTCD.

Design Standards

All Sign Standards set in the BLM Sign Manual (BLM MS-9130) will be followed. All sign standards set by the U.S. Department of Transportation will be followed, when applicable. If other agency standards apply, such as sign standards specific for the Nez Perce National Historic Trail, these will be adhered to, with a copy of the sign standards retained in the Sign Plan file for future reference.

Relationship to other Plans

The Resource Management Plan (RMP) discusses in general terms the BiFO management strategy and direction. In its new draft RMP (2013), the BiFO travel management decisions are to designate a motorized and non-motorized route system. All non-designated but existing routes would be closed, possibly rehabbed, but not signed. Only designated routes would be signed as open. Specifics of implementation, including signing, brochures, and maps will be addressed in Activity-level Travel Management Plans. Special Recreation Management Areas (SRMAs) would also be addressed through Activity-level plans. ACECs may or may not have Activity-Level Plans.

Permits, Clearances, and Inventories

Appropriate clearances such as Endangered Species Act (ESA), inventories for cultural resources, or National Environmental Policy Act (NEPA) documentation may be required. Prior to the BLM installing any sign, the appropriate jurisdictional agency must grant its permission. This may include the State Department of Transportation if the sign will be placed along a State highway, or the county road and bridge department if the sign will be installed along a county road. Encroachment Permits issued by the managing agency will be retained in the BiFO Sign Plan File.

When placing BLM signs on roads under other jurisdiction, BiFO staff should coordinate signing requirements with that agency. In those instances, staff should follow the placement and installation guidelines and standards of the agency with jurisdiction of the road.

Sign Placement

Placement involves the horizontal positioning, vertical height, and location along the roadway where the sign is placed. The general standard for BiFO is to place all signs on the right-hand side of the traveled way as close to the standard location as is practical.

Consider the following guidelines when selecting sign placement locations:

1. Place signs where they provide adequate time for proper viewer response, considering factors such as speed, trail or road conditions, intermediate intersections, and road/trail geometry.

2. Select locations that minimize viewing obstructions. Some common placement locations to be avoided include:

- Dips in the roadway or trail.
- Just beyond the crest of a hill.
- Where a sign could be obscured by other signs.
- Where the sign may interfere with the normal operation of the facility.
- Where there is increased need for drivers to focus on the roadway.
- Too close to trees or other foliage that could grow to cover the sign face.
- Snow removal areas.
- Site location where a significant viewpoint is impaired

3. Erect signs individually on separate posts or mountings except where one sign supplements another, such as a warning sign with an advisory speed plaque, or where route markers and destination signs must be grouped.

All signs need to be visible to users in time for them to see the sign, perceive the message, react, and complete the necessary maneuver considering approach speeds and conditions.

Place regulatory signs at or near where their mandate or prohibition applies or begins.

Warning signs are normally placed in advance of the situation to which they call attention to allow adequate time for proper response.

Sign faces should be placed at approximately right angles to and directly facing traffic they are intended to serve. On curves, orient the sign to face the oncoming traffic—not the road edge.

Sign Priority

Priorities for signing are listed below in order of importance:

1. Public health and safety.

2. Entrances to and boundaries of areas of national significance (e.g., Pompeys Pillar National Monument, Nez Perce and Lewis and Clark National Historic Trails, Wilderness Study Areas) – NLCS units and the PMWHR.

3. Special management areas (e.g., recreation sites, watchable wildlife sites, trails, back country byways, etc.).

4. Visitor enhancement and convenience.

5. Major concentrations of BLM-managed public lands and waters on major thoroughfares crossing large blocks of public lands.6. Isolated or small parcels of public lands with no or limited access or use.

7. Conformance of existing signs to new standards, especially in high Priority Areas (see above)

Sign Ordering and Storage

All signs will be ordered through appropriate administrative procedures described in other sections of this plan. The signs may be stored at sites throughout the FO prior to installation but individual programs are responsible for them. Any obsolete, damaged, or decayed signs which can be recycled should be brought to a central location designated by the Field Office Manager and disposed of from there on an annual basis, if necessary. Individual programs will be responsible for their own signs and funding. If several programs are involved, the programs will split the cost.

Sign Data Base

The sign data base is intended to be on an electronic shared drive readily accessible to all BiFO staff members and as a paper file located in the Field Office. Any changes on the ground should be changed at the same time on this database and meet the standards as noted above (See "Sign Inventory" section). A new Form 9130-4, "Sign Inventory/Maintenance Form" will be filled out for each new or replacement sign, kiosk, or interpretive panel. At least once each fiscal year the Field Office Sign Coordinator shall imitate a field office-wide staff review of deteriorated, damaged or newly required signs.

Staff Responsibilities

The following key positions are described, to better define duties and responsibilities, regarding sign maintenance.

National Sign Center: Establishes quality control, consistency, and standardization in all BLM signage. Identifies and recommends other public and private sources for the design and production of BLM signs. The Sign Center ensures that all materials produced are consistent with current laws, regulations, and policies. The Sign Center should produce all BLM signs and sign orders in a timely and cost-effective manner. The Sign Center provides expertise on design and materials when requested.

The National Sign Center in Rawlins, Wyoming, is the clearinghouse for all custom BLM signs. Safety and traffic signs should be ordered from the Federal Prison Industries (Unicor). The Sign Center will determine the most efficient cost-effective source whether it be in-house or contracting for the design and production of these signs. The Sign Center is available for assistance with special interpretative products.

National Sign Coordinator: Develops and maintains the BLM National Sign Program. Creates and develops program objectives. Develops current standards and evaluate procedures. The National Sign Coordinator provides program standards and specifications. The National Sign Coordinator approves the appropriate content on all BLM standard signs and has review and approval authority for all BLM signs not conforming to the established standards in the Sign Guidebook; Coordinates the numbering, printing, and issuing of all standard BLM signs. Coordinates and collaborates with all State Sign Coordinators in developing a National Sign Strategy and a National 5-Year Sign Maintenance Plan; Coordinates with all State Offices, program offices, State representatives, and Field Offices to achieve management goals. Has review and approval for all requests for alternative sources of design and production for all BLM signs. Coordinates and collaborates with the National Interpretive Lead on the design and production of interpretive waysides. Coordinates and collaborates with the National Accessibility Lead to ensure the design and production of all signs meet accessibility guidelines.

State Sign Coordinator: The State Sign Coordinator is responsible for producing and updating the State's 5-year sign plan and providing the data to the National Sign Coordinator. The State Sign Coordinator also provides guidance regarding sign maintenance issues and tracks overall sign maintenance needs identified within the statewide sign database. The State sign coordinator will be available to assist and provide guidance to Field Office staff.

Field Office Sign Coordinator: The Field Office Sign Coordinator is responsible for ensuring that the sign database inventory is complete and up to date. They are also responsible for creating and maintaining the Field Office's 5-Year Sign Plan and ensuring that maintenance, and replacement schedules for signs are performed on a regular basis and in an efficient manner. They coordinate with the Field Office personnel that can help and assist with sign maintenance such as equipment operators, recreation planners, and engineers. These are the "on the ground personnel that keep the signage in good condition and looking professional.

Staff Input

Prepared by (team members):

Tim Finger – Outdoor Recreation Planner
Nancy Bjelland – Wild Horse and Burro Program Specialist, Safety
Jared Bybee- State Lead Wild Horse and Burro and Rangeland Management Specialist
Sheila Cain – GIS Specialist
Tom Carroll – Realty Specialist
Dustin Crowe – Rangeland Management Specialist
Don Galvin – Park Ranger
Paul Green – Equipment Operator
Jeff Herriford – Law Enforcement Officer
Irv Leach – Fire Management Officer
Ernie McKenzie – Wildlife Biologist/Fisheries and Riparian Specialist
Larry Padden – Natural Resources Specialist (Weeds)
Jay Parks – Wildlife Biologist
Carolyn Sherve-Bybee – Archeologist, RMP Planning Lead
Carmen Thomason – Fire Education and Mitigation Specialist
Kachmir Watt – Range Specialist
Jared Werning – Equipment Operator

References

Highway Safety Act of 1966 (as amended).

Omnibus Public Land Management Act of 2009 (public Law 111-11)

National Environmental Policy Act of 1969 (NEPA), as amended. 42 U.S.C, 4321 et seq.

The Archaeological Resources Protection Act of 1979 (P.L. 96-95; 93 Stat. 721; 16 U.S.C. 470aa)

The National Trails System Act of 1968, as amended, P.L. 90-543, P.L. 110-229 and 16 U.S.C. 1241-1251

The Sikes Act, as amended, 16 U.S.C. 670a-670o and P.L. 90-465

The Architectural Barriers Act of 1968, as amended, 42 U.S.C. 4151

Executive Order 13195 (Trails for America in the 21st Century)

Executive Orders 11644 (1972) and 11989 (1977) – Off Road Vehicle Management Policies

BLM Travel and Transportation Manual (MS-1626)

42 U.S.C. 4332 – Cooperation of Agencies

BLM Manual 1601 – Land Use Planning

BLM Manual 9100 – Facilities Planning, Design, Construction, and Maintenance.

BLM Manual 9130 – Sign Manual

43 CFR 2920 – Leases, Permits, and Easements

43 CFR 8342 – Off-Road Vehicles: Designation Procedures

43 CFR 8364 – Visitor Services: Closure and Restriction Orders

BLM's National Management Strategy for Motorized Off-highway Vehicle Use on Public Lan (January 2001).

National Mountain Bicycling Strategic Action Plan (BLM/WY/PL- 0303/001+1220).

National Scenic and Historic Trails Strategy and Work Plan (BLM-WO-GI-06-020-6250).

The BLM's Priorities for Recreation and Visitor Services (Purple Book May 2003).

BLM's Unified Strategy to Implement —BLM's Priorities for Recreation and Visitor Services (January 2007).

Planning and Conducting Route Inventories (BLM Technical Reference 9113-1).

Roads and Trails Terminology, U.S. Department of the Interior, Bureau of Land Management, Washington DC, 20240 (Technical Note 422).

43 CFR 8341.2 or 8364.1. Temporary Closure or Restrictions.

Appendix S:
Oil and Gas Lease Stipulations

Serial No._____

CONTROLLED SURFACE USE STIPULATION

Big Game Winter Range

Prior to surface occupancy and use a plan shall be prepared by the proponent as a component of the APD, Sundry Notice, etc. and approved by the Authorized Officer in coordination with the state wildlife management agency. The operator shall not initiate surface-disturbing activities unless the authorized officer has approved the plan. The plan must demonstrate to the authorized officer's satisfaction the function and suitability of the habitat will not be impaired.

Surface occupancy and use activities will be restricted to one oil and gas surface disturbance per 640 acres of land. Cumulative disturbance from all activities cannot exceed more than 5 percent of the winter range habitat in 640 acres. To maintain functional habitat and the associated populations, disturbed areas would have to be fully reclaimed to pre-disturbance conditions or to a desired plant community before additional disturbance could be approved. The plan will address how short-term and long-term direct and indirect effects to winter range will be mitigated based on current science and research (Appendix H). The plan will also include a monitoring protocol.

On the lands described below:

Objective: To protect winter range utilized during mild to severe winters by big game identified by BLM priority species for management; including white-tailed deer, mule deer, elk, moose, pronghorn antelope, and bighorn sheep..

Waiver: The authorized officer, after coordination with the state wildlife management agency, may waive this stipulation if the entire leasehold is no longer big game winter range habitat.

Exception: The authorized officer, after coordination with the state wildlife management agency, may grant an exception if the action will not impair the function or suitability of the winter range habitat.

Modification: The authorized officer, after coordination with the state wildlife management agency, may modify the boundaries of the stipulated area if portions of the leasehold are no longer big game winter range habitat.

(XXXX RMP ROD, Page XX)

Serial No._____

CONTROLLED SURFACE USE STIPULATION

Cave and Karsts

Surface occupancy and use is subject to the following operating constraints:

> Cave and karst areas will be inventoried prior to oil and gas exploration or development by the lessee. An approved mitigation plan will be required to avoid impacts to cave resources.

On the lands described below:

Purpose: To protect cave and karst resources.

There are no waivers, exceptions, or modifications.

(XXXX RMP ROD, Page XX)

Serial No._____

CONTROLLED SURFACE USE STIPULATION

Historic Trails

Surface occupancy and use is subject to the following operating constraints:

> Oil and Gas leasing, exploration, and development would be allowed within ¼ mile of the following historic trails Bridger Cut-Off Trail (all three routes) and the Meeteetse Trail with the following stipulation:
>
> Avoid, minimize, or mitigate adverse effects to historic landscapes surrounding these historic trails as a result of BLM land-use authorizations and to have no net decrease in the value of high-potential segments or sites regardless of NRHP eligibility.

On the lands described below:

Purpose: Preserve and protect historic trails and the natural setting in which they occur.

There are no Waivers, Exceptions or Modifications.

(XXXX RMP ROD, Page XX)

Serial No._____

LEASE NOTICE

Lake Mason NWR

Surface occupancy and use is subject to the following operating constraints:

Cultural sites are located in the _____, Section___ T. ___., R. ___. This parcel is located adjacent to the Lake Mason National Wildlife Refuge.

In accordance with 43 CFR 3101.1-2, additional mitigation may be required in regard to exploration and development.

Purpose: To identify and protect cultural resources and to avoid disturbance or inadvertent impacts to these resources.

Serial No._____

CONTROLLED SURFACE USE STIPULATION

Special Recreation Management Areas

Surface occupancy and use is subject to the following operating constraints:

> Operations within Special Recreation Management Areas (SRMAs) must be conducted in a manner that minimized encounters and conflicts with recreation users. Proposed activities may not alter or depreciate important recreational values located outside of developed areas, but within the SRMA boundary.

On the lands described below:

Purpose: To prevent user conflicts and incompatible uses in areas with high recreational values and significant amounts of recreational activity in the following SMRAs:

- Asparagus Point
- Pryor Mountain Travel Management Area (TMA)
- Horsethief TMA
- South Hills TMA

There are no waivers, exceptions, or modifications.

(XXXX RMP ROD, Page XX)

Serial No._____

CONTROLLED SURFACE USE STIPULATION

Special Status Plants

Surface occupancy or use is subject to the following operating constraints.

> A field inspection will be conducted for special status plant species by the lessee prior to any surface disturbance. A list of special status plant species and any known populations or suitable habitat will be provided after the issuance of the lease. Plant species on the list are subject to change over time as new information becomes available. Plant inventories must be conducted at the time of the year when the target species are actively growing and flowering. An acceptable report must be provided to the BLM documenting the presence or absence of special status plants in the area proposed for surface disturbing activities. The findings of this report may result in restrictions to the operator's plans or may preclude use and occupancy.

On the lands described below:

Purpose: To protect and conserve rare plants associated plant communities and the habitats that support them.

There are no waivers, exceptions, or modifications.

(XXXX RMP ROD, Page XX)

Serial No._____

CONTROLLED SURFACE USE STIPULATION

Elk Calving Grounds

Surface occupancy or use is subject to the following operating constraints:

> Prior to surface occupancy and use a plan shall be prepared by the proponent as a component of the APD, Sundry Notice, etc. and approved by the authorized officer in coordination with the state wildlife management agency. The operator shall not initiate surface disturbing activities unless the authorized officer has approved the plan. The plan must demonstrate to the authorized officer's satisfaction the function and suitability of the habitat will not be impaired.

On the lands described below:

Objective: To protect traditional elk calving ground habitat crucial for successful recruitment of elk calves.

Waiver: The authorized officer, after coordination with the state wildlife management agency, may waive this stipulation if the entire leasehold is no longer elk calving habitat.

Exceptions: The authorized officer, after coordination with the state wildlife management agency, may grant an exception if the action will not impair the function or suitability of the elk calving habitat.

Modification: The authorized officer, after coordination with the state wildlife management agency, may modify the boundaries of the stipulated area if portions of the leasehold are no longer within elk calving habitat.

(XXXX RMP ROD, Page XX)

Serial No._____

LEASE NOTICE

Threatened and Endangered Species, Special Status Species and Their Habitat

The lease area may now or hereafter contain plants, animals, or their habitats determined to be threatened, endangered, or other special status species. BLM may recommend modifications to exploration and development proposals to further its conservation and management objective to avoid BLM approved activity that will contribute to a need to list such a species or their habitat. BLM may require modifications to or disapprove proposed activity that is likely to result in jeopardy to the continued existence of a proposed or listed threatened or endangered species or result in the destruction or adverse modification of a designated or proposed critical habitat. BLM will not approve any ground-disturbing activity that may affect any such species or critical habitat until it completes its obligations under applicable requirements of the Endangered Species Act as amended, 16 U.S.C. § 1531 et seq., including completion of any required procedure for conference or consultation.

(XXXX RMP ROD, Page XX)

Serial No._____

CONTROLLED SURFACE USE STIPULATION

Invasive Species and Noxious Weeds

Surface occupancy and use is subject to the following operating constraints.

The following noxious weed(s) has been identified within the boundaries of the lease parcel:

On the lands described below:

If operator(s) chooses to disrupt/build roads/build facilities on the parcel, then the operator(s) will be responsible for providing an Integrated Weed Management (IPM) plan and the operator will be also responsible for the cost of treatment and monitoring throughout the duration of the project.

1. Site Inventories:
    a. Must be conducted to determine the presence of noxious weeds for all disturbance or use areas.
    b. Are required in known habitat for all areas proposed for surface disturbance before initiating project activities, at a time when the plant can be detected, and during appropriate flowering periods.
    c. Should include documentation on individual plant locations.
    d. Individual(s) qualified in the identification of invasive species must conduct surveys.
2. Lease activities will require monitoring throughout the duration of the project to prevent the spread and introduction and ensure desired results of past treatment(s).
3. Project activities must be designed to minimize soil disturbance to the extent practical, consistent with project objectives.
    a. Avoid creating soil conditions that promote weed germination and establishment.
    b. Avoid or minimize all types of travel through weed-infested areas or restrict travel to periods when the spread of seeds or propagules is least likely.
    c. Prevent the introduction and spread of weeds caused by moving weed-infested sand, gravel, borrow, and fill material.
    d. Inspect material sources before moving infested material to site.

e. Any and all equipment undercarriage must be power washed prior to entry to the aforementioned parcel and prior to leaving public highways/roads. When temperatures fall below freezing (32˚F), high pressure air may be substituted for power washing.

f. All disturbed areas will be revegetated to native species composed of indigenous species appropriate to the area.

Purpose: To prevent the spread and introduction of noxious weeds and ensure desired results of past treatment(s).

Waiver: The boundaries of the stipulated area to be inventoried for noxious weeds may be modified if BLM determines that a large portion of the lease identified for surface disturbing activities does not contain noxious weed species. Such as during pre-drill/onsite inspection for noxious weed species determines that the area proposed for access and/or the construction of a drill pad has not noxious weeds present. If inventory shows no noxious weeds present, the operator must continue to monitor for noxious weeds throughout the duration of the project.

Exception: The stipulation may be waived by the authorized officer if the noxious weed site inventory determines that the lease is found not to have noxious weed species present. If inventory shows no noxious weeds present, the operator must continue to monitor for noxious weeds throughout the duration of the project.

Modification: The exception to this stipulation may be granted if BLM determines and if current weed site inventory indicates that the portion of the lease identified for surface disturbing activities does not contain noxious weed(s). If inventory shows no noxious weeds present, the operator must continue to monitor for noxious weeds throughout the duration of the project.

(XXXX RMP ROD, Page XX)

Serial No._____

CONTROLLED SURFACE USE STIPULATION

Water, Riparian, Wetlands

Surface occupancy and use will be controlled within 300 feet of riparian and/or wetland areas. Surface-disturbing activities will require a plan with design features that demonstrate how all actions would maintain and/or improve the functionality of riparian/wetland areas.

The plan will address:

1. potential impacts to riparian and wetland resources;
2. mitigation to reduce impacts to acceptable levels (including timing restrictions);
3. post project restoration; and
4. monitoring (the operator must conduct monitoring capable detecting early signs of changing riparian and/or wetland conditions).

On the lands described below:

Purpose: To protect the unique biological and hydrological features associated with wetland and riparian areas. Disturbances adjacent to wetland and/or riparian areas (including road use) can adversely impact these sensitive areas. This stipulation would protect these features from indirect effects produced within the adjacent ground. This would also encompass the floodplain along most first to third order streams.

Waiver: This stipulation can be waived by the AO if it is determined that the entire lease area does not contain wetlands or riparian areas.

Exception: The Authorized Officer (AO) may grant an exception to this stipulation if the operator can demonstrate that the proposed action would not adversely impact wetland or riparian function or associated water quality.

Modification: The area affected by this stipulation can be modified by the AO if it is determined that portions of the lease area do not contain wetlands or riparian areas.

(XXXX RMP ROD, Page XX)

Serial No._____

CONTROLLED SURFACE USE

Visual Resource Management Class II, III, and IV Areas

Surface occupancy or use is subject to the following operating constraints.

> All surface disturbing activities and construction of semi-permanent and permanent facilities in VRM Class II, III, and IV areas may require special design including location, painting, and camouflage to blend with the natural surroundings and meet the visual quality objectives for each respective class.

On the lands described below:

For the purpose of: To control the visual impacts of activities and facilities within acceptable levels.

There are no waivers, exceptions, or modifications.

(XXXX RMP ROD, Page XX)

Serial No._____

CONTROLLED SURFACE USE STIPULATION

Travel Management

Surface occupancy or use is subject to the following operating constraints.

Oil and gas activities will comply with all motorized vehicle use and travel plan restrictions, including seasonal restrictions and areas closed to motorized travel.

On the lands described below:

For the purpose of:

a. To prevent degradation of various resource values protected by travel plan limitations and motorized vehicle use restrictions.

Serial No._____

CONTROLLED SURFACE USE STIPULATION

Bighorn Sheep Range

Surface occupancy and use is subject to the following operating constraints.

> Prior to surface occupancy and use a plan shall be prepared by the proponent as a component of the APD, Sundry Notice, etc., and approved by the authorized officer in coordination with the state wildlife management agency. The operator shall not initiate surface disturbing activities unless the authorized officer has approved the plan. The plan must demonstrate to the authorized officer's satisfaction that the function and suitability of the habitat will not be impaired.

On the lands described below:

Objective: To protect bighorn sheep and their habitats, a BLM priority species for management

Waiver: The authorized officer, after coordination with the state wildlife management agency, may waive this stipulation if the entire leasehold is no longer bighorn sheep habitat

Exception: The authorized officer, after coordination with the state wildlife management agency, may grant an exception if the action will not impair the function or suitability of the bighorn sheep habitat.

Modification: The authorized officer, after coordination with the state wildlife management agency, may modify the boundaries of the stipulated area if portions of the leasehold are no longer within bighorn sheep habitat.

(XXXX RMP ROD, Page XX)

Serial No._____

CONTROLLED SURFACE USE STIPULATION

Soils – Sensitive Soils

Surface occupancy and use will be controlled on sensitive soils. Sensitive soils are defined as those with severe wind and water erosion ratings. Prior to surface disturbance on sensitive soils, a reclamation plan must be approved by the administrative officer. The plan must demonstrate the following:

1. No other practicable alternatives exist for relocating the activity;
2. The activity will be located to reduce impacts to soil and water resources;
3. Site productivity will be maintained or restored;
4. Surface runoff and sedimentation will be adequately controlled;
5. On- and off-site areas will be protected from accelerated erosion by wind or water; and
6. Surface-disturbing activities will be prohibited during extended wet periods.

On the lands described below:

Purpose: To maintain the chemical, physical, and biotic properties of soils, this includes maintaining soil productivity, soil stability, and soil biotic properties. This will prevent excessive erosion, potential mass wasting, and improve the likelihood of successful reclamation.

Waiver: The administrative officer may waive this stipulation if it is determined that the entire leasehold does not contain sensitive soils.

Exception: The administrative officer may grant an exception to this stipulation if the operator can demonstrate that the proposed action will not contribute to degradation of the soil resource or downslope resource conditions.

Modification: The administrative officer may modify the area affected by this stipulation if it is determined that portions of the leasehold do not contain sensitive soils.

(XXXX RMP ROD, Page XX)

Serial No._____

LEASE NOTICE

Cultural Inventory Requirement

An inventory of those portions of the leased lands subject to proposed disturbance may be required prior to any surface disturbance to determine whether cultural resources are present and to identify needed mitigation measures. Prior to undertaking any surface-disturbing activities on the lands covered by this lease, the lessee or operator shall:

1. Contact the Surface Management Agency (SMA) to determine whether a cultural resource inventory is required. If an inventory is required, then:

2. The SMA will complete the required inventory; or the lessee or operator, at their option may engage the services of a cultural resource consultant acceptable to the SMA to conduct a cultural resource inventory of the area of proposed surface disturbance. The operator may elect to inventory an area larger than the standard ten-acre minimum to cover possible site relocation which may result from environmental or other considerations. An acceptable inventory report is to be submitted to the SMA for review and approval no later than that time when an otherwise complete application for approval of drilling or subsequent surface-disturbing operation is submitted.

3. Implement mitigation measures required by the SMA. Mitigation may include the relocation of proposed lease-related activities or other protective measures such as data recovery and extensive recordation. Where impacts to cultural resources cannot be mitigated to the satisfaction of the SMA, surface occupancy on that area must be prohibited. The lessee or operator shall immediately bring to the attention of the SMA any cultural resources discovered as a result of approved operations under this lease, and shall not disturb such discoveries until directed to proceed by the SMA.

(XXXX RMP ROD, Page XX)

Serial No._____

LEASE NOTICE

Land Use Authorizations

Land Use Authorizations incorporate specific surface land uses allowed on Bureau of Land Management (BLM) administered lands by authorized officers and those surface uses acquired by BLM on lands administered by other entities. These BLM authorizations include rights-of-way, leases, permits, conservation easements, and Recreation and Public Purposes leases and patents.

The rights acquired, reserved, or withdrawn by BLM for specific purposes include non-oil and gas leases, conservation easements, archaeological easement, road easements, fence easements, and administrative site withdrawals. The existence of such land use authorizations shall not preclude the leasing of the leasing of the oil and gas. The locations of land use authorizations are noted on the oil and gas plats and in LR2000. The plats are a visual source noting location; LR2000 provides location by legal description through the Geographic Cross Reference program.

The specifically authorized acreage for land use should be avoided by oil and gas exploration and development activities. All authorized surface land uses are valid claims to prior existing rights unless the authorization states otherwise.

The right of the Secretary to issue future land use authorizations on an oil and gas lease is reserved by provision of section 29 of the Mineral Leasing Act, 30 U.S.C.

(XXXX RMP ROD, Page XX)

Serial No._____

LEASE NOTICE

Paleontological Resource Inventory Requirement

This lease has been identified as being located within geologic units rated as being moderate to very high potential for containing significant paleontological resources. The locations meet the criteria for class 3, 4 and/or 5 as set forth in the Potential Fossil Yield Classification System. The BLM is responsible for ensuring that the leased lands are examined to determine whether paleontological resources are present and to specify mitigation measures.

Prior to undertaking any surface-disturbing activities on the lands covered by this lease, the lessee or project proponent must contact the BLM to determine whether a paleontological resource inventory is required. If an inventory is required, the lessee or project proponent must complete the inventory subject to the following:

- the project proponent must engage the services of a qualified paleontologist, acceptable to the BLM, to conduct the inventory.
- the project proponent will, at a minimum, inventory a 10-acre area or larger to incorporate possible project relocation which may result from environmental or other resource considerations.
- paleontological inventory may identify resources that may require mitigation to the satisfaction of the BLM.

(XXXX RMP ROD, Page XX)

Serial No._____

LEASE NOTICE

Sacred Sites and Historic Properties

Lease is located adjacent to known sacred sites and Historic Properties, and contains high potential for National Register eligible historic and cultural properties. Lessees are notified that archaeological resource inventory and mitigation costs may be high within this area. A cultural plan of operations will be developed in consultation with the Billings Field Office and must be approved before field development takes place. All surface use plans will be presented to the Billings Field Office archaeologist for review.

On the lands described below:

(XXXX RMP ROD, Page XX)

Serial No._____

LEASE NOTICE

Migratory Birds

Migratory Birds - Migratory Bird Treaty Act.

The Operator is responsible for compliance with provisions of the Act by implementing one of the following measures; a) avoidance by timing; ground disturbing activities will not occur from April 15 to July 15, b) habitat manipulation; render proposed project footprints unsuitable for nesting prior to the arrival of migratory birds (blading or pre-clearing of vegetation must occur prior to April 15 within the year and area scheduled for activities between April 15 and July 15 of that year to deter nesting, or c) survey-buffer-monitor; surveys will be conducted by a BLM approved biologist within the area of the proposed action and a 300 foot buffer from the proposed project footprint between April 15 to July 15 if activities are proposed within this timeframe. If nesting birds are found, activities would not be allowed within 0.1 miles of nests until after the birds have fledged. If active nests are not found, construction activities must occur within 7 days of the survey. If this does not occur, new surveys must be conducted. Survey reports will be submitted to the appropriate BLM Office.

On the lands described below:

(XXXX RMP ROD, Page XX)

Serial No._____

LEASE NOTICE

Black-footed Ferrets

Surface occupancy or use is subject to the following special operating constraints: prior to surface disturbance, prairie dog colonies and complexes 80 acres or more in size will be examined to determine the presence or absence of black-footed ferrets. The findings of this examination may result in some restrictions to the operator's plans or may even preclude use and occupancy. The lessee or operator may, at their own option, conduct an examination to determine the presence or absence of black-footed ferrets. This examination must be done by or under the supervision of a qualified resource specialist approved by the surface management agency. An acceptable report must be provided to the

Surface management agency documenting the presence or absence of black footed ferrets and identifying the anticipated effects of the proposed action on the black-footed ferret and its habitat.

On the lands described below:

(XXXX RMP ROD, Page XX)

Serial No._____

LEASE NOTICE

Invasive Species and Noxious Weeds

There may be noxious weeds present on the lease parcel. Prior to any surface disturbing activities, the operator will be responsible for providing an Integrated Weed Management (IWP) plan. The operator will be responsible for the cost of the treatment and monitoring throughout the duration of the lease as long as oil and gas activities are occurring on the lease.

1. Site Inventories:
    a. Must be conducted to determine the presence of noxious weeds for all disturbance or use areas.
    b. Are required in known habitat for all areas proposed for surface disturbance before initiating project activities, at a time when the plant can be detected, and during appropriate flowering periods.
    c. Should include documentation on individual plant locations.
    d. Individual(s) qualified in the identification of invasive species must conduct surveys.
2. Lease activities will require monitoring throughout the duration of the project, to prevent the spread and introduction and ensure desired results of past treatment(s).
3. Project activities must be designed to minimize soil disturbance to the extent practical, consistent with project objectives.
    a. Avoid creating soil conditions that promote weed germination and establishment.
    b. Avoid or minimize all types of travel through weed-infested areas or restrict travel to periods when the spread of seeds or propagules is least likely.
    c. Prevent the introduction and spread of weeds caused by moving weed-infested sand, gravel, borrow, and fill material.
    d. Inspect material sources before moving infested material to site.
    e. Any and all equipment undercarriage must be power washed prior to entry and prior to leaving public highways/roads. When temperatures fall below freezing (32˚F), high pressure air may be substituted for power washing.
    f. All disturbed areas will be revegetated to native species composed of indigenous species appropriate to the area.

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Serial No.14-16

LEASE NOTICE

Setback from Human Occupied Dwellings Requirement

The Lease area may contain human occupied dwellings. Under Regulation 43 CFR 3101.1-2 and terms of the lease (BLM form 3100-11), the authorized officer may require reasonable measures to minimize adverse impacts to other resource values, land uses, and users not addressed in lease stipulations at the time operations are proposed. Such reasonable measures may include, but are not limited to modification of siting or design of facilities, which may require relocating proposed operations up to 200 meters, but not off the leasehold.

The setback requirement of 500 feet from human occupied dwellings has been established based upon the best information available. The following condition of approval may be applied as a result of the Application for Permit to Drill (APD) process during the on-site inspection and the environmental review unless an acceptable plan for mitigation of impacts is reached between the resident, lessee, and BLM:

- **Facilities will not be allowed within 500 feet of human occupied residences.**

The intent of this Lease Notice is to provide information to the lessee that would help design and locate oil and gas facilities to preserve the aesthetic qualities around human occupied dwellings.

Serial No._____

NO SURFACE OCCUPANCY STIPULATION

ACECs

Surface occupancy and use is prohibited for oil and gas exploration and development in areas identified as areas of critical environmental concern:

On the lands described below:

- Grove Creek ACEC
- Meeteetse Spires (acquisition area only)
- Pryor Foothills RNA ACEC (¼ mile buffer on known plant sites only)
- Stark Site ACEC
- Weatherman Draw ACEC (7,291 acres – expansion area only)

Purpose: To protect cultural, paleontological and other resource values for which the ACECs were nominated.

There are no waivers, exceptions, or modifications.

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Serial No._____

NO SURFACE OCCUPANCY STIPULATION

Bighorn Sheep Lambing

Surface occupancy and use is prohibited for oil and gas exploration and development within bighorn sheep lambing areas.

On the lands described below:

Objective: To protect traditional bighorn sheep lambing habitat, crucial for successful recruitment of bighorn sheep lambs.

Waiver: The authorized officer, after coordination with the state wildlife management agency, may waive this stipulation if the entire leasehold is no longer bighorn sheep lambing habitat.

Exception: The authorized officer, after coordination with the state wildlife management agency, may grant an exception if the action will not impair the function or suitability of the habitat.

Modification: The authorized officer, after coordination with the state wildlife management agency, may modify the boundaries of the stipulated area if portions of the leasehold are no longer within bighorn sheep lambing habitat.

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Serial No._____

NO SURFACE OCCUPANCY STIPULATION

Blue Ribbon Fisheries

Surface occupancy and use is prohibited for oil and gas exploration and development within one half (½) mile from the centerline of streams containing Class 1 fisheries (Blue Ribbon).

On the lands described below:

Objective: To ensure healthy aquatic habitat are maintained along Class 1 fisheries (Blue Ribbon).

Waiver: The authorized officer, after coordination with the state wildlife management agency, may waive this stipulation if the entire leasehold can be occupied without adversely impacting the habitat associated with the Class 1 fisheries.

Exception: The authorized officer, after coordination with the state wildlife management agency, may grant an exception if the action will not impair the function or suitability of the fisheries habitat.

Modification: The authorized officer, after coordination with the state wildlife management agency, may modify the boundaries of the stipulated area if portions of the leasehold can be occupied without adversely impacting the habitat associated with the Class 1 fisheries.

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Serial No._____

NO SURFACE OCCUPANCY STIPULATION

Cemeteries

Surface occupancy and use is prohibited for oil and gas exploration and development within and for a distance of 300 feet from the boundary of a cemetery.

On the lands described below:

> There are no known cemeteries on BLM administered surface within the Billings Field Office boundaries. There are four known cemeteries located on private surface/federal mineral estate within the BiFO boundaries.

Cemetery	County	7.5 Map Name
Annherer Spring Grave	Carbon	Dead Indian Hill
Sunrise Cemetery	Carbon	Castagne
Castle Butte Cemetery	Yellowstone	Bull Mountain NW
Cabin Creek Cemetery	Musselshell	Weed Creek West

Purpose: To identify and protect cultural resources and to avoid disturbance or inadvertent impacts to these resources.

There are no Waivers, Exceptions or Modifications.

(XXXX RMP ROD, Page XX)

Serial No._____

NO SURFACE OCCUPANCY STIPULATION

Coal Leases

Surface occupancy and use is prohibited for oil and gas exploration and development within the boundaries of existing coal leases.

On the lands described below:

Purpose: To protect lease rights associated with existing coal leases.

Waiver: This stipulation may be waived by the authorized officer if it is determined that all coal lease operations within the leasehold have been completed, or if the coal lease is terminated, canceled or relinquished.

Exception: An exception to this stipulation may be granted by the authorized officer if the operator submits a plan of operations which is compatible with existing or planned coal mining operations and is approved by all affected parties.

Modification: The area affected by this stipulation may be modified by the authorized officer if it is determined that the portions of the area are not needed for existing or planned mining operations, or where mining operations have been completed. An agreement approved by all affected parties must be provided to the Authorized Officer.

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Serial No._____

NO SURFACE OCCUPANCY STIPULATION

Eagle Nest Sites

Surface occupancy and use is prohibited for oil and gas exploration and development within ½ mile of active and alternate eagle nests (for territories occupied within the last five years) unless the activity complies with USFWS National Bald Eagle Management Guidelines (2007).

On the lands described below:

Purpose: To protect bald and golden eagle nesting sites and/or breeding habitat in accordance with the Montana Bald Eagle Management Plan and the Bald and Golden Eagle Protection Act.

Waiver: This stipulation may be waived if the authorized officer, in consultation with USFWS, determines that the entire leasehold no longer contains eagle nests or nesting territories.

Exception: An exception may be granted by the authorized officer if the operator submits a plan which demonstrates that the proposed action will not affect eagles or their habitat. This plan must be approved by BLM in consultation with the USFWS. Refer to "Requirements and/or Guidelines for Wildlife Controlled Surface Use (CSU) and Exceptions to No Surface Occupancy (NSO) and Timing Limitation Stipulations", Appendix H.

Modification: The boundaries of the stipulated area may be modified if the authorized officer, in consultation with USFWS, determines that a portion of the leasehold no longer contains eagle nests or nesting territories. Distance would be reduced if natural barriers (e.g., vegetation or terrain) reduce line-of-sight distance or nest visibility.

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Serial No._____

NO SURFACE OCCUPANCY STIPULATION

Raptor Nest Sites

Surface occupancy and use is prohibited for oil and gas exploration and development within ¼ mile of raptor nest sites active within the preceding seven (7) years.

On the lands described below:

Objective: To protect nest sites of raptors identified as BLM priority species for management.

Waiver: The authorized officer may waive this stipulation if the entire leasehold is no longer within ¼ mile of raptor nest sites active within the past 7 years or if the habitat has been altered to an extent that future use by nesting raptors is unlikely.

Exception: The authorized officer may grant an exception if the action will not result in nest territory abandonment.

Modification: The authorized officer may modify the boundaries of the stipulated area if portions of the leasehold are no longer within ¼ mile of raptor nest sites active within the past 7 years.

(XXXX RMP ROD, Page XX)

Serial No._____

NO SURFACE OCCUPANCY STIPULATION

Colonial-nesting Waterbirds

Surface occupancy and use is prohibited for oil and gas exploration and development within ¼ mile of waterbird nesting colonies.

On the lands described below:

Purpose: To protect the nesting and breeding habitat of colonial-nesting birds identified as BLM priority species for management.

Waiver: The authorized officer may waive this stipulation if the entire leasehold is no longer within ¼ mile of nest sites historically used by colonial-nest birds or if the habitat has been altered to an extent that future use by colonial-nesting birds is unlikely.

Exception: The authorized officer may grant an exeption if the action will not result in colony abandonment.

Modification: The authorized officer may modify the boundaries of the stipulated area if portions of the leasehold are no longer within ¼ mile of colonial-nesting bird sites.

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Serial No._____

NO SURFACE OCCUPANCY STIPULATION

LWCF Lands

Surface occupancy and use is prohibited for oil and gas exploration and development on lands acquired with Land and Water Conservation Funds.

On the lands described below:

Purpose: To protect surface values on lands acquired with Land and Water Conservation Funds. These lands are traditionally acquired for the purpose of protecting and managing for wildlife habitat or watershed values.

There are no waivers, exceptions, or modifications.

(XXXX RMP ROD, Page XX)

Serial No._____

NO SURFACE OCCUPANCY STIPULATION

Mountain Plover Habitat

Surface occupancy and use is prohibited for oil and gas exploration and development within mountain plover habitat.

On the lands described below:

Objective: To protect mountain plover habitat.

Waiver: The authorized officer may waive this stipulation if the entire leasehold is no longer within mountain plover nesting habitat.

Exception: The authorized officer may grant an exception if the action will not impair the function or suitability of the mountain plover habitat.

Modification: The authorized officer may modify the boundaries of the stipulated area if portions of the leasehold are no longer within mountain plover habitat.

(XXXX RMP ROD, Page XX)

Serial No._____

NO SURFACE OCCUPANCY STIPULATION

National Historic Trails

Surface occupancy and use is prohibited for oil and gas exploration and development within one-half (½) mile of designated National Historic Trails.

On the lands described below:

- Designated National Historic Trails include the Lewis and Clark Trail and the Nez Perce (Nee-Ne-Poo) Trail.

Purpose: Preserve and protect designated National Historic Trails and the natural setting in which they occur.

There are no Waivers, Exceptions or Modifications.

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Serial No._____

NO SURFACE OCCUPANCY STIPULATION

National Register Eligible Sites

Surface occupancy and use is prohibited for oil and gas exploration and development within, and for a distance of 300 feet from the boundaries of cultural properties and archaeological/historic districts determined to be eligible or potentially eligible to the national register of historic places. This includes cultural properties designated for conservation use, scientific use, traditional use, and public use. Defined archaeological sites, districts, and areas include: Steamboat Butte, Bruder-Janich Site, Paul Duke Site, Demi-John Flat NR District, Bighorn Mouth North Cliffs rock art site, Gyp Springs Site, Hoskins Basin Archaeological District.

On the lands described below:

Purpose: To protect those cultural properties identified for Conservation Use, Public Use, Traditional Use, or Scientific Use. (see definitions in WO IM 2002-101)

There are no waivers, exceptions, or modifications.

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Serial No._____

NO SURFACE OCCUPANCY STIPULATION

Paleontological Sites

Surface occupancy and use is prohibited for oil and gas exploration and development within designated or recorded paleontological sites.

On the lands described below:

Purpose: To preserve and protect significant vertebrate fossils and paleontological locales.

There are no waivers, exceptions, or modifications.

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Serial No._____

NO SURFACE OCCUPANCY STIPULATION

Peregrine Falcon Nests

Surface occupancy and use is prohibited for oil and gas exploration and development within one mile of peregrine falcon nest sites active within the preceding 7 years.

On the lands described below:

Purpose: To protect nest sites and nesting activities of peregrine falcons, a BLM priority species for management.

Waiver: The authorized officer may waive this stipulation of the entire leasehold is no longer within one mile of peregrine falcon nest sites active within the past 7 years or if the habitat has been altered to an extent that future use by nesting peregrine falcons is unlikely.

Exception: The authorized officer may grant an exception if the action will not result in nest territory abandonment.

Modification: The authorized officer may modify the boundaries of the stipulated area if portions of the leasehold are no longer within one mile of peregrine falcon nest sites active within the past 7 years..

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Serial No._____

NO SURFACE OCCUPANCY STIPULATION

Prairie Dog Habitat

Surface occupancy and use is prohibited for oil and gas exploration and development within ¼ mile of black-tailed or white-tailed prairie dog habitat. Prairie dog habitat is defined as the maximum extent of areas occupied by prairie dogs at any time during the last 10 years.

On the lands described below:

Purpose: To protect prairie dog habitat, a BLM priority species for management as well as, burrowing owls, mountain plover, and other obligate species.

Waiver: The authorized officer may waive this stipulation if the entire leasehold is no longer within ¼ mile of prairie dog colonies active within the past 10 years.

Exception: The authorized officer may grant an exception if the action will not impair the function or suitability of the prairie dog habitat.

Modification: The authorized officer may modify the boundaries of the stipulated area if portions of the leasehold are no longer within ¼ mile of prairie dog habitat active within the past 10 years.

(XXXX RMP ROD, Page XX)

Serial No._____

NO SURFACE OCCUPANCY STIPULATION

Unincorporated Towns and Residential Structures

Surface occupancy and use is prohibited for oil and gas exploration and development within and 500 feet from unincorporated towns or human occupied residential structures.

On the lands described below:

Purpose: To ensure a proper distance between development and human occupation for health and safety purposes; 500 feet provides for reduced visual intrusion, noise, traffic, and dust.

Waiver: This stipulation may be waived if the authorized officer determines that the entire leasehold can be occupied without adversely affecting the public's health and safety.

Exception: An exception to this stipulation may be granted by the authorized officer if the operator submits a plan that demonstrates that the impacts from the proposed action can be adequately mitigated.

Modification: The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area can be occupied without adversely affecting the public's health and safety.

(XXXX RMP ROD, Page XX)

Serial No._____

NO SURFACE OCCUPANCY STIPULATION

Riparian, Water, Wetlands, and Floodplains

Surface occupancy and use is prohibited for oil and gas exploration and development within perennial or intermittent streams (as indicated by obligate wetland species or hydric soils), lakes, ponds, and reservoirs, 100-year floodplains, wetlands, and riparian areas.

On the lands described below:

Purpose: To protect the unique biological and hydrological features associated with perennial or intermittent streams; lakes, ponds, and reservoirs; floodplains; wetlands; and riparian areas.

Waiver: This stipulation may be waived by the authorized officer if it is determined that the entire leasehold does not include these types of areas.

Exception: No exceptions would be allowed in streams, natural lakes, or wetlands. An exception may be granted by the authorized officer for riparian areas and floodplains if the operator can demonstrate that: (1) there are no practicable alternatives to locating facilities in these areas, (2) the proposed actions would maintain or enhance resource functions, and (3) all reclamation goals and objectives would be met.

Modification: The area affected by this stipulation may be modified by the authorized officer if it is determined that portions of the area do not include these types of areas.

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Serial No._____

NO SURFACE OCCUPANCY STIPULATION

Traditional Cultural Properties and Traditional Use Areas

Surface occupancy and use is prohibited for oil and gas exploration and development within one-half (½) mile of the boundaries of cultural properties determined to be of particular importance to Native American groups, determined to be traditional cultural properties, and /or designated for traditional use. Such properties include (but are not limited to) burial locations, plant gathering locations, and areas considered sacred or used for religious purposes.

On the lands described below:

Purpose: To avoid disturbance and to protect archaeological properties of known significance to Native American groups, as well as traditional cultural properties, and the setting in which they occur.

There are no Waivers, Exceptions or Modifications.

(XXXX RMP ROD, Page XX)

Serial No._____

NO SURFACE OCCUPANCY STIPULATION

Greater Sage-Grouse (Priority Habitat Management Areas)

To protect Greater Sage-grouse, a priority species for management, surface occupancy and use is prohibited for oil and gas exploration and development within Greater Sage-grouse Priority Habitat Management Areas (PHMAs).
On the lands described below:

Objective: To maintain and enhance the most important of habitats needed by priority sage-grouse populations.

Waivers and Modifications : No waivers or modifications to a fluid mineral lease no-surface-occupancy stipulation will be granted. The Authorized Officer may grant an exception to a fluid mineral lease no-surface-occupancy stipulation only where the proposed action:

i. Would not have direct, indirect, or cumulative effects on GRSG or its habitat; or,
ii. Is proposed to be undertaken as an alternative to a similar action occurring on a nearby parcel, and would provide a clear conservation gain to GRSG.

Exceptions: Exceptions based on conservation gain (ii) may only be considered in (a) PHMAs of mixed ownership where federal minerals underlie less than fifty percent of the total surface, or (b) areas of the public lands where the proposed exception is an alternative to an action occurring on a nearby parcel subject to a valid Federal fluid mineral lease existing as of the date of this RMP [revision or amendment]. Exceptions based on conservation gain must also include measures, such as enforceable institutional controls and buffers, sufficient to allow the BLM to conclude that such benefits will endure for the duration of the proposed action's impacts.
Any exceptions to this lease stipulation may be approved by the Authorized Officer only with the concurrence of the State Director. The Authorized Officer may not grant an exception unless the applicable state wildlife agency, the USFWS, and the BLM unanimously find that the proposed action satisfies (i) or (ii). Such finding shall initially be made by a team of one field biologist or other GRSG expert from each respective agency. In the event the initial finding is not unanimous, the finding may be elevated to the appropriate BLM State Director, USFWS State Ecological Services Director, and state wildlife agency head for final resolution. In the event their finding is not unanimous, the exception will not be granted. Approved exceptions will be made publically available at least quarterly.

(XXXX RMP ROD, Page XX)

Serial No._____

NO SURFACE OCCUPANCY STIPULATION

Greater Sage-Grouse General Habitat Management Areas

To protect general habitat areas for Greater Sage-grouse breeding activities, surface occupancy and use is prohibited for oil and gas exploration and development within 0.6 mile of the perimeter of Greater Sage-grouse leks.

On the lands described below:

Objective: To maintain the integrity of general sage-grouse habitat and promote movement and genetic diversity to support sustainable sage-grouse populations.

Waiver: The authorized officer may waive this stipulation if:

- The entire leasehold is no longer within 0.6 mile of the perimeter of a lek;
- It is determined sage-grouse are no longer a BLM special status species or federally threatened or endangered;
- No reasonable alternative development scenario exists; or
- The habitat has been altered to the point sage-grouse no longer use the site and there is little likelihood of habitat capable of supporting sage-grouse being restored.

Exceptions and Modifications: A modification or exception may only be considered where the proposed action is determined to be non-habitat, the area is not used by GRSG, and the proposed action would not have direct, indirect, or cumulative effects to GRSG or its habitat. The determination would be made by the BLM in consultation with a team of agency GRSG experts, including an expert from the state wildlife agency, USFWS, and BLM/USFS. The State Director must have received a determination before approving any modification or exception. All modifications or exceptions must be approved by the State Director.

(XXXX RMP ROD, Page XX)

Serial No._____

NO SURFACE OCCUPANCY STIPULATION

Greater Sage-Grouse Restoration Areas

To protect restoration areas for Greater Sage-grouse breeding activities, surface occupancy and use is prohibited for oil and gas exploration and development within 0.6 mile of the perimeter of Greater Sage-grouse leks.

On the lands described below:

Objective: To maintain the integrity of general sage-grouse habitat and promote movement and genetic diversity to support sustainable sage-grouse populations.

Waiver: The authorized officer may waive this stipulation if:

- The entire leasehold is no longer within 0.6 mile of the perimeter of a lek;
- It is determined sage-grouse are no longer a BLM special status species or federally threatened or endangered;
- No reasonable alternative development scenario exists; or
- The habitat has been altered to the point sage-grouse no longer use the site and there is little likelihood of habitat capable of supporting sage-grouse being restored.

Exception: The authorized officer may grant an exception if the action will not result in sage-grouse lek abandonment.

Modification: The authorized officer may modify the boundaries of the stipulated area if portions of the leasehold are no longer within 0.6 mile of the perimeter of an active lek or a portion of the habitat has been altered to the point sage-grouse no longer occupy the site and there is no likelihood of habitat capable of supporting sage-grouse being restored.

(XXXX RMP ROD, Page XX)

Serial No._____

NO SURFACE OCCUPANCY STIPULATION

Sharp-tailed Grouse and Greater Prairie Chicken Leks

Surface occupancy and use is prohibited for oil and gas exploration and development within ½ mile of sharp-tailed grouse and greater prairie chicken leks.

On the lands described below:

Objective: To protect leks for sharp-tailed grouse and greater prairie chicken, a BLM priority species for management.

Waiver: The authorized officer may waive this stipulation after coordination with the state wildlife management agency if the entire leasehold is no longer within ½ mile of the perimeter of active sharp-tailed grouse or greater prairie chicken leks active within the past 5 years or if the habitat has been altered to an extent that future use by sharp-tailed grouse or greater prairie chicken is unlikely.

Exception: The authorized officer, after coordination with the state wildlife management agency, may grant an exception if the action will not result in lek abandonment.

Modification: The authorized officer may modify the boundaries of the stipulated area after coordination with the state wildlife management agency if portions of the leasehold are no longer within ½ mile of the perimeter of active leks active within the past 5 years or if the habitat has been altered to an extent that future use by sharp-tailed grouse or greater prairie chicken is unlikely.

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Serial No._____

NO SURFACE OCCUPANCY STIPULATION

Special Recreation Management Areas

Surface occupancy and use is prohibited for oil and gas exploration and development on the following Special Recreation Management Areas:

On the lands described below:

- Sundance Lodge Recreation Area
- Four Dances Natural Area ACEC
- Shepherd Ah-Nei Recreation Area
- Acton Recreation Area
- Yellowstone River Corridor: ½ mile corridor

Purpose: To prevent user conflicts and incompatible uses in areas with high recreational values and significant amounts of recreational activity and to protect surface values in developed recreation areas and areas receiving high/concentrated use.

There are no waivers, exceptions, or modifications.

(XXXX RMP ROD, Page XX)

Serial No._____

NO SURFACE OCCUPANCY STIPULATION

State Lands

Surface occupancy and use is prohibited for oil and gas exploration and development within the State of Montana Wildlife Management Areas, Game Ranges, Fishing Access Sites, and State Parks.

On the lands described below:

Purpose: To prevent user conflicts, incompatible uses in areas with high recreational values, provide the opportunity for quality recreation experiences, and to protect habitat suitability.

Waiver: This stipulation may be waived by the authorized officer, in consultation with the State of Montana, determines that the entire leasehold no longer contains a State of Montana management area or leasing is allowed.

Exception: An exception may be granted by the authorized officer, in consultation with the State of Montana, if the operator submits a plan demonstrating that impacts from the proposed action are acceptable or can be mitigated.

Modification: The boundaries of the area may be modified by the authorized officer, in consultation with the State of Montana; if it is determined the management boundaries can be changed.

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Serial No._____

NO SURFACE OCCUPANCY STIPULATION

Wild and Scenic Rivers

Surface occupancy and use is prohibited for oil and gas exploration and development within one half (½) mile from the centerline of Eligible and Suitable Wild and Scenic River segments.

On the lands described below:

Purpose: To protect the eligibility of Wild and Scenic River segments.

Waiver: This stipulation may be waived if the authorized officer determines that the entire leasehold can be occupied without adversely affecting WSR eligibility.

Exception: An exception to this stipulation may be granted by the authorized officer if the operator submits a plan that demonstrates that the impacts from the proposed action are minimal or can be adequately mitigated.

Modification: The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area can be occupied without affecting eligibility of WSR segments.

(XXXX RMP ROD, Page XX)

Serial No._____

NO SURFACE OCCUPANCY STIPULATION

Yellowstone Cutthroat Trout Populations

Surface occupancy and use is prohibited for oil and gas exploration and development within one half (½) mile from the centerline of streams containing Montana Fish, Wildlife, and Parks designated conservation and core populations of Yellowstone cutthroat trout.

On the lands described below:

Purpose: To protect Yellowstone cutthroat trout habitat necessary for the long term maintenance of Yellowstone cutthroat trout populations and ensure healthy aquatic habitat exists in drainages important to the viability of the species.

Waiver: This stipulation may be waived if the authorized officer determines that the entire leasehold can be occupied without adversely affecting Yellowstone cutthroat trout populations and Yellowstone cutthroat trout habitat.

Exception: An exception to this stipulation may be granted by the authorized officer if the operator submits a plan which demonstrates that the proposed action will not affect Yellowstone cutthroat trout or their habitat. Refer to "Requirements and/or Guidelines for Wildlife Controlled Surface Use (CSU) and Exceptions to No Surface Occupancy (NSO) and Timing Limitation Stipulations", Appendix H.

Modification: The boundaries of the stipulated area may be modified of the authorized officer determines that portions of the area can be occupied without adversely affecting Yellowstone cutthroat trout populations and Yellowstone cutthroat trout habitat.

(XXXX RMP ROD, Page XX)

Serial No._____

NO SURFACE OCCUPANCY STIPULATION

Black-footed Ferret Habitat

Surface occupancy and use is prohibited for oil and gas exploration and development within ¼ mile of black-footed ferret habitat. (NSO)

On the lands described below:

Purpose: To protect habitat for the federally endangered black-footed ferret.

Waiver: The authorized officer, subject to consultation with USFWS, may waive this stipulation, if the entire leasehold is no longer within ¼ mile of current to potential black-footed ferret habitat.

Exception: The authorized officer, subject to consultation with the USFWS, may grant an exception if the action will not impair the function or suitability of the black-footed ferret habitat.

Modification: The authorized officer, subject to confirmation from the USFWS, may modify the boundaries of the stipulated area if portions of the leasehold are no longer within ¼ mile of current or potential black-footed ferret habitat.

(XXXX RMP ROD, Page XX)

Serial No._____

NO SURFACE OCCUPANCY STIPULATION

Soils – Badlands, Rock Outcrops

Surface occupancy and use is prohibited for oil and gas exploration and development on badlands and rock outcrops. (NSO)

On the lands described below:

Purpose: To prevent excessive soil erosion and to avoid disturbing areas subject to potential reclamation problems.

Waiver: The authorized officer may waive this stipulation if it is determined that the entire leasehold does not include these types of areas.

Exception: The authorized officer may not grant exceptions to this stipulation.

Modification: The authorized officer may modify the boundaries of the stipulated area if it is determined that portions of the leasehold do not include these types of areas.

(XXXX RMP ROD, Page XX)

Serial No._____

NO SURFACE OCCUPANCY STIPULATION

State-designated Source Water Protection Areas

Surface occupancy and use is prohibited for oil and gas exploration and development within State-designated Source Water Protection Areas. (NSO)

Purpose: To protect human health by minimizing the potential contamination of public water systems. Source water is untreated water from streams, rivers, lakes, or aquifers used to supply public water systems. Ensuring that source water is protected from contamination can reduce the costs of treatment and risks to public health. This stipulation would protect the State-designated Source Water Protection Areas that protect public water systems from potential contamination.

Waiver: The authorized officer may waive this stipulation if it is determined that the entire leasehold does not include Source Water Protection Areas.

Exception: – The authorized officer may not grant exceptions to this stipulation.

Modification: The authorized officer may modify the boundaries of the stipulated area if it is determined that portions of the leasehold do not include Source Water Protection Areas.

(XXXX RMP ROD, Page XX)

Serial No._____

NO SURFACE OCCUPANCY STIPULATION

Interior Least Tern

Surface occupancy and use is prohibited for oil and gas exploration and development within one-quarter (¼) mile of wetlands identified as Interior Least Tern habitat.

On the lands described below:

Objective: To protect the nesting habitat of the interior least tern, an endangered species under the Endangered Species Act (ESA).

Waiver: The authorized officer may waive this stipulation if the entire leasehold is no longer within ¼ mile of interior least tern nesting habitat.

Exception: The authorized officer, subject to consultation with the USFWS, may grant an exception if the action will not result in nest territory abandonment or decrease productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior.

Modification: The authorized officer may modify the boundaries of the stipulated area if portions of the leasehold are no longer within ¼ mile of interior least tern habitat.

(XXXXX RMP ROD, Page XX)

Serial No._____

NO SURFACE OCCUPANCY STIPULATION

Crucial Winter Range

Surface occupancy and use is prohibited for oil and gas exploration and development in crucial winter range for antelope, elk, moose, bighorn sheep, mule deer, white-tailed deer, and Greater Sage-grouse.

On the lands described below:

Objective: To protect winter ranges crucial to the survival of 80% of the species identified as BLM priority species for management in the most severe of winters.

Waiver: The authorized officer, after coordination with the state wildlife management agency, may waive this stipulation if the entire leasehold has been altered to an extent that future use by wintering wildlife is unlikely.

Exception: The authorized officer, after coordination with the state wildlife management agency, may grant an exception if the action will not result impair the function or suitability of the winter range habitat.

Modification: The authorized officer, after coordination with the state wildlife management agency, may modify the boundaries of the stipulated area if portions of the leasehold no longer support wintering wildlife.

(XXXXX RMP ROD, Page XX)

Serial No._____

TIMING LIMITATION STIPULATION

Mountain Plover Habitat

Surface use is prohibited within ¼ mile of mountain plover habitat from April 1 through July 15.

On the lands described below:

Objective: To protect nesting activities associated with mountain plovers, a BLM priority species for management.

Waiver: The authorized officer may waive this stipulation if the entire leasehold is no longer within ¼ mile of mountain plover habitat.

Exception: The authorized officer may grant an exception if the action will not result in nest territory abandonment or decrease productivity by substantially interfering with normal breeding, feeding, or sheltering behavior of mountain plovers.

Modification: The authorized officer may modify the boundaries of the stipulated area if portions of the leasehold are no longer within ¼ mile of mountain plover habitat.

(XXXX RMP ROD, Page XX)

Serial No._____

TIMING LIMITATION STIPULATION

Raptor Nest Sites

Surface use is prohibited within ½ mile of active raptor nest sites from March 1 through July 31.

On the lands described below:

Objective: To protect nesting activities associated with raptors identified as BLM priority species for management

Waiver: The authorized officer may waive this stipulation if the entire leasehold is no longer within ½ mile of an active raptor nest.

Exception: The authorized officer may grant an exception if the action will not result in nest territory abandonment or decrease productivity by substantially interfering with normal breeding, feeding, or sheltering behavior.

Modification: The authorized officer may modify the boundaries of the stipulated area if portions of the leasehold are no longer within ½ mile of an active raptor nest.

(XXXX RMP ROD, Page XX)

Serial No._____

TIMING LIMITATION STIPULATION

Colonial-nesting Waterbirds

Surface use is prohibited within ½ mile of a waterbird colony from April 1 through July 15.

On the lands described below:

Purpose: To protect nesting activities associated with colonial-nesting birds identified as BLM priority species for management.

Waiver: The authorized officer may waive this stipulation if the entire leasehold is no longer within ½ mile of an active colonial-nesting bird colony.

Exception: The authorized officer may grant an exception if the action will not result in nest territory abandonment or decrease productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior.

Modification: The authorized offiver may modify the boundaries of the stipulated area if portions of the leasehold are no longer within ½ mile of an active nesting colony.

(XXXX RMP ROD, Page XX)

Serial No._____

TIMING LIMITATION STIPULATION

Sprague's Pipit Habitat

Surface use is prohibited from April 15 through July 15 in Sprague's Pipit Habitat.

This stipulation does not apply to operation and maintenance of production facilities.

On the lands described below:

Purpose: The protection of nesting and breeding habitat and the reproductive potential for Sprague's pipit.

Waiver: This stipulation may be waived if the authorized officer determines that the entire leasehold no longer has Sprague's pipit habitat or nest sites are inactive.

Exception: An exception to this stipulation may be granted by the authorized officer if the operator submits a plan which demonstrates that the proposed action will not affect Sprague's pipit or their habitat. Refer to "Requirements and/or Guidelines for Wildlife Controlled Surface Use (CSU) and Exceptions to No Surface Occupancy (NSO) and Timing Limitation Stipulations", Appendix H.

Modification: The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area no longer are within 1 mile of Sprague's pipit. Distance may be reduced if natural barriers (e.g. vegetation or terrain) reduce line-of-sight distance or nest visibility. The timing restriction dates may be modified if new information indicates that the dates are not valid for the leasehold.

(XXXX RMP ROD, Page XX)

Serial No._____

TIMING LIMITATION STIPULATION

Sage Grouse Nest Areas (Restoration Areas and General Habitat Management Areas)

Surface use is prohibited from March 1 through June 30 within 3 miles of sage grouse leks.

This stipulation does not apply to operation and maintenance of production facilities.

On the lands described below:

Purpose: The protection of sage-grouse leks, breeding and nesting habitat, necessary for the long term maintenance of sage-grouse populations.

Waiver: This stipulation may be waived if the authorized officer, in consultation with Montana FWP and the USFWS, determines that the entire leasehold can be occupied without adversely affecting sage grouse leks or the surrounding breeding habitat, the lek is confirmed inactive (10 years with no males or sign of lek activity), or sage grouse are no longer considered BLM special status species and not listed by USFWS.

Exception: An exception to this stipulation may be granted by the authorized officer, in consultation with Montana FWP, if the operator submits a plan which demonstrates that the proposed action will not affect sage grouse or their habitat. Refer to "Requirements and/or Guidelines for Wildlife Controlled Surface Use (CSU) and Exceptions to No Surface Occupancy (NSO) and Timing Limitation Stipulations", Appendix H or portions of the area no longer have sage grouse or their habitat, or the lek is confirmed inactive (10 years with no males or sign of lek activity). Activities would be allowed, if they are consistent with the goals and objectives for the Restoration Area (RA) or General habitat.

Modification: The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the area can be occupied without adversely affecting sage grouse leks or portions of the area no longer have sage grouse or their habitat. The timing restriction dates may be modified if new information indicates that the dates are not valid for the leasehold.

(XXXX RMP ROD, Page XX)

Serial No._____

TIMING LIMITATION STIPULATION

Sharp-tailed Grouse Nesting

Surface use is prohibited within 2 miles of the perimeter of sharp-tailed grouse and/or greater prairie chicken leks from April 1 through July 15.

On the lands described below:

Objective: To protect nesting activities associated with sharp-tailed grouse and greater prairie chickens, identified as BLM priority species for management.

Waiver: The authorized officer may waive this stipulation after coordination with the state wildlife management agency if the entire leasehold is no longer within 2 miles of a lek active within the past 5 years.

Exception: The authorized officer , after coordination with the state wildlife management agency, may grant an exception if the action will not result in nest territory abandonment or decrease productivity by substantially interfering with normal breeding.

Modification: The authorized officer may modify the boundaries of the stipulated area after coordination with the state wildlife management agency if portions of the leasehold are no longer within 2 miles of a lek active within the past 5 years.

(XXXX RMP ROD, Page XX)

Form 3100-11
(July 2006)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Serial Number

OFFER TO LEASE AND LEASE FOR OIL AND GAS

The undersigned (page 2) offers to lease all or any of the lands in Item 2 that are available for lease pursuant to the Mineral Lands Leasing Act of 1920, as amended and supplemented (30 U.S.C. 181 et seq.), the Mineral Leasing Act for Acquired Lands of 1947, as amended (30 U.S.C. 351-359), or _____ (other).

READ INSTRUCTIONS BEFORE COMPLETING

1. Name
   Street
   City, State, Zip Code

2. This application/offer/lease is for: *(Check Only One)* ☐ PUBLIC DOMAIN LANDS ☐ ACQUIRED LANDS (percent U.S. interest _____)

Surface managing agency if other than Bureau of Land Management (BLM): _____ Unit/Project _____

Legal description of land requested: *Parcel No.: _____ *Sale Date (mm/dd/yyyy): _____

***See Item 2 in Instructions below prior to completing Parcel Number and Sale Date.**

T.	R.	Meridian	State	County

Total acres applied for _____

Amount remitted: Filing fee $ _____ Rental fee $ _____ Total $ _____

DO NOT WRITE BELOW THIS LINE

3. Land included in lease:

T.	R.	Meridian	State	County

Total acres in lease _____

Rental retained $ _____

This lease is issued granting the exclusive right to drill for, mine, extract, remove and dispose of all the oil and gas (except helium) in the lands described in Item 3 together with the right to build and maintain necessary improvements thereupon for the term indicated below, subject to renewal or extension in accordance with the appropriate leasing authority. Rights granted are subject to applicable laws, the terms, conditions, and attached stipulations of this lease, the Secretary of the Interior's regulations and formal orders in effect as of lease issuance, and to regulations and formal orders hereafter promulgated when not inconsistent with lease rights granted or specific provisions of this lease.

NOTE: This lease is issued to the high bidder pursuant to his/her duly executed bid or nomination form submitted under 43 CFR 3120 and is subject to the provisions of that bid or nomination and those specified on this form.

Type and primary term:

☐ Noncompetitive lease (ten years)

☐ Competitive lease (ten years)

☐ Other _____

THE UNITED STATES OF AMERICA

by _____
(BLM)

_____
(Title) (Date)

EFFECTIVE DATE OF LEASE _____

(Continued on page 2)

4. (a) Undersigned certifies that (1) offeror is a citizen of the United States; an association of such citizens; a municipality; or a corporation organized under the laws of the United States or of any State or Territory thereof, (2) all parties holding an interest in the offer are in compliance with 43 CFR 3100 and the leasing authorities; (3) offeror's chargeable interests, direct and indirect, in each public domain and acquired lands separately in the same State, do not exceed 246,080 acres in oil and gas leases (of which up to 200,000 acres may be in oil and gas options or 300,000 acres in leases in each leasing District in Alaska of which up to 200,000 acres may be in options, (4) offeror is not considered a minor under the laws of the State in which the lands covered by this offer are located; (5) offeror is in compliance with qualifications concerning Federal coal lease holdings provided in sec. 2(a)2(A) of the Mineral Leasing Act; (6) offeror is in compliance with reclamation requirements for all Federal oil and gas lease holdings as required by sec. 17(g) of the Mineral Leasing Act; and (7) offeror is not in violation of sec. 41 of the Act. (b) Undersigned agrees that signature to this offer constitutes acceptance of this lease, including all terms conditions, and stipulations of which offeror has been given notice, and any amendment or separate lease that may include any land described in this offer open to leasing at the time this offer was filed but omitted for any reason from this lease. The offeror further agrees that this offer cannot be withdrawn, either in whole or in part unless the withdrawal is received by the proper BLM State Office before this lease, an amendment to this lease, or a separate lease, whichever covers the land described in the withdrawal, has been signed on behalf of the United States.

This offer will be rejected and will afford offeror no priority if it is not properly completed and executed in accordance with the regulations, or if it is not accompanied by the required payments.

Duly executed this _____ day of _____ , 20 ____ _____
(Signature of Lessee or Attorney-in-fact)

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212 make it a crime for any person knowingly and willfully to make to any department or Agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

LEASE TERMS

Sec. 1. Rentals--Rentals must be paid to proper office of lessor in advance of each lease year. Annual rental rates per acre or fraction thereof are:

(a) Noncompetitive lease, $1.50 for the first 5 years; thereafter $2.00;

(b) Competitive lease, $1.50; for the first 5 years; thereafter $2.00;

(c) Other, see attachment, or

as specified in regulations at the time this lease is issued.

If this lease or a portion thereof is committed to an approved cooperative or unit plan which includes a well capable of producing leased resources, and the plan contains a provision for allocation of production, royalties must be paid on the production allocated to this lease. However, annual rentals must continue to be due at the rate specified in (a), (b), or (c) rentals for those lands not within a participating area.

Failure to pay annual rental, if due, on or before the anniversary date of this lease (or next official working day if office is closed) must automatically terminate this lease by operation of law. Rentals may be waived, reduced, or suspended by the Secretary upon a sufficient showing by lessee.

See. 2. Royalties--Royalties must be paid to proper office of lessor. Royalties must be computed in accordance with regulations on production removed or sold. Royalty rates are:

(a) Noncompetitive lease, 12 1/2%;

(b) Competitive lease, 12 1/2 %;

(c) Other, see attachment; or

as specified in regulations at the time this lease is issued.

Lessor reserves the right to specify whether royalty is to be paid in value or in kind, and the right to establish reasonable minimum values on products after giving lessee notice and an opportunity to be heard. When paid in value, royalties must be due and payable on the last day of the month following the month in which production occurred. When paid in kind, production must be delivered, unless otherwise agreed to by lessor, in merchantable condition on the premises where produced without cost to lessor. Lessee must not be required to hold such production in storage beyond the last day of the month following the month in which production occurred, nor must lessee be held liable for loss or destruction of royalty oil or other products in storage from causes beyond the reasonable control of lessee.

Minimum royalty in lieu of rental of not less than the rental which otherwise would be required for that lease year must be payable at the end of each lease year beginning on or after a discovery in paying quantities. This minimum royalty may be waived, suspended, or reduced, and the above royalty rates may be reduced, for all or portions of this lease if the Secretary determines that such action is necessary to encourage the greatest ultimate recovery of the leased resources, or is otherwise justified.

An interest charge will be assessed on late royalty payments or underpayments in accordance with the Federal Oil and Gas Royalty Management Act of 1982 (FOGRMA) (30 U.S.C. 1701). Lessee must be liable for royalty payments on oil and gas lost or wasted from a lease site when such loss or waste is due to negligence on the part of the operator, or due to the failure to comply with any rule, regulation, order, or citation issued under FOGRMA or the leasing authority.

(Continued on page 3)

Sec. 3. Bonds - A bond must be filed and maintained for lease operations as required under regulations.

Sec. 4. Diligence, rate of development, unitization, and drainage - Lessee must exercise reasonable diligence in developing and producing, and must prevent unnecessary damage to, loss of, or waste of leased resources. Lessor reserves right to specify rates of development and production in the public interest and to require lessee to subscribe to a cooperative or unit plan, within 30 days of notice, if deemed necessary for proper development and operation of area, field, or pool embracing these leased lands. Lessee must drill and produce wells necessary to protect leased lands from drainage or pay compensatory royalty for drainage in amount determined by lessor.

Sec. 5. Documents, evidence, and inspection - Lessee must file with proper office of lessor, not later than 30 days after effective date thereof, any contract or evidence of other arrangement for sale or disposal of production. At such times and in such form as lessor may prescribe, lessee must furnish detailed statements showing amounts and quality of all products removed and sold, proceeds therefrom, and amount used for production purposes or unavoidably lost. Lessee may be required to provide plats and schematic diagrams showing development work and improvements, and reports with respect to parties in interest, expenditures, and depreciation costs. In the form prescribed by lessor, lessee must keep a daily drilling record, a log, information on well surveys and tests, and a record of subsurface investigations and furnish copies to lessor when required. Lessee must keep open at all reasonable times for inspection by any representative of lessor, the leased premises and all wells, improvements, machinery, and fixtures thereon, and all books, accounts, maps, and records relative to operations, surveys, or investigations on or in the leased lands. Lessee must maintain copies of all contracts, sales agreements, accounting records, and documentation such as billings, invoices, or similar documentation that supports costs claimed as manufacturing, preparation, and/or transportation costs. All such records must be maintained in lessee's accounting offices for future audit by lessor. Lessee must maintain required records for 6 years after they are generated or, if an audit or investigation is underway, until released of the obligation to maintain such records by lessor.

During existence of this lease, information obtained under this section will be closed to inspection by the public in accordance with the Freedom of Information Act (5 U.S.C. 552).

Sec. 6. Conduct of operations - Lessee must conduct operations in a manner that minimizes adverse impacts to the land, air, and water, to cultural, biological, visual, and other resources, and to other land uses or users. Lessee must take reasonable measures deemed necessary by lessor to accomplish the intent of this section. To the extent consistent with lease rights granted, such measures may include, but are not limited to, modification to siting or design of facilities, timing of operations, and specification of interim and final reclamation measures. Lessor reserves the right to continue existing uses and to authorize future uses upon or in the leased lands, including the approval of easements or rights-of-way. Such uses must be conditioned so as to prevent unnecessary or unreasonable interference with rights of lessee.

Prior to disturbing the surface of the leased lands, lessee must contact lessor to be apprised of procedures to be followed and modifications or reclamation measures that may be necessary. Areas to be disturbed may require inventories or special studies to determine the extent of impacts to other resources. Lessee may be required to complete minor inventories or short term special studies under guidelines provided by lessor. If in the conduct of operations, threatened or endangered species, objects of historic or scientific interest, or substantial unanticipated environmental effects are observed, lessee must immediately contact lessor. Lessee must cease any operations that would result in the destruction of such species or objects.

Sec. 7. Mining operations - To the extent that impacts from mining operations would be substantially different or greater than those associated with normal drilling operations, lessor reserves the right to deny approval of such operations.

Sec. 8. Extraction of helium - Lessor reserves the option of extracting or having extracted helium from gas production in a manner specified and by means provided by lessor at no expense or loss to lessee or owner of the gas. Lessee must include in any contract of sale of gas the provisions of this section.

Sec. 9. Damages to property - Lessee must pay lessor for damage to lessor's improvements, and must save and hold lessor harmless from all claims for damage or harm to persons or property as a result of lease operations.

Sec. 10. Protection of diverse interests and equal opportunity - Lessee must pay, when due, all taxes legally assessed and levied under laws of the State or the United States; accord all employees complete freedom of purchase; pay all wages at least twice each month in lawful money of the United States; maintain a safe working environment in accordance with standard industry practices; and take measures necessary to protect the health and safety of the public.

Lessor reserves the right to ensure that production is sold at reasonable prices and to prevent monopoly. If lessee operates a pipeline, or owns controlling interest in a pipeline or a company operating a pipeline, which may be operated accessible to oil derived from these leased lands, lessee must comply with section 28 of the Mineral Leasing Act of 1920.

Lessee must comply with Executive Order No. 11246 of September 24, 1965, as amended, and regulations and relevant orders of the Secretary of Labor issued pursuant thereto. Neither lessee nor lessee's subcontractors must maintain segregated facilities.

Sec. 11. Transfer of lease interests and relinquishment of lease - As required by regulations, lessee must file with lessor any assignment or other transfer of an interest in this lease. Lessee may relinquish this lease or any legal subdivision by filing in the proper office a written relinquishment, which will be effective as of the date of filing, subject to the continued obligation of the lessee and surety to pay all accrued rentals and royalties.

Sec. 12. Delivery of premises - At such time as all or portions of this lease are returned to lessor, lessee must place affected wells in condition for suspension or abandonment, reclaim the land as specified by lessor and, within a reasonable period of time, remove equipment and improvements not deemed necessary by lessor for preservation of producible wells.

Sec. 13. Proceedings in case of default - If lessee fails to comply with any provisions of this lease, and the noncompliance continues for 30 days after written notice thereof, this lease will be subject to cancellation unless or until the leasehold contains a well capable of production of oil or gas in paying quantities, or the lease is committed to an approved cooperative or unit plan or communitization agreement which contains a well capable of production of unitized substances in paying quantities. This provision will not be construed to prevent the exercise by lessor of any other legal and equitable remedy, including waiver of the default. Any such remedy or waiver will not prevent later cancellation for the same default occurring at any other time. Lessee will be subject to applicable provisions and penalties of FOGRMA (30 U.S.C. 1701).

Sec. 14. Heirs and successors-in-interest - Each obligation of this lease will extend to and be binding upon, and every benefit hereof will inure to the heirs, executors, administrators, successors, beneficiaries, or assignees of the respective parties hereto.

(Continued on page 4)

A. General:

1. Page 1 of this form is to be completed only by parties filing for a noncompetitive lease. The BLM will complete page 1 of the form for all other types of leases.

2. Entries must be typed or printed plainly in ink. Offeror must sign Item 4 in ink.

3. An original and two copies of this offer must be prepared and filed in the proper BLM State Office. See regulations at 43 CFR 1821.2-1 for office locations.

4. If more space is needed, additional sheets must be attached to each copy of the form submitted.

B. Special:

Item 1 - Enter offeror's name and billing address.

Item 2 - Identify the mineral status and, if acquired lands, percentage of Federal ownership of applied for minerals. Indicate the agency controlling the surface of the land and the name of the unit or project which the land is a part. The same offer may not include both Public Domain and Acquired lands. Offeror also may provide other information that will assist in establishing title for minerals. The description of land must conform to 43 CFR 3110. A single parcel number and Sale Date will be the only acceptable description during the period from the first day following the end of a competitive process until the end of that same month, using the parcel number on the List of Lands Available for Competitive Nominations or the Notice of Competitive Lease Sale, whichever is appropriate.

Payments: The amount remitted must include the filing fee and the first year's rental at the rate of $1.50 per acre or fraction thereof. The full rental based on the total acreage applied for must accompany an offer even if the mineral interest of the United States is less than 100 percent. The filing fee will be retained as a service charge even if the offer is completely rejected or withdrawn. To protect priority, it is important that the rental submitted be sufficient to cover all the land requested. If the land requested includes lots or irregular quarter-quarter sections, the exact area of which is not known to the offeror, rental should be submitted on the basis of each such lot or quarter-quarter section containing 40 acres. If the offer is withdrawn or rejected in whole or in part before a lease issues, the rental remitted for the parts withdrawn or rejected will be returned.

Item 3 - This space will be completed by the United States.

NOTICES

The Privacy Act of 1974 and the regulations in 43 CFR 2.48(d) provide that you be furnished with the following information in connection with information required by this oil and gas lease offer.

AUTHORITY: 30 U.S.C. 181 et seq.; 30 U.S.C 351-359.

PRINCIPAL PURPOSE: The information is to be used to process oil and gas offers and leases.

ROUTINE USES: (1) The adjudication of the lessee's rights to the land or resources. (2) Documentation for public information in support of notations made on land status records for the management, disposal, and use of public lands and resources. (3) Transfer to appropriate Federal agencies when consent or concurrence is required prior to granting a right in public lands or resources. (4)(5) Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions.

EFFECT OF NOT PROVIDING INFORMATION: If all the information is not provided, the offer may be rejected. See regulations at 43 CFR 3100.

The Paperwork Reduction Act of 1995 requires us to inform you that:
This information is being collected pursuant to the law.
This information will be used to create and maintain a record of oil and gas lease activity.
Response to this request is required to obtain a benefit.

BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 1 hour per response including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0185), Bureau Information Collection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop, 401LS, Washington, D.C. 20240.

(Form 3100-11, page 4)

Form 3109-1
(December 1972)
(formerly 3103-1)

Serial Number_____

LEASE STIPULATIONS
BUREAU OF RECLAMATION

The lessee agrees to maintain, if required by the lessor during the period of this lease, including any extension thereof, an additional bond with qualified sureties in such sum as the lessor, if it considers that the bond required under Section 2(a) is insufficient, may at any time require:

(a) to pay for damages sustained by any reclamation homestead entryman to his crops or improvements caused by drilling or other operations of the lessee, such damages to include the reimbursement of the entryman by the lessee, when he uses or occupies the land of any homestead entryman, for all construction and operation and maintenance charges becoming due during such use or occupation upon any portion of the land so used and occupied;

(b) to pay any damage caused to any reclamation project or water supply thereof by the lessee's failure to comply fully with the requirements of this lease; and

(c) to recompense any nonmineral applicant, entryman, purchaser under the Act of May 16, 1930 (46 Stat. 367), or patentee for all damages to crops or to tangible improvements caused by drilling or other prospecting operation, where any of the lands covered by this lease are embraced in any nonmineral application, entry, or patent under rights initiated prior to the date of this lease, with a reservation of the oil deposits, to the United States pursuant to the Act of July 17, 1914 (38 Stat. 509).

As to any lands covered by this lease within the area of any Government reclamation project, or in proximity thereto, the lessee shall take such precautions as required by the irrigation under such project or to the water supply thereof; *provided* that drilling is prohibited on any constructed works or right-of-way of the Bureau of Reclamation, and *provided, further*, that there is reserved to the lessor, its successors and assigns, the superior and prior right at all times to construct, operate, and maintain dams, dikes, reservoirs, canals, wasteways, laterals, ditches, telephone and telegraph lines, electric transmission lines, roadways, appurtenant irrigation structures, and reclamation works, in which construction, operation, and maintenance, the lessor, its successors and assigns, shall have the right to use any or all of the lands herein described without making compensation therefor, and shall not be responsible for any damage from the presence of water thereon or on account of ordinary, extraordinary, unexpected , or unprecedented floods. That nothing shall be done under this lease to increase the cost of, or interfere in any manner with, the construction, operation, and maintenance of such works. It is agreed by the lessee that, if the construction of any or all of said dams, dikes, reservoirs, canals, wasteways, laterals, ditches, telephone or telegraph lines, electric transmission lines, roadways, appurtenant irrigation structures or reclamation works across, over, or upon said lands should be made more expensive by reason of the existence of the improvements and workings of the lessee thereon, said additional expense is to be estimated by the Secretary of the Interior, whose estimate is to be final and

(continued on reverse)

binding upon the parties hereto, and that within thirty (30) days
after demand is made upon the lessee for payment of any such sums, the lessee will make payment thereof to the United States, or its successors, constructing such dams, dikes, reservoirs, canals, wasteways, laterals, ditches, telephone and telegraph lines, electric transmission lines, roadways, appurtenant irrigation structures, or reclamation works, across, over, or upon said lands; *provided, however,* that subject to advance written approval by the United States, the location and course of any improvements or works and appurtenances may be changed by the lessee; *provided , further,* that the reservations, agreements, and conditions contained in the within lease shall be and remain applicable notwithstanding any change in the location or course of said improvements or works of lessee. The lessee further agrees that the United States, its officers, agents, and employees, and its successors and assigns shall not be held liable for any damage to the improvements or workings of the lessee resulting from the construction, operation, and maintenance of any of the works hereinabove enumerated. Nothing in this paragraph shall be construed as in any manner limiting other reservations in favor of the United States contained in this lease.

THE LESSEE FURTHER AGREES That there is reserved to the lessor, its successors and assigns, the prior right to use any of the lands herein leased, to construct, operate, and maintain dams, dikes, reservoirs, canals, wasteways, laterals, ditches, telephone and telegraph lines, electric transmission lines, roadways, or appurtenant irrigation structures, and also the right to remove construction materials therefrom, without any payment made by the lessor or its successors for such right, with the agreement on the part of the lessee that if the construction of any or all of such dams, dikes, reservoirs, canals, wasteways, laterals, ditches, telephone and telegraph lines, electric transmission lines, roadways, or appurtenant irrigation structures across, over, or upon said lands or the removal of construction materials therefrom, should be made more expensive by reason of the existence of improvements or workings of the lessee thereon, such additional expense is to be estimated by the Secretary of the Interior, whose estimate is to be final and binding upon the parties hereto, and that within thirty (30) days after demand is made upon the lessee for payment of any such sums, the lessee will make payment thereof to the United States or its successors constructing such dams, dikes, reservoirs, canals, wasteways, laterals, ditches, telephone and telegraph lines, electric transmission lines, roadways, or appurtenant irrigation structures across, over, or upon said lands or removing construction materials therefrom. The lessee further agrees that the lessor, its officers, agents, and employees and its successors and assigns shall not be held liable for any damage to the improvements or workings of the lessee resulting from the construction, operation, and maintenance of any of the works herein above enumerated. Nothing contained in this paragraph shall be construed as in any manner limiting other reservations in favor of the lessor contained in this lease.

To insure against the contamination of the waters of the Reservoir, Project, State of , the lessee agrees that the following further conditions shall apply to all drilling and operations on lands covered by this lease, which lie within the flowage or drainage area of the Reservoir, as such area is defined by the Bureau of Reclamation:

1. The drilling sites for any and all wells shall be approved by the Superintendent, Bureau of Reclamation, Project, before drilling begins. Sites for the construction of pipe-line rights-of-way or other authorized facilities shall also be approved by the Superintendent before construction begins.

2. All drilling or operation methods or equipment shall, before their imployment, be inspected and approved by the Superintendent of the Project, , and by the supervisor of the U.S. Geological Survey having jurisdiction over the area.

GPO 854-703

BOR 17-1

GP-135
(02/03)

Serial Number_____

SPECIAL STIPULATION - BUREAU OF RECLAMATION

To avoid interference with recreation development and/or impacts to fish and wildlife habitat and to assist in preventing damage to any Bureau of Reclamation dams, reservoirs, canals, ditches, laterals, tunnels, and related facilities, and contamination of the water supply therein, the lessee agrees that the following conditions shall apply to all exploration and developmental activities and other operation of the works thereafter on lands covered by this lease:

1. Prior to commencement of any surface-disturbing work including drilling, access road work, and well location construction, a surface use and operations plan will be filed with the appropriate officials. A copy of this plan will be furnished to the Regional Director, Great Plains Region, Bureau of Reclamation, P.O. Box 36900, Billings, MT 59107-6900, for review and consent prior to approval of the plan. Such approval will be conditioned on reasonable requirements needed to prevent soil erosion, water pollution, and unnecessary damages to the surface vegetation and other resources, including cultural resources, of the United States, its lessees, permittees, or licensees, and to provide for the restoration of the land surface and vegetation. The plan shall contain provisions as the Bureau of Reclamation may deem necessary to maintain proper management of the water, recreation, lands structures, and resources, including cultural resources, within the prospecting, drilling, or construction area.

Drilling sites for all wells and associated investigations such as seismograph work shall be included in the above-mentioned surface use and operation plan.

If later explorations require departure from or additions to the approved plan, these revisions or amendments, together with a justification statement for proposed revisions, will be submitted for approval to the Regional Director, Great Plains Region, Bureau of Reclamation, or his authorized representative.

Any operations conducted in advance of approval of an original, revised, or amended prospecting plan, or which are not in accordance with an approved plan constitute a violation of the terms of this lease. The Bureau of Reclamation reserves the right to close down operations until such corrective action, as is deemed necessary, is taken by the lessee.

2. No occupancy of the surface of the following excluded areas is authorized by this lease. It is understood and agreed that the use of these areas for Bureau of Reclamation purposes is superior to any other use. The following restrictions apply only to mineral tracts located within the boundary of a Bureau of Reclamation project where the United States owns 100 percent of the fee mineral interest.

a. Within 500 feet on either side of the centerline of any and all roads or highways within the leased area.

b. Within 200 feet on either side of the centerline of any and all trails within the leased area.

c. Within 500 feet of the normal high-water line of any and all live streams in the leased area.

d. Within 400 feet of any and all recreation developments within the leased area.

e. Within 400 feet of any improvements either owned, permitted, leased, or otherwise authorized by the Bureau of Reclamation within the leased area.

f. Within 200 feet of established crop fields, food plots, and tree/shrub plantings within the leased area.

g. Within 200 feet of slopes steeper than a 2:1 gradient within the leased area.

h. Within established rights-of-way of canals, laterals, and drainage ditches within the leased area.

i. Within a minimum of 500 feet horizontal from the centerline of the facility or 50 feet from the outside toe of the canal, lateral, or drain embankment, whichever distance is greater, for irrigation facilities without clearly marked rights-of-way within the leased area.

j. Providing that appropriate environmental compliance measures can be ensured, and providing further that Reclamation project works and other public interests can be protected, Reclamation may consider, on a case-by-case basis, waiving the requirement specified in Section 2 hereof. **HOWEVER, LESSEES ARE ADVISED THAT OBTAINING SUCH A WAIVER CAN BE A DIFFICULT, TIME CONSUMING, AND COSTLY PROCESS WITH NO GUARANTEE THAT RECLAMATION WILL GRANT THE REQUESTED WAIVER.**

3. No occupancy of the surface or surface drilling will be allowed in the following areas. In addition, no directional drilling will be allowed that would intersect the subsurface zones delineated by a vertical plane in these areas. The following restrictions apply only to mineral tracts located within the boundary of a Bureau of Reclamation project, where the United States owns 100 percent of the fee mineral interest in said tract, or tracts.

a. Within 1,000 feet of the maximum water surface, as defined in the Standard Operating Procedures (SOP), of any reservoirs and related facilities located within the leased area.

b. Within 2,000 feet of dam embankments and appurtenance structures such as spillway structures, outlet works, etc.

c. Within one-half (1/2) mile horizontal from the centerline of any tunnel within the leased area.

d. Providing that appropriate environmental compliance measures can be ensured, and providing further that Reclamation project works and other public interests can be protected. Reclamation may consider, on a case-by-case basis, waiving the requirements specifies in Section 3 hereof. **HOWEVER, LESSEES ARE ADVISED THAT OBTAINING SUCH A WAIVER CAN BE A DIFFICULT, TIME CONSUMING, AND COSTLY PROCESS WITH NO GUARANTEE THAT RECLAMATION WILL GRANT THE REQUESTED WAIVER.**

4. The distances stated in items 2 and 3 above are intended to be general indicators only. The Bureau of Reclamation reserves the right to revise these distances as needed to protect Bureau of Reclamation facilities.

5. The use of explosives in any manner shall be so controlled that the works and facilities of the United States, its successors and assigns, will in no way be endangered or damaged. In this connection, an explosives use plan shall be submitted to and approved by the Regional Director, Great Plains Region, Bureau of Reclamation, or his/her authorized representative.

6. The lessee shall be liable for all damage to the property of the United States, its successors or assigns, resulting from the exploration, development, or operation of the works contemplated by this lease, and shall further hold the United States, its successors or assigns, and its officers, agents, and employees, harmless from all claims of third parties for injury or damage sustained or in any way resulting from the exercise of the rights and privileges conferred by the lease.

7. The lessee shall be liable for all damages to crops or improvements of any entryman, nonmineral applicant, or patentee, their successors or assigns, caused by or resulting from the drilling or other operations of the lessee, including reimbursement of any entryman or patentee, their successors or assigns, for all construction, operation, and maintenance charges becoming due on any portion of their said lands damaged as a result of the drilling or other operation of the lessee.

8. In addition to any other bond required under the provisions of this lease, the lessee shall provide such bond as the United States may at any time require for damages which may arise under the liability provisions of Section six (6) and seven (7) above.

BOR 17-2

Appendix T:
Areas of Critical Environmental Concern

Report on the Application of the Relevance and Importance Criteria

Prepared by:
United States Department of the Interior
Bureau of Land Management
Billings Field Office

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T. Areas of Critical Environmental Concern

T.1 Executive Summary

As part of the Billings/Pompeys Pillar Resource Management Plan (RMP) process, the RMP Interdisciplinary Team (IDT) analyzed whether proposed Areas of Critical Environmental Concern (ACEC) meet the relevance and importance criteria. The Billings Field Office (BiFO) analyzed 14 nominated ACECs (existing, internally and externally proposed). Based on the analysis, 13 ACEC nominations met the relevance and importance criteria and 1 ACEC nomination did not. Twelve were carried forward for analysis as one nomination did not need special management. The following table summarizes each ACEC proposal, the rationale for the nomination and whether or not it will be carried forward for analysis in the RMP.

Table T-1 ACEC Determinations

Existing or Proposed ACECs	Nominated by:	Rationale	Carried forward for analysis
Bridger Fossil Area	Internal (previous decision)	protect paleontological values and NNL	Yes
Castle Butte	Internal (previous decision)	protect unique cultural values	Yes
East Pryor	Internal (previous decision)	Wild horse habitat, wildlife habitat, historical/cultural and paleontological resources, special status plant species, Crooked Creek Natural Area and Crooked Creek NNL	Yes
Four Dances	Internal (previous decision)	significant historic, cultural or scenic values, peregrine falcon nesting habitat, and for the "natural hazards" of the cliffs	Yes
Grove Creek	Internal / External	significant archaeological and traditional cultural values and special status species plants	Yes
Meeteetse Spires	Internal (previous decision)	Unique vegetation and scenic values and rare plant protection	Yes
Petroglyph Canyon	Internal (previous decision)	protect unique cultural values	Yes
Pompeys Pillar	Internal (previous decision)	Protect historic and cultural values	Yes
Pryor Foothills RNA	External	Area has a large concentration of Bureau special status plant species and rare plant communities. The Gyp Springs site contains high historic and cultural values	Yes
Stark Site	Internal (previous decision)	protect unique cultural values	Yes
Sykes Ridge	External	Rare plant protection	No
Weatherman Draw	Internal/External (previous decision)	protect unique cultural values	Yes
Greater Sage-Grouse Habitat	External	Protect Greater Sage-grouse habitat	Yes
Steamboat Butte	External	Protect unique cultural values	No

These areas (12) will be identified as potential ACECs and will be fully considered for designation and management in the RMP (BLM Manual 1613.2.21). For the areas found not to meet the relevance and importance criteria, "the management prescriptions which are eventually established in the plan for such areas shall reflect consideration of the identified values."

T.2 Introduction

As part of the process for developing the Billings/Pompeys Pillar RMP, the BLM, Billings Field Office (BiFO) IDT reviewed all BLM-administered public lands in the planning area to determine whether any areas should be considered for designation as Areas of Critical Environmental Concern (ACECs). The public was also requested (through scoping and notification in the *Federal Register* Notice of Intent to identify areas they feel should be considered for management as an ACEC (or other special designation).

The Federal Land Policy and Management Act (FLPMA) **requires that priority** shall be given to the designation and protection of ACECs. Areas of Critical Environmental Concern are defined in the FLPMA Sec. 103[43 U.S.C. 1702] (a) and in 43 C.F.R. 1601.0-5(a) as "areas within the public lands where special management attention is required to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources or other natural systems or processes, or to protect life and safety from natural hazards."

The following analysis and the resultant findings for ACEC relevance and importance criteria has been performed pursuant to FLPMA Sec. 202[43 U.S.C. 1712] (c)(3), 43 C.F.R. 1610-7-2 and BLM 1613 Manual.

T.3 Requirements for ACEC Designation

To be eligible for designation as an ACEC, an area must meet the relevance and importance criteria described in 43 Code of Federal Regulations (CFR) 1610.7-2 and BLM Manual 1613, *Areas of Critical Environmental Concern*, and need special management. The determinations in this report deal strictly with the relevance and importance criteria, and not special management attention.

Special management attention refers to "*management prescriptions developed during preparation of an RMP or amendment expressly to protect the important and relevant values of an area from the potential effects of actions permitted by the RMP, including proposed actions deemed to be in conformance with the terms, conditions, and decisions of the RMP*." Thus, these are management measures that would not be necessary and prescribed if the relevant and important values were not present. A management prescription is considered to be special if it is unique to the area involved and includes terms and conditions specifically to protect the values occurring within the area.

BLM Manual 1613 includes the following guidance on incorporating management prescriptions for potential ACECs into appropriate alternatives:

> *"During the formulation of alternatives, management prescriptions for potential ACEC's are fully developed. Management prescriptions will generally vary across the plan alternatives. If there is no controversy or issues raised regarding the management of a potential ACEC, it may not be necessary to develop a range of management alternatives. In other words, management prescriptions may not vary significantly across alternatives. A potential ACEC (or portion thereof) must be shown as recommended for designation in any or all alternatives in the Draft RMP in which special management attention is prescribed to protect the resource or to minimize hazard to human life and safety. Because special management attention must be prescribed in at least one plan alternative, each potential ACEC will appear as a recommended ACEC in at least one plan alternative. Designation is based on whether or not a potential ACEC requires special management attention in the selected plan alternative (i.e. preferred alternative)."*

Relevance and importance are defined as follows:

> **Relevance:** There shall be present a significant historic, cultural, or scenic value, a fish or wildlife resource or other natural system or process, or natural hazard.
>
> **Importance:** The above described value, resource, system, process, or hazard shall have substantial significance and value, which generally requires qualities of more than local significance and special worth, consequence, meaning, distinctiveness, or cause for concern. A natural hazard can be important if it is a significant threat to life or property.

T.3.1 Relevance

An area meets the relevance criterion if it contains one or more of the following:

1. A significant historic, cultural, or scenic value (including but not limited to rare or sensitive archeological resources and religious or cultural resources important to Native Americans)

2. A fish and wildlife resource (including but not limited to habitat for endangered, sensitive, or threatened species or habitat essential for maintaining species diversity).

3. A natural process or system (including but not limited to endangered, sensitive, or threatened plant species; rare, endemic, or relic plants or plant communities that are terrestrial, aquatic, or riparian; or rare geological features).

4. Natural hazards (including but not limited to areas of avalanche, dangerous flooding, landslides, unstable soils, seismic activity, or dangerous cliffs). A hazard caused by human action might meet the relevance criteria if it is determined through the resource management planning process to have become part of a natural process.

T.3.2 Importance

An area meets the importance criterion if it meets one or more of the following:

1. Have more than locally significant qualities that give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource.

2. Have qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change.

3. Has been recognized as warranting protection to satisfy national priority concerns or to carry out the mandates of the Federal Land Policy and Management Act (FLPMA).

4. Have qualities that warrant highlighting to satisfy public or management concerns about safety and public welfare.

5. Poses a significant threat to human life and safety or to property.

T.4 Evaluation Process

In compiling a list of areas to be analyzed in this report, the BLM ID teams followed the guidance set forth in BLM Manual 1613 and considered:

1. Existing ACECs

2. Areas recommended for ACEC consideration (external and internal nominations)

3. Areas identified through inventory and monitoring

4. Adjacent designations of other Federal and State agencies.

ACECs may be nominated by BLM staff, other agencies, or members of the public at any time. During the RMP revision scoping process, the BLM specifically solicited nominations from the public and other agencies. Information on special designations and ACECs was part of the scoping package and included in information made available at the public scoping meetings.

As part of the formal outreach process, the BLM received four external nominations from the public (refer to Table I). The BLM staff also reviewed information from BLM inventories, data, and other reports to ensure that all potentially relevant and important values with in the planning areas were considered.

The maps included in this Draft RMP Map Appendix, along with the ACEC evaluations included in the section below, are for those areas that were found to meet the relevance and importance criteria. The boundaries of some of the proposed external nominations were modified to accurately represent where the values exist. The size and management prescriptions for each ACEC may vary by alternative to reflect a balance between the goals and objectives of the alternative and values being protected (BLM Manual 1613.2.22.B.1&2). The range of alternatives for the size of each ACEC being carried forward for further study is included in Chapter 2 – Alternatives.

ACEC Nomination Evaluation Forms

ACEC NOMINATION EVALUATION

NAME: **Bridger Fossil Area ACEC** (includes the Bridger Fossil Area National Natural Landmark)

LOCATION:
[redacted]

SIZE: 577 acres NOMINATED BY: BLM

RATIONALE: protect paleontological values EVALUATED BY: Carolyn Sherve-Bybee

In order to be considered as a potential ACEC and analyzed in resource management plan alternatives, an area must meet both the relevance and importance criteria:

I. RELEVANCE (must contain one or more of the following):

1. A significant historic, cultural, or scenic value (including but not limited to rare or sensitive archeological resources and religious or cultural resources important to Native Americans).

   The Bridger Fossil Area ACEC contains spectacular Cloverly Formation exposures and consists of variegated maroon and black shales. The fossils occur in the Cloverly Formation which is locally exposed badlands topography. Early Cretaceous vertebrates are found in this area. Early Cretaceous vertebrates of any kind are rare and poorly known from all regions of North America.

   The Bridger Fossil Area National Natural Landmark (designated in November 1973) is a 161 acre locale located entirely within the 577 acre Bridger Fossil Area ACEC. This site has produced nearly all of the known remains of Deinonychrus antirrhopus, a new genus and species of carnivorous dinosaur. This small, bipedal flesh-eating dinosaur was about 3.5 feet tall, about 8 feet long, and probably weighted about 150 pounds.

   The area includes the fossil remains of Deinonychus antirrhopus, a highly predaceous carnivorous dinosaur from the Cretaceous Cloverly Formation. Interpretation of the anatomy and habits of this creature led to ideas about the warm-bloodedness of dinosaurs, and possible close relationship to modern birds. A bone bed in the Jurassic Morrison Formation contains the remains of numerous juvenile and subadult sauropods. The Museum of the Rockeis, Montana State University and the Cincinnati Museum Center - Geier Collections and Research Center (Vertebrate Paleontology) have both conducted long term studies at this site.

II. IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource?

   Exposures of the Late Jurassic Morrison and Early Cretaceous Cloverly Formations in this area have yielded fossils of rare dinosaur taxa. While fossil localities dating to this time period exist elsewhere, the quality, concentration, and kinds of fossils present on public lands in the Bridger Fossil Area can provide an outstanding record of the environment and a glimpse of terrestrial life during those periods.

   In addition, the area includes the most fossiliferous exposures of the Cloverly Formation in northern Wyoming and southern Montana. Deinonychus and Tenontosaurus, rare dinosaur species have been documented here, as well as an extremely rare concentration of dinosaur egg and embryonic remains. These specimens may hold the answer to central questions in dinosaur research, regarding dinosaur physiology and behavior.

   Professor Glenn Storrs (Adjunct Professor of Geology, University of Cincinnati and Director of Science Research & Withrow Farny Curator of Vertebrate Paleontology, Cincinnati Museum Center) has been holding a field school and excavating at the Mother's Day Site each summer for the past several years. The Mother's Day site, which is located within the Bridger Fossil Area ACEC, contains the remains of at least 8 juvenile dinosaurs.

   During the summer/fall of 2006, after the field school had ended, the Mother's Day site was vandalized.

Due to the Bridger Fossil Area ACEC containing early Cretaceous vertebrates, this ACEC contains more than locally significant qualities which give it special worth and distinctiveness. There is cause for concern for the fossils located in this ACEC (the vandalism in 2006 and the current market for vertebrate fossils).

2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change?

The fossils themselves are fragile, rare, and unique and are threatened by vandalism.

III. RESOURCE SPECIALIST'S RECOMMENDATION FOR ACEC CONSIDERATION IN THE RMP

It is the recommendation of the specialist that the Bridger Fossil Area ACEC be retained as an ACEC. It meets relevance criterion 1 and importance criteria 1 and 2.

Approval by Associate Field Manager	/s/ Craig R. Drake Signature	9/30/2009 Date
Concurred by Field Manager	/s/ James M. Sparks Signature	9/30/2009 Date

Mother's Day Site photos

Summer 2007

Summer 2007

Ready for transport – summer 2008

ACEC NOMINATION EVALUATION

NAME: **Castle Butte ACEC** LOCATION: [redacted]

SIZE: 184 acres NOMINATED BY: BLM

RATIONALE: protect unique cultural values EVALUATED BY: Carolyn Sherve-Bybee, Jay Parks

In order to be considered as a potential ACEC and analyzed in resource management plan alternatives, an area must meet both the relevance and importance criteria:

I. RELEVANCE (must contain one or more of the following):

1. A significant historic, cultural, or scenic value (including but not limited to rare or sensitive archeological resources and religious or cultural resources important to Native Americans).

Castle Butte is a remarkable topographic feature with access from an adjacent county road and is locally well known. It has been known to Euro-Americans since the late 19th Century. Site 24YL0418 at Castle Butte is eligible for the National Register of Historic Places. Castle Butte has significant potential to provide information on Native American cultures of the Northwestern Plains during the Late Prehistoric and Historic time periods. It has clear association with specific ethnic groups still present in this region today, which suggests that it may be considered relevant to contemporary Native Americans.

Although there are numerous known rock art sties in the Northwestern Plains region, many of which are considered eligible to the National Register of Historic Places, site 24YL0418, the complex of rock art at Castle Butte is almost unique in the quality and concentration of artwork, particularly for the early historic time period. Panels at the site are believed to be biographical in character and to actually document events in the lives of 18th and 19th century Northwestern Plains horse nomads.

Castle Butte is one of a handful of sites in the Northwestern Plains which show a range of rock art styles dating over a long period of time. Examples of Native American arty styles dating from around AD 1100 to the fur trade period have been identified on the site, as well as historic EuroAmerican graffiti dating from 1874 to the present. The rich concentration of pecked, incised, and more rarely, painted motifs of a variety of styles in a relatively small area has resulted in some panels which show superimposing of elements. This is an important key to the relative dating of the various styles.

Some of the panels at Castle Butte can also be directly associated with adjacent buried archaeological deposits which can be dated through the use of radiocarbon dating techniques. This situation increases the scientific value of the site immensely. Site 24YL0760, an adjacent multiple component camp site, is closely associated with the rock art panels and probably was used by the persons who created the rock art at Castle Butte. Projectile points recovered from the surface of the site show that occupation occurred throughout the period during which the rock art was created.

On-going research into the function of rock art in prehistoric and historic Native American societies on the Plains indicates that stylistic variations may give clues as to the general date of its creation. Information on ethnic affiliation and dates for the rock art can provide significant contributions to our understanding of prehistoric and early historic population movements and interactions on the Northwestern Plains. Because of their excellent preservation as well as the large numbers of individual panels, Castle Butte has been and will continue to be important in such investigations.

Consultations with representatives of Native American tribes elsewhere in the region has shown that rock art sites are often considered highly important and are sometimes sacred locations. Although specific consultation has not been undertaken for Castle Butte, the highly unusual concentration and quality of rock art at the location makes it likely that it too is of importance to contemporary Native groups.

The viewshed is important to the setting of Castle Butte. From Castle Butte one can see south, across the Yellowstone River Valley to the Pryor Mountains and to the northwest to the Steamboat Butte rock art site. Possibly for these reasons this butte was chosen as the location for this rock art.

2. A fish and wildlife resource (including but not limited to habitat for endangered, sensitive or threatened species, or habitat essential for maintaining species diversity).

   There are a number of raptor nest sites within the rock formation that are used for nesting, including a golden eagle nest site.

II. IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource?

   Castle Butte meets importance criterion 1. It possesses information that is significant on a regional scale. Information which has been gained from the rock art and that the rock art still has the potential to yield. This has important implication for the understanding of the meaning of stylistic change in Native American rock art throughout the Plains area from Alberta to Texas

2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change?

   Castle Butte also meets importance criterion 2. The art is inherently fragile and could easily be destroyed through erosion or vandalism. Episodes of erosion have been documented in recent years in which rocks bearing panels have fallen from the butte. While vandalism is minimal at this time, Castle Butte is somewhat remote, but is easily accessible by county road. The site has been widely published in professional journals and monographs and it is well known locally as an archaeological site. Individual panels are probably valuable to collectors or artifact dealers and many could be easily removed by vandals.

III. RESOURCE SPECIALIST'S RECOMMENDATION FOR ACEC CONSIDERATION IN THE RMP

It is the specialist's recommendation that Castle Butte be retained as an ACEC.

Castle Butte meets both relevance and importance criteria. This cultural complex consists of two sites: 24YL0418 (an extensive rock art site) and 24YL0760 (a buried occupation site). Each of these sites are considered eligible to the National Register of Historic Places.

Castle Butte is one of the premiere rock art sites of the Northwestern Plains. Information from the site has been used by a number of prominent rock art investigators in constructing and debating an understanding of the sequence and causes of stylistic changes in Native American rock art throughout the High Plains form Alberta to Texas, particularly for the early historic period. The quality, quantity, and concentration of rock art on the site, as well as the potential for relative and absolute dating clearly make this site more than locally significant. Its remote, yet easily accessible location makes it vulnerable to vandalism. Natural erosion is an on-going problem to the site.

Approval by Associate Field Manager	/s/ Craig R. Drake Signature	9/30/2009 Date
Concurred by Field Manager	/s/ James M. Sparks Signature	9/30/2009 Date

Battle Scene Petroglyph

ACEC NOMINATION EVALUATION

NAME: **East Pryor ACEC** LOCATION: Pryor Mountains

SIZE: 29,550 acres (Alt A), 8,301 acres (Alt B), 32,767 acres (Alt C), 11,122 acres (Alt D) NOMINATED BY: BLM

RATIONALE: Wild horse habitat, wildlife habitat, historical/cultural, paleontology, SS plants and animals

EVALUATED BY: Jared Bybee, Nora Taylor, Carolyn Sherve-Bybee, Jay Parks, Ernest McKenzie

In order to be considered as a potential ACEC and analyzed in resource management plan alternatives, an area must meet both the relevance and importance criteria:

I. RELEVANCE (must contain one or more of the following):

1. A significant historic, cultural, or scenic value (including but not limited to rare or sensitive archeological resources and religious or cultural resources important to Native Americans).

   Sykes Ridge has numerous vision quest sites and is an important religious value to the Crow Indians.

   The Demijohn Flat National Register (NR) District provides locally and regionally important values to the area. Currently about ¼ of the Demijohn Flat NR District is within the existing ACEC boundary, with the rest of the rest of the National Register District not being included within the ACEC boundary.

2. A fish and wildlife resource (including but not limited to habitat for endangered, sensitive or threatened species, or habitat essential for maintaining species diversity).

   Numerous BLM sensitive species inhabit the area these species are: Townsends big-eared bat, spotted bat, pallid bat, Fringed myotis, Peregrine falcon, sage-grouse, Yellowstone cutthroat trout, possibly western spotted skunk. Other species that may inhabit the east priors or migrate seasonally are the Ferriginous Hawk, Swainsons Hawk, Burrowing Owl, numerous LBBs. This area also serves as the only remaining population of Big Horn sheep in the planning area.

3. A natural process or system (including but not limited to endangered, sensitive, or threatened plant species; rare, endemic, or relic plants or plant communities which are terrestrial, aquatic, or riparian; or rare geological features.

   There are 10 BLM sensitive plant species that occur in the area and include: sweetwater milkvetch, Shoshonea, Lesicas's Bladderpod, Daggett Rockcress, Wind River milkvetch, Obscure Evening primrose, Yellow Beeplant, Leptodactylon phlox, Dwarf mentzelia, Short-leaved bluegrass,

   The caves within the area are considered fragile, irreplaceable and vulnerable to adverse impacts.

   The southern end of the area in the Crooked Creek NNL has fossil bearing Cretaceous deposits as well as three types of dinosaurs.

   The Upper segment of Crooked Creek, located within this ACEC, supports a population of Yellowstone Cutthroat Trout (YCT) (Oncorhynchus clarkii bouvieri) that has been designated a "core population." These pure strain YCT are very valuable in that they can be used to enhance other YCT populations or establish new populations in suitable waters. The YCT are listed as a Species of Concern by the MFWP and a federally sensitive species by the BLM and USFS.

4. Natural hazards (including but not limited to areas of avalanche, dangerous flooding, landslides, unstable soils, seismic activity, or dangerous cliffs). A hazard caused by human action may meet the relevance criteria if it is determined through the resource management planning process that it has become part of a natural process.

The caves are fragile, complex environments with natural hazards requiring special rules for public access and use.

Big Coulee is prone to sudden flash flooding, even if no rainfalls in the low elevations water will flash flood from the high elevation areas and create a natural hazard for anyone in the bottom of big Coulee during an event.

II. IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource?

   The PMWHR draws visitors locally, nationally and internationally, and provides opportunities for remoteness and solitude, and outstanding wildlife viewing opportunities. The cave ecosystems present in the area are fragile, complex environments that support bat species.

   The Demijohn Flat National Register District (24CB0478) provides regionally significant cultural resource values which give it special worth and distinctiveness and cause for concern. DemiJohn Flat National Register District retains archaeologically intact remnants of proto-historic period Crow tipi habitation. This site also retains unique qualities of outstanding scientific value on a regional level.

   There are many vision quest sites located within the East Pryor ACEC. In most cases vision quest locations were chosen as a result the unhindered viewshed. Many of vision quest sites (and the viewsheds) are considered to be of religious significance to the Crow for the same reasons.

2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change?

   The caves are fragile, complex environments with natural hazards requiring special rules for public access and use.

   Lesica's bladderpod is the only sensitive species found exclusively within the East Pryor ACEC (but also falls within the existing WSA boundary).

   Dinosaur fossils of sauropod, anklysaur, ornithopod, and primitive duckbill are within the Crooked Creek NNL. Large and small dinosaur predator bones are also present.

   The size and relatively pristine nature of DemiJohn Flat National Register District warrant the additional protection offered by an ACEC designation.

3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA?

   There are a number of regulations or policies in place to protect the fragile ecological environment of the East Pryor ACEC, including:

   - *1988 cave resource protection act mandates the protection of caves, cave ecosystems, and cave dependent species*
   - *I.M 6840 directs the BLM to manage and protect sensitive species the same as candidate species as to prevent listing under the ESA*
   - *Wild Free-Roaming Horse and Burro Act mandates protection of wild horses*
   - *Paleontological Resources Protection Act 2009 mandates the protection of vertebrate fossils*
   - *ARPA mandates the protection of archeological resources*
   - *Antiquities Act of 1906*
   - *Executive Order 13007 (Sacred Sites)*

4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare?

5. Poses a significant threat to human life and safety or to property?

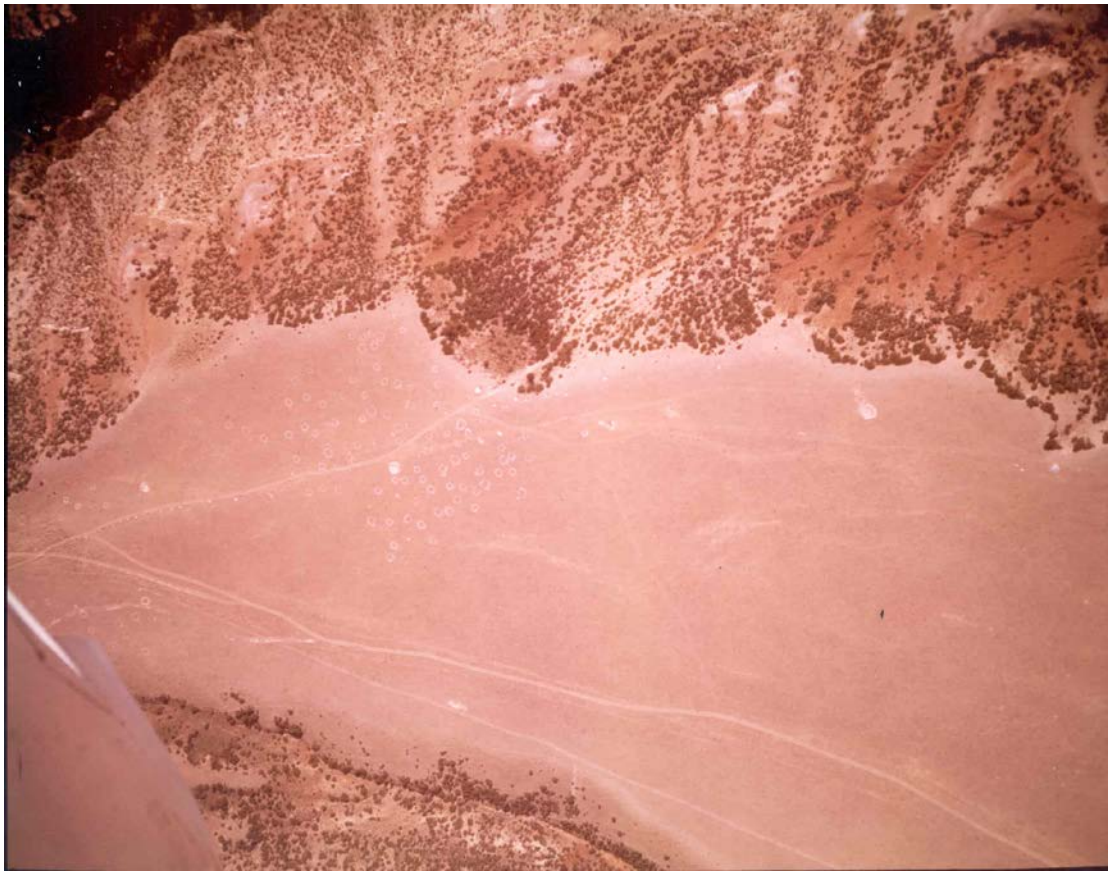
III. RESOURCE SPECIALIST'S RECOMMENDATION FOR ACEC CONSIDERATION IN THE RMP

Based on specialists' review, the East Pryor ACEC meets the following relevance and importance criteria:

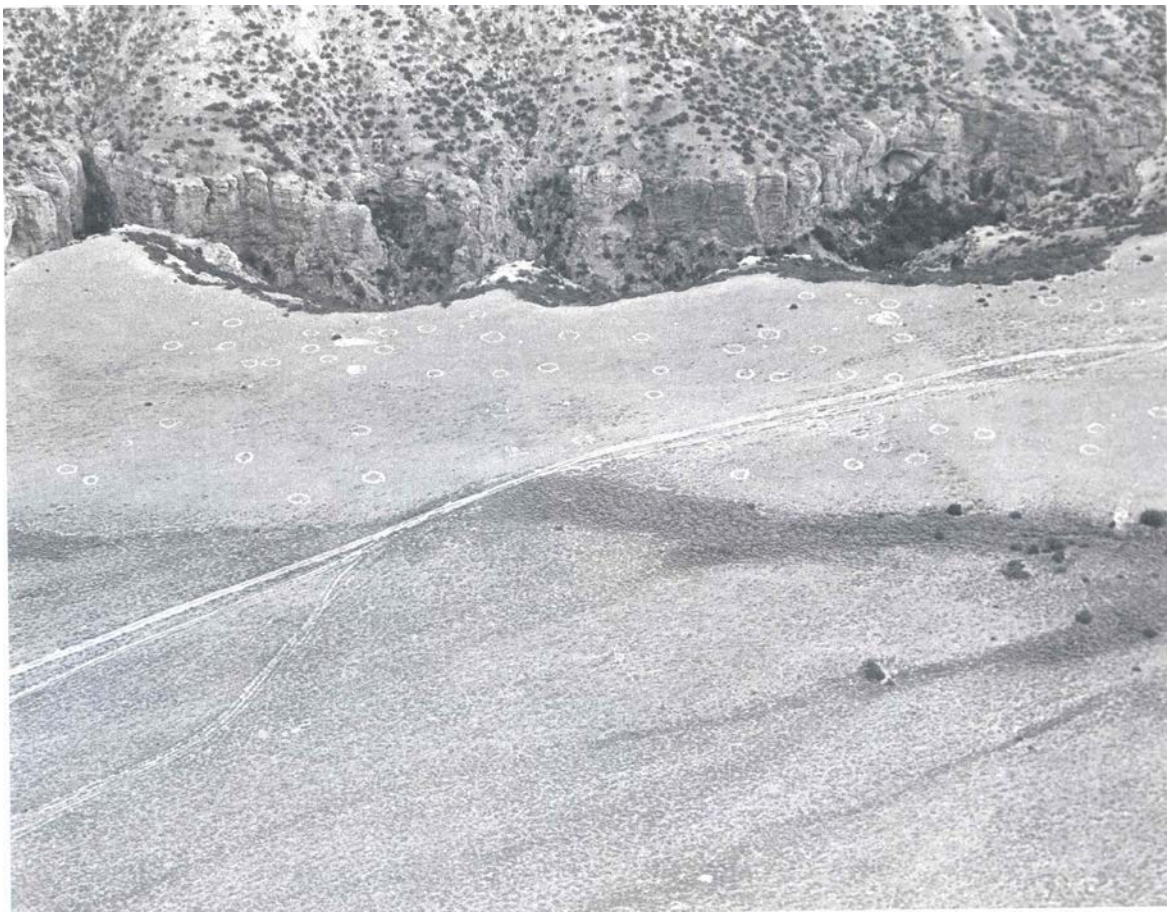
- *Native American religious values meet Relevance Criteria 1 and Importance Criteria 3*
- *The cave ecosystems are considered fragile and meet Relevance Criteria 3 and Relevance Criteria 4 and Importance Criteria 3, although cave formations in limestone formations are not rare or unique.*
- *Sensitive species: the Townsends big-eared bat is considered extremely vulnerable to human disturbance and will abandon roosts and young if disturbed and is a former candidate species. The spotted bat is the least understood bat in North America. Fringed myotis and pallid bat are common throughout the western United States. Peregrine falcon is no longer on the T&E list, however, it is still managed as a special status species. Sage-grouse is uncommon on the East Pryors. Western spotted skunk has very little information collected or studied about the species. Yellowstone cutthroat trout is susceptible to hybridization with non-native trout. The species meet Relevance Criteria 2 and Importance Criteria 3.*
- *The vertebrate fossil area Crooked Creek NNL meets the Relevance Criteria 3 and 4 and the Importance Criteria 3.*
- *Sensitive Plants - Lesica's bladderpod is the only sensitive species found exclusively within the East Pryor ACEC and meets Relevance Criteria 3 and Importance Criteria 2. The other sensitive plant species have limited distribution locally or regionally.*
- *The Demijohn Flat NR District provides locally and regionally significant historical values, and meets Relevance Criteria 1 and Importance Criteria 1 and 2.*

The East Pryor ACEC is designated for wild horses, wildlife, historical/cultural and paleontological resources. The Relevance Criterion for East Pryor ACEC was identified as meeting 1, 2, and 3; and Importance Criteria 2 and 3. Much of the East Pryor ACEC boundary overlaps three Wilderness Study Areas (WSAs): Pryor Mountain, Burnt Timber and Bighorn Tack-On WSAs. The management within the WSAs affords protection for the resource values present within the ACEC. Therefore, it is the specialist's recommendation to retain only those BLM public lands of the existing East Pryor ACEC that fall outside the WSAs to eliminate the overlapping designations. It is the specialists' recommendation to also include expanding the East Pryor ACEC to the west to include all of Demijohn Flat National Register District.

Approval by Associate Field Manager	/s/ Craig R. Drake Signature	9/30/2009 Date
Concurred by Field Manager	/s/ James M. Sparks Signature	9/30/2009 Date



DemiJohn Flat aerial view 1



DemiJohn Flat aerial view 2

ACEC NOMINATION EVALUATION

NAME: **Four Dances Natural Area ACEC** LOCATION:

SIZE: 784 acres NOMINATED BY: BLM

RATIONALE: significant historic, cultural or scenic values, peregrine falcon nesting habitat, and for the "natural hazards" of the cliffs

EVALUATED BY: Carolyn Sherve-Bybee, L. Hardy, J. Parks

In order to be considered as a potential ACEC and analyzed in resource management plan alternatives, an area must meet both the relevance and importance criteria:

I. RELEVANCE (must contain one or more of the following):

1. A significant historic, cultural, or scenic value (including but not limited to rare or sensitive archeological resources and religious or cultural resources important to Native Americans).

   When the BLM acquired the area now known as the Four Dances Natural Area/ACEC in 1998, the Yellowstone River Parks Association nominated the area as an ACEC. At that time the area was known locally as Sacrifice Cliff.

   Three recorded sites are located within the Four Dances Natural Area ACEC: 24YL1535, 24YL1536, 24YL1537. 24YL1535 is a lithic scatter, 24YL1536 is a petroglyph site and 24YL1537 is also a petroglyph site. Both 24YL1536 and 24YL1537 are considered to be eligible to the National Register. There are two known unrecorded sites located within the Four Dances Natural Area ACEC, the Crow vision quest site and the Will James cabin. The vision quest site is considered a sacred site by the Crow and although it has not been evaluated for National Register eligibility, it should be considered eligible. The Will James cabin also has not been recorded and evaluated for National Register eligibility.

   Historically, the Crow tribe used this area for vision questing – mostly due to the view from the location of the vision quest site (four mountain ranges can be seen). In 2008, the Crow held a Men's Health Ceremony at the Four Dances Natural Area/ACEC. As part of the ceremony, prayers were said at the vision quest site. The Crow do hold the area around the vision quest site as being sacred.

   Will James (1892-1942) is a well known character (artist, writer, cowboy, etc.) of the American West. His use of the cabin is well known locally.

2. A fish and wildlife resource (including but not limited to habitat for endangered, sensitive or threatened species, or habitat essential for maintaining species diversity).

   Peregrine falcons nest on the cliffs at the Four Dances Natural Area / ACEC. Peregrine Falcons were removed from the U.S. Endangered Species list in August 1999. The peregrine falcon is currently protected by the Migratory Bird Treaty Act. The peregrine falcon is a protected non-game species for which it is illegal to collect, harm, or otherwise remove from its natural habitat.

3. Natural hazards (including but not limited to areas of avalanche, dangerous flooding, landslides, unstable soils, seismic activity, or dangerous cliffs). A hazard caused by human action may meet the relevance criteria if it is determined through the resource management planning process that it has become part of a natural process.

   The cliffs at the Four Dances Natural Area/ACEC are considered to be natural hazards (dangerous cliffs). Four Dances is bordered to the west by these cliffs which rise 200-500 feet above the Yellowstone River.

II. IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource?

   The Four Dances Natural Area / ACEC has more than locally significant qualities which give it special worth, consequence, meaning, and distinctiveness compared to other resources. It is an undeveloped 765 acres immediately adjacent to the city of Billings. It is open to the public during the daylight hours for hiking.

   The location of Four Dances Natural Area ACEC marks the downstream end of the Coulson Bottom plain. The high sheer sandstone cliffs that form the western edges of Four Dances Natural Area ACEC are also a notable landmark in the Yellowstone Valley. Numerous references to the area exist in both Crow and Hidatsa oral literature.

   The aboriginal Crow name for the cliffs is "Annishshisoopash", translated as "Place of Four Dances". The cliff is traditionally recognized as a fasting site used by Four Dances, a prominent Crow warrior in the 1830s, during the heyday of the Rocky Mountain fur trade and the intertribal Plains wars. Four Dances took his name from the vision he received while fasting at this place. Four Dances' name refers to the dancers who appeared to him in four different places during his vision. Four Dances went from his fasting place to achieve a great Crow victory over the Lakota. Crows visited Four Dances' fasting place until about the turn of the century. Will James had a cabin which is located within the Four Dances Natural Area ACEC.

   The majority of the property is a plateau 200-500 feet above the Yellowstone River, which command views of many important traditional Crow sites and offers great potential for interpretation of many historical and aboriginal sites. The lower end of Coulson Bottoms was favored for Crow camps in the eighteenth and nineteenth centuries. Major fords crossing the Yellowstone and an important pass to the uplands north of the valley were both located here. The pass to the north was documented by Lieutenant James Bradley in 1876, when he passed through with Crow scouts on the way to discover the defeated Custer troops at Little Bighorn.

   In the twentieth century, internationally known cowboy artist and author, Will James periodically worked on the Snook Ranch which included the Four Dances property. Will James used a small cabin overlooking the Yellowstone Valley as a retreat. This cabin remains intact on the Four Dances Natural Area ACEC and appears much as it did in James' time. James was instrumental in perpetuating the myth of the American West and the image of the cowboy as the quintessential American character. The best known of James' works includes Smoky the Cowhorse (1926). Smoky the Cowhorse won the Newbery Medal for children's literature in 1927 and the Lewis Carroll Shelf Award in 1965.

   The Four Dances Natural Area ACEC is directly across the river from Coulson City, a late nineteenth century steamboat landing and the precursor to Billings. Coulson City was built just across the river from what was then the Crow Reservation (the reservation boundary was adjusted to the east in 1891). A segment of the historic Meeteetse to Billings stage and freight road also appears to have crossed the northeast corner of the Four Dances Natural Area ACEC.

   The cliffs on the Four Dances site were also noted by William Clark when he floated past in 1806. His manuscript maps refer to them as "Yellow Cliffs". A few days later Sergeant Pryor and his party crossed the Yellowstone with the expedition's horse herd just below the cliffs.

2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change?

   The undeveloped nature of this location so close to the city of Billings makes it vulnerable to adverse change.

3. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare?

   The Four Dances Natural Area/ACEC has qualities which warrant highlighting in order to satisfy management concerns about public safety. Those concerns are with regards to the cliffs. Currently the BLM has some management prescriptions for the ACEC which prohibit rock climbing and hang gliding from the cliffs..

III. RESOURCE SPECIALIST'S RECOMMENDATION FOR ACEC CONSIDERATION IN THE RMP

It is the recommendation of the specialist to retain the Four Dances Natural Area ACEC. It meets relevance criteria 1, 2, and 3 and importance criteria 1, 2, and 3.

Approval by Associate Field Manager	/s/ Craig R. Drake Signature	9/30/2009 Date
Concurred by Field Manager	/s/ James M. Sparks Signature	9/30/2009 Date

The Four Dances Natural Area/ACEC

Crow Men's Health Ceremony at Four Dances Natural Area ACEC June 2008

ACEC NOMINATION EVALUATION

NAME: **Grove Creek ACEC** LOCATION: west half of Grove Creek area

SIZE: 0 Acres (Alt A), 8,251 Acres (Alt B), 9,445 Acres (Alt C), 8,251 acres (Alt D)

NOMINATED BY: BLM and Public

RATIONALE: significant archaeological and traditional cultural values and special status plants

EVALUATED BY: Carolyn Sherve-Bybee, Nora Taylor, Jay Parks

In order to be considered as a potential ACEC and analyzed in resource management plan alternatives, an area must meet both the relevance and importance criteria:

I. RELEVANCE (must contain one or more of the following):

1. A significant historic, cultural, or scenic value (including but not limited to rare or sensitive archeological resources and religious or cultural resources important to Native Americans).

   The Gold Creek complex consists of four sites initially recorded as discrete sites or feature clusters, (24CB0622, 25CB0148, 24CB0625, and 24CB1190) and have since been determined to be two very large "site complexes". The cluster of recorded sites comprising the Ruby Creek Complex includes 24CB0148, 24CB0149, 24CB0622, 24CB1193, 24CB1194, and 24CB1839. Together, these sites contain over 300 individual tipi ring features and extend over more than a square mile. Roughly 2/3 of this complex is located on private land within the Grove Creek development while 1/3 is located on BLM managed public lands.

   24CB0622: This site contains 170 stone features including 157 discreet tipi rings. The site is eligible for nomination to the National Register of Historic Places under criterion D. This site was originally recorded in 1973. The original recordation did not address the extent of the site, but did state that informant's testimony indicated that the tipi rings extended across much of the surrounding benches. Site 24CB0148 (37 rings) and site 24CB0149 (16 rings) are essentially coincident with site 24CB0625 and should have been re-recorded as part of that site. The Ruby Creek complex should also include sits 24CB1193, 24CB1194 and 24CB1839. The Ruby Creek complex is eligible to the National Register under criterion A (national events) in that it was the locality of a series of complex behavioral events that occurred for over 4,000 years based on the projectile point typology and recovered radiocarbon dates. It is also eligible to the National Register under criterion C in that design and construction of the individual features represents a style of construction. Also testing of several features demonstrated that the area still can yield information.

   The Gold Creek Complex is of similar nature to that of the Ruby Creek Complex and indeed may be extant as a single large site complex extending roughly three miles north/south and about one mile east/west. 24CB0625 was originally recorded in 1973 as a cluster of a half dozen tipi rings on a low ridge overlooking Gold Creek. In 1989, site 24CB1190 was recorded which contained 69 discreet ring features. These two sites are contiguous and are probably part of the same occupation.

   The Crow tribe believes these site complexes to be a Traditional Cultural Property, although it has not been recorded as such.

   Members of the Crow tribe have identified the area as being of religious significance.

2. A natural process or system (including but not limited to endangered, sensitive, or threatened plant species; rare, endemic, or relic plants or plant communities which are terrestrial, aquatic, or riparian; or rare geological features.

   The western part of the Gold Creek complex contains populations of Beartooth large-flowered goldenweed (Haplopappus carthamoides var. subsquarrosa). This is a regionally endemic species restricted to the eastern

front of the Beartooth Mountains and the foothills of the Pryor Mountains. Haplopappus carthamoides is known from only eight locations in Montana. The area is adjacent to recovery areas for the Grizzly Bear and Gray Wolf.

II. II. IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource?

   The Gold Creek complex has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern. The projectile point typology and recovered radiocarbon dates indicate that this area has been occupied (the tipi rings) for over 4000 years.

   While this area has not yet been designated a Traditional Cultural Property, the area contains Native American burials and sacred sites.

2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change?

   The Gold Creek Complex has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change.

   The private land surrounding the BLM managed public lands in the Grove Creek area have been subdivided and the parcels are being sold. ROW applications have been submitted to access some of these parcels. If ROWs are approved, road construction could adversely damage many of the sites. The Crow tribe has requested that the sites be avoided by road construction. Feature density within both complexes if of high enough density that avoidance is not a practical option. In the case of the Ruby Creek road, avoidance would mean substantial re-routing of the road. In Grove Creek, no study has been done to avoid the sites in question and any potential re-route would most likely still impact other loci within the potential TCP district.

   Improved and increased roads in this area will also lead to vandalism of the sites in the Grove Creek Complex (tipi rings, burials, sacred sites, etc.). In 1990, during the construction of a road and well pad it, five individual features within site 24CB0622 were vandalized by looters. The BLM in consultation with the SHPO determined that this vandalism was a direct result of increased access from the newly constructed road.

   Beartooth large-flowered goldenweed is a regionally endemic species restricted to the eastern front of the Beartooth Mountains and the foothills of the Pryor Mountains.

   Development of the area (oil and gas development, ROWs, etc.) would bring more people into the area. As the Grove Creek area is of religious significance to the Crow, the development or having more people in this area would hinder/restrict Crow religious practices in the area.

3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA?

4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare?

5. Poses a significant threat to human life and safety or to property?

III. RESOURCE SPECIALIST'S RECOMMENDATION FOR ACEC CONSIDERATION IN THE RMP

The Grove Creek Complex meets both the relevance criteria (1 & 2) as well as the importance criteria (1 & 2). As the BLM's current management cannot protect this area, it is recommended that this area be considered as an ACEC.

Approval by Associate Field Manager	/s/ Craig R. Drake Signature	9/30/2009 Date
Concurred by Field Manager	/s/ James M. Sparks Signature	9/30/2009 Date

ACEC NOMINATION EVALUATION

NAME: **Meeteetse Spires ACEC** LOCATION: T. 8 S., R. 20 E

SIZE: 965 acres (Alt A), 1,523 acres (Alt B), 2,173 (Alt. C), 1,523 acres (Alt D) NOMINATED BY: BLM

RATIONALE: Unique vegetation and scenic values and rare plant protection.

EVALUATED BY: Nora Taylor, Carolyn Sherve-Bybee, Jay Parks

In order to be considered as a potential ACEC and analyzed in resource management plan alternatives, an area must meet both the relevance and importance criteria:

I. RELEVANCE (must contain one or more of the following):

1. A significant historic, cultural, or scenic value (including but not limited to rare or sensitive archeological resources and religious or cultural resources important to Native Americans).

   This area contains significant scenic value because of the spire remnants of the upturned Madison limestone.

2. A fish and wildlife resource (including but not limited to habitat for endangered, sensitive or threatened species, or habitat essential for maintaining species diversity).

   The spire rock formations are used by peregrine falcons for nesting. Peregrine falcons are a Bureau sensitive species.

3. A natural process or system (including but not limited to endangered, sensitive, or threatened plant species; rare, endemic, or relic plants or plant communities which are terrestrial, aquatic, or riparian; or rare geological features.

   This area contains populations of the rare plants, shoshonea (Shoshonea pulvinata) and Beartooth large-flowered goldenweed (Haplopappus carthamoides var. subsquarrosa). The area is adjacent to recovery areas for the Grizzly bear and Gray wolf.

   The terrain slopes steeply, dropping from 7,200 feet to5,600 feet. The spires are formed by a tilted layer of sedimentary rocks at the edge of the Beartooth Uplift and are remnants of upturned Madison limestone.

4. Natural hazards (including but not limited to areas of avalanche, dangerous flooding, landslides, unstable soils, seismic activity, or dangerous cliffs). A hazard caused by human action may meet the relevance criteria if it is determined through the resource management planning process that it has become part of a natural process.

   There are natural hazards due to the dangerous cliffs in the ACEC.

II. IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource?

   This area is considered significant for the rare plant species Shoshonea pulvinata which is known in three locations in Montana and only 12 world-wide and for Haplopappus carthamoides which is known from only eight locations in Montana.

   Both species are regional endemics. Shoshonea is known only from the Absaroka and Owl Creek Mountains of northwest Wyoming and adjacent Montana. Beartooth large-flowered goldenweed is restricted to the eastern front of the Beartooth Mountains and the foothills of the Pryor Mountains.

2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change?

   The Meeteetse Spires area is of religious significance to the Crow Tribe.

3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA?

4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare?

5. Poses a significant threat to human life and safety or to property?

   The steep cliffs pose a hazard to the recreating public.

III. RESOURCE SPECIALIST'S RECOMMENDATION FOR ACEC CONSIDERATION IN THE RMP

It is recommended that the existing Meeteetse Spires ACEC be retained and upon completion of the proposed LWCF land acquisition, the ACEC boundary be expanded to include the acquired land. This would add 558 acres and one shoshonea site to the ACEC. The 650 acres to the east of the boundary of the existing ACEC only contains one Beartooth large-flowered goldenweed site so this area is not recommended to be included in the ACEC. The entire Meeteetse Spires area is of religious significance to the Crow Tribe.

Approval by Associate Field Manager	/s/ Craig R. Drake Signature	9/30/2009 Date
Concurred by Field Manager	/s/ James M. Sparks Signature	9/30/2009 Date

560 acre acquisition area

560 acre acquisition area

ACEC NOMINATION EVALUATION

NAME: **Petroglyph Canyon ACEC** LOCATION: [redacted]

SIZE: 240 acres NOMINATED BY: BLM

RATIONALE: unique cultural values EVALUATED BY: Carolyn Sherve-Bybee

In order to be considered as a potential ACEC and analyzed in resource management plan alternatives, an area must meet both the relevance and importance criteria:

IV. **RELEVANCE** (must contain one or more of the following):

1. A significant historic, cultural, or scenic value (including but not limited to rare or sensitive archeological resources and religious or cultural resources important to Native Americans).

Petroglyph Canyon ACEC, known by Smithsonian trinomial number 24CB0601, is a Late Prehistoric rock art site listed on the National Register of Historic Places (11/20/1975). The complex rock art site consists of 38 panels of petroglyphs. Anthropomorphic figures dominate. The majority of the petroglyphs were made by pecking through the dark varnish to expose the lighter colored interior stone. This practice of removing all the interior of each petroglyph, as opposed to simply pecking away an outline of each figure, is known as the *en toto* pecked style. The rock art in Petroglyph Canyon dates from 800-1000 years ago (Loendorf 1984).

This style is dominated by depictions of humans shown in full view, side-by-side, in rows of figures. Both males and females are shown.

Quadrapedal animals, including what are likely representations of bison, sheep, dogs/coyotes, and bears are found in the *en toto* style, as are snakes and possibly birds. Abstract elements include net patterns and pecked dots, sometimes in rows and other times, just a single dot.

Petroglyphs in the *en toto* style were through to be part of a continuous tradition that lasted through at least four centuries.

The numerical ages for two petroglyphs at Petroglyph Canyon were determined through AMS dating while seen more petroglyphs were dated through the CR curve. All dates fall within the relative estimate for the *en toto* tradition.

Petroglyph Canyon lies in the Cretaceous Cloverly formation. The Cloverly strata include sandstones of moderate hardness and Petroglyph Canyon has been cut in the sandstone mostly through water erosion. The upper end of the canyon is a jumbled array of boulders of varying sizes and shapes. The boulders decrease along the actual canyon bottom toward its mouth and in the lower third of the canyon the sandstone bedrock is exposed on the floor. Six to eight circular eroded holes or pockets occur in the bedrock; some of these are nearly two meters in diameter and more than a meter in depth. These holes catch runoff water and retain water through mid-summer in normal years.

The canyon is oriented northwest to southeast over the length of 1.5 kilometers. The maximum height of the canyon walls is 20 meters along the southwestern wall near the mouth. The northeastern side is not as steep and is dissected by drainages. Along this side near the canyon mouth there are numerous large boulders and erosional remnants which are often separated by

narrow crevices. Petroglyphs are found on the faces of these boulders as well as on the more sheer canyon walls.

2. **A fish and wildlife resource (including but not limited to habitat for endangered, sensitive or threatened species, or habitat essential for maintaining species diversity).**

3. **A natural process or system (including but not limited to endangered, sensitive, or threatened plant species; rare, endemic, or relic plants or plant communities which are terrestrial, aquatic, or riparian; or rare geological features.**

4. **Natural hazards (including but not limited to areas of avalanche, dangerous flooding, landslides, unstable soils, seismic activity, or dangerous cliffs). A hazard caused by human action may meet the relevance criteria if it is determined through the resource management planning process that it has become part of a natural process.**

II. **IMPORTANCE** (characterized by one or more of the following):

1. **Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource?**

Petroglyph Canyon ACEC (24CB0601) contains more than locally significant qualities which give it special worth, consequence, meaning, or distinctiveness, especially compared to similar resources.

The rock art in Petroglyph Canyon dates from 800-1000 years ago (Loendorf 1984) and represents the northernmost extension of a rock art style not commonly found in Montana.

This *en toto* style is dominated by depictions of humans shown in full view, side-by-side, in rows of figures. Both males and females are shown in Petroglyph Canyon.

Quadrapedal animals, including what are likely representations of bison, sheep, dogs/coyotes, and bears are found in the *en toto* style, as are snakes and possibly birds. Abstract elements include net patterns and pecked dots, sometimes in rows and other times, just a single dot.

Petroglyphs in the *en toto* style were through to be part of a continuous tradition that lasted through at least four centuries.

The numerical ages for two petroglyphs at Petroglyph Canyon were determined through AMS dating while seen more petroglyphs were dated through the CR curve. All dates fall within the relative estimate for the *en toto* tradition. The average age of the four dated anthropomorphic figures is 1278 BP, which is within the range of the oldest C14 date from the site. A thunderbird figure was dated at 962 ± 78 BP. Three petroglyphs were older than the relative estimates for the site. One, a bison figure, dated at 1470±75 BP, two other animal forms include an upside down quadraped and another correctly oriented quadraped , but the latter is so heavily varnished it is difficult to see. These figures dated at 2454±223 BP and 2613±309 BP respectively and may represent an older rock art tradition.

2. **Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change?**

Petroglyph Canyon ACEC (24CB0601) has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change. It possesses information that is regionally significant and fragile. The area is vulnerable to natural erosion and vandalism.

Petroglyph Canyon is seeing an increasing amount of visitation each year. Site stewards, part of the Montana Site Steward Program, have been monitoring the site since 2010. No new incidences of vandalism have occurred at the site, although unauthorized roads are now visible from the southern end of Petroglyph Canyon (one road begins on the private land to the west, the other begins on BLM managed public land in Wyoming).

3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA?

4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare?

5. Poses a significant threat to human life and safety or to property?

III. RESOURCE SPECIALIST'S RECOMMENDATION FOR ACEC CONSIDERATION IN THE RMP

It is the specialists's recommendation that Petroglyph Canyon ACEC be retained. This recommendation is based on the outstanding cultural and natural values and recognizing that preservation of those values is in the interest of the public.

Petroglyph Canyon ACEC meets Relevance criterion 1 and Importance criteria 1 and 2.

Petroglyph Canyon ACEC is well known regionally. It contains the northernmost extension of a rock art style (*en toto*) that is not commonly found in Montana. The site is listed on the National Register of Historic Places. It is considered significant for its information potential on the prehistory of Native American in the plains environment.

Approval by Associate Field Manager	/s/ Craig R. Drake Signature	9/30/2009 Date
Concurred by Field Manager	/s/ James M. Sparks Signature	9/30/2009 Date

ACEC NOMINATION EVALUATION

NAME: **Pompeys Pillar ACEC** LOCATION: 30 miles east of Billings, MT

SIZE: 423 acres NOMINATED BY: RMP amendment, 1996

RATIONALE: Protect historic and cultural values and wildlife/fisheries

EVALUATED BY: Dick Kodeski, Carolyn Sherve-Bybee, Jay Parks, Ernie McKenzie

In order to be considered as a potential ACEC and analyzed in resource management plan alternatives, an area must meet both the relevance and importance criteria:

I. RELEVANCE (must contain one or more of the following):

1. A significant historic, cultural, or scenic value (including but not limited to rare or sensitive archeological resources and religious or cultural resources important to Native Americans).

   Pompeys Pillar has served as an important geological feature, landmark and register of travelers for hundreds of years. Hundreds of markings, petro glyphs, and inscriptions left by visitors have transformed this geologic phenomenon into a living journal of the American West. One of the Pillar's most notable visitors, Captain William Clark of the Lewis and Clark Expedition, arrived at Pompeys Pillar on July 25, 1806, on his return trip from the Pacific coast. Clark's journal recorded his stop at this "remarkable rock" with its "extensive view in every direction." He described an idyllic landscape of grassy plains, snow-capped mountains, and cliffs abutting the wandering river. Clark marked his presence by engraving his name and the date of his visit on the outcrop. In his journal, Clark named the rock Pompey's Tower (Pompey being Clark's nickname for Sacagawea's young son, Jean Baptiste Charbonneau). Ethnographic and archaeological evidence indicates that the Pillar was a place of ritual and religious activity. Hundreds of petroglyphs on the face of the rock, noted by Clark in his journal, reflect the importance of the monument to early peoples. The Crow people, the dominant residents of the region when Clark passed through, call the pillar the "Mountain Lions Lodge" in their language, and it figures prominently in Crow oral history. Pompeys Pillar also includes the markings and signature of a host of characters from the pioneer past, including fur trappers, Yellowstone River steamboat men, frontier army troops, railroad workers, missionaries, and early settlers. In 1873, Lieutenant Colonel George Armstrong Custer and his men camped at its base, where they came under attack from Sioux snipers. Crow ethnographies include numerous references to the Pillar as a landmark and as an area for religious activities such as fasting. Evidence of long-term use of the Pillar is ubiquitous in the vicinity. The burned rock, flaked stone and bone debris left from probably thousands of years of small, short-term occupations are visible in the flats surrounding the landform.

   Pompeys Pillar has several designations associated with the site to protect its significant values, including most recently, status as a National Monument. Through Section 2 of the Act of June 8, 1906 (34 Stat. 225, 16 U.S.C. 431), approximately 51 acres at Pompeys Pillar was designated a national monument in January of 2001, for the purpose of protecting the historic and cultural objects described above.

   In 1965, Pompeys Pillar was officially designated a National Historic Landmark (NHL) primarily because of the significance of William Clark's signature panel. The boundaries designated include 6 acres above the 2,890 foot contour level. In 1983, the same six acre site was listed on the National Register of Historic Places as a significant cultural property.

2. A fish and wildlife resource (including but not limited to habitat for endangered, sensitive or threatened species, or habitat essential for maintaining species diversity).

   The Pompeys Pillar property serves as important habitat for significant fish and wildlife resources. The community of wildlife species present on the property are typical of the riverine environment of the middle Yellowstone Valley in the early nineteenth century. Bald eagles have been observed traveling in the Pompeys Pillar area. During spring migration, up to 100 bald eagles have been observed in the trees and over the river about 1.5 miles downstream from the existing bridge (BRW, biological assessment report, February 1999). Pompeys Pillar has a

rich diversity of song birds (meadowlark, black-capped chick-a-dee, and mountain blue bird), upland game bird species (sharp-tail grouse, pheasant) and raptors (kestrel; red-tailed, sharp-shinned, Cooper's, Swainson's, rough-legged and marsh hawks; and prairie falcon). The golden eagle, mallard, Canada geese, snow geese, red-breasted merganser, and common golden-eye have been observed in the corridor. The Yellowstone River corridor, adjacent to the Pillar, may be suitable habitat for the Pallid Sturgeon for potential future recovery efforts.

3. A natural process or system (including but not limited to endangered, sensitive, or threatened plant species; rare, endemic, or relic plants or plant communities which are terrestrial, aquatic, or riparian; or rare geological features.

   Pompeys Pillar is a massive sandstone outcrop that rises approximately 127 feet on the banks of the Yellowstone River east of Billings. The Monument's premier location at a natural ford in the Yellowstone River, and its geologic distinction as the only major sandstone formation in the area, have made Pompeys Pillar a celebrated landmark and outstanding observation point for more than eleven thousand years of human occupation. The Pompeys Pillar property harbors a functioning ecosystem similar to that observed by the Clark party in the early nineteenth century. Many wildlife species typical of the early 1800s, have been observed in the area. The Pillar lies at a well-known ford of the Yellowstone. On the north side of the river, opposite the Pillar, the high sandstone rims are broken to allow Pompeys Pillar Creek entry into the Yellowstone. To the south is the mouth of the north-draining Fly Creek Valley. The ford and these natural passages must have been used for millennia by bison herds and hunters to access the Bull Mountains and Musselshell Valley and lands beyond to the north, and the Big Horn and Little Big Horn Valleys and the country to the south. The position of Pompeys Pillar at this strategic crossroads along north-south and east-west travel corridors virtually guaranteed it an important role in the prehistory and history of the middle Yellowstone Valley.

4. Natural hazards (including but not limited to areas of avalanche, dangerous flooding, landslides, unstable soils, seismic activity, or dangerous cliffs). A hazard caused by human action may meet the relevance criteria if it is determined through the resource management planning process that it has become part of a natural process.

II. <u>IMPORTANCE (characterized by one or more of the following):</u>

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource?

   Pompeys Pillar meets Importance Criteria 1. Pompeys Pillar has resources and qualities that are both locally and nationally significant. William Clark's signature is the only on-site physical evidence known for the Lewis and Clark Expedition. The hundreds of markings, petroglyphs, and inscriptions are evidence of the regional significance of the site. To further support the importance of the site, 51 acres was reserved and set-aside as Pompeys Pillar National Monument to protect the values and resources.

2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change?

   Pompeys Pillar meets Importance Criteria 2. The signatures and rock art are extremely fragile and are especially vulnerable to erosion. Comparison of the signature panels today with photographs made about 30 years ago show significant deterioration. Modem graffiti (vandalism) is the secondary threat to the historic and prehistoric motifs.

3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA?

   Pompeys Pillar meets Importance Criteria 3. The area warrants protection in order to preserve and protect the significant resource values, as recognized through the National Monument proclamation. With the addition of visitor facilities to interpret the cultural and historical significance of the area, the site has become an important destination for visitors from across the region and country.

4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare?

5. Poses a significant threat to human life and safety or to property?

III. RESOURCE SPECIALIST'S RECOMMENDATION FOR ACEC CONSIDERATION IN THE RMP

Pompeys Pillar meets both relevance (criteria 1, 2, and 3) and importance (criteria 1, 2, and 3). Since the original 1996 Pompeys Pillar ACEC Amendment, 51 acres within the ACEC have been designated a National Monument. In addition, a significant investment of resources were dedicated to the site to interpretive the historical, cultural and Native American values of the region. The site continues to draw visitors from across the country and provides local and regional schools interpretive opportunities as well as an opportunity to experience an ecosystem reminiscent of an 1806 environment.

Recommend: retaining the 432 acre ACEC, inclusive of the NM and NHL designations (and National Register Landmark). BLM management objectives should address the long-term conservation of the biological and heritage resources and provide visitor service/interpretive opportunities.

Approval by Associate Field Manager	/s/ Craig R. Drake Signature	9/30/2009 Date
Concurred by Field Manager	/s/ James M. Sparks Signature	9/30/2009 Date

ACEC NOMINATION EVALUATION

NAME: **Pryor Foothills Research Natural Area/ACEC** LOCATION: T. 9 S., R. 27 E.

SIZE: 0 acres (Alt A), 958 acres (Alt. B), 7,401 acres (Alt. C), 2,606 (Alt D) NOMINATED BY: Public

RATIONALE: Area has a large concentration of Bureau sensitive plant species and rare plant communities. The Gyp Springs contains high historic and cultural values

EVALUATED BY: Nora Taylor, Carolyn Sherve-Bybee, Jay Parks

In order to be considered as a potential ACEC and analyzed in resource management plan alternatives, an area must meet both the relevance and importance criteria:

I. RELEVANCE (must contain one or more of the following):

1. A significant historic, cultural, or scenic value (including but not limited to rare or sensitive archeological resources and religious or cultural resources important to Native Americans).

   The Gyp Springs area (located in the south portion of the proposed Pryor Foothills RNA) contains significant historic and cultural values.

   Historic Values: In 1864, Jim Bridger, famed early trapper and mountain man, and later guide for the Captain William Reynolds Exploration military and emigrant parties, blazed what would become known as Bridger Cutoff, an alternative route for a section of the Bozeman Trail emigrant route. The Bozeman Trail extended from Fort Casper, Wyoming to Virginia City through the territories of the Sioux and Northern Cheyenne and Northern Arapaho, who, at the time were hostile. The Bridger Cutoff extended west from Fort Casper, where it left the Bozeman Trail passing through relatively friendly Shoshone and Crow territory and then north to Edgar, Montana, where it then connected again with the Bozeman Trail. The Bridger Cutoff became the main emigrant trail through the region, particularly after the section of the Bozeman Trail through the hostile territory was abandoned in 1868. The Bridger Cutoff in some sections was used through the 1920s. The present day Gyp Springs Road (still in-use) follows generally along the Bridger Cutoff through the Gyp Springs area. The trail passes directly through and continues west of Gyp Springs. The spring was likely used historically as a watering and camp site and was an integral part of Bridger Cutoff of the Bozeman Trail. The trail was designated as site number 24CB1242 within the Montana portion in 1991 (Taylor 1991) beginning below Gyp Springs following Gyp Springs Creek north from the border with Wyoming and continuing along the creek, through the springs, and then continuing to the northwest. The Bridger Cutoff was determined eligible for inclusion to the NRHP on a state level. The trail has at least regional significance because it is associated with events that have made a significant contribution to the broad pattern of our history and it is associated with the lives of persons significant in our past.

   Cultural Values: Gyp Springs and the immediate vicinity retain archaeological evidence of both historic and prehistoric use and is documented as site 24CB604. Confirmed substantial surface and subsurface cultural remains indicate possible long, intensive and continued use of the springs in prehistoric through historic periods. The prehistoric component is comprised of artifact scatter and intact subsurface deposits indicative of a habitation site. Diagnostic materials indicate an occupation or occupations as early as late Paleolithic/archaic period up to late prehistoric period. A Recreation Site Inventory and Evaluation Form completed by BLM before 1969 indicates a consideration of Gyp Springs and "Tipi Rings Area nearby" as contributing to the recreational attraction for the Crooked Creek Program Area. The "Tipi Rings Area" was recorded as 24CB604 in 1967. The combination of the historic and prehistoric values makes the cultural values outstandingly remarkable.

2. A fish and wildlife resource (including but not limited to habitat for endangered, sensitive or threatened species, or habitat essential for maintaining species diversity).

   The area contains sites of seven bureau sensitive plant species.

3. A natural process or system (including but not limited to endangered, sensitive, or threatened plant species; rare, endemic, or relic plants or plant communities which are terrestrial, aquatic, or riparian; or rare geological features.

   The area contains the northern extent of the Wyoming Basins ecoregion.

4. Natural hazards (including but not limited to areas of avalanche, dangerous flooding, landslides, unstable soils, seismic activity, or dangerous cliffs). A hazard caused by human action may meet the relevance criteria if it is determined through the resource management planning process that it has become part of a natural process.

II. IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource?

   This area is the northern extent of the Wyoming Basins ecoregion. The area contains seven bureau sensitive plant species. Most of the Montana sites of the many of the species are found in this area.

   The Gyp Springs locale contains more than locally significant qualities that give it special worth and distinctiveness or cause for concern, especially compared to any similar resource. The entire Gyp Springs site is eligible for the National Register for cultural and historic values, this is due to the prehistoric and historic use of the spring site. .

2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change?

   Impacts of climate change would be observed first where plants are at the edge of their range. Changing climates would allow plants to modify their ranges making peripheral populations important for range expansion.

   The Gyp Springs locale has qualities that make it fragile, sensitive, threatened or vulnerable to adverse change. The historic resources (historic roads/trails) are sensitive and vulnerable to change as the roads (or road traces) can be impacted unintentional OHV use. The cultural resources are vulnerable to collecting and vandalism.

3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA?

4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare?

5. Poses a significant threat to human life and safety or to property?

III. RESOURCE SPECIALIST'S RECOMMENDATION FOR ACEC CONSIDERATION IN THE RMP

I recommend designating 2,606 acres of the Pryor Mountain foothills as a Research Natural Area/ACEC for the management and protection of the rare plant values of this area. This area provides a unique area for research and education about rare plants and the impact of climate change to ecoregions at the edge of their distribution. The cultural resources located in the Gyp Springs area are an additional important value to the proposed RNA.

Approval by Associate Field Manager	/s/ Craig R. Drake Signature	9/30/2009 Date
Concurred by Field Manager	/s/ James M. Sparks Signature	9/30/2009 Date

ACEC NOMINATION EVALUATION

NAME: **Stark Site ACEC** LOCATION:

SIZE: 799 acres NOMINATED BY: BLM

RATIONALE: protect unique cultural values EVALUATED BY: Carolyn Sherve-Bybee

In order to be considered as a potential ACEC and analyzed in resource management plan alternatives, an area must meet both the relevance and importance criteria:

I. RELEVANCE (must contain one or more of the following):

1. A significant historic, cultural, or scenic value (including but not limited to rare or sensitive archeological resources and religious or cultural resources important to Native Americans).

   The Stark Site complex (a series of 27 sites) has the potential to yield significant information on Native American societies of the Northwestern Plains from the Plains Archaic period to the early Historic period.

   The complex of sites in the area includes evidence of the repeated impoundment, slaughter, and processing of bison over a long period of time. Included are seven separate bison bone deposits, each representing a kill and processing episode; a number of open occupation sites with artifacts, hearth features, and buried deposits; and a small rockshelter with rock art and with the potential for buried occupation deposits. At least two human burials have been removed from that area.

   When originally recorded in 1972, one of the bison kill and processing sites yielded pottery shards similar to types found in late prehistoric contexts on the Missouri River in North Dakota. Limited excavation was subsequently conducted by Montana State University, Bozeman. The presence of this rare (for Central Montana) and exotic artifact type suggests that these peoples may have been among the earliest Crow to move into the area after splitting off from North Dakota agricultural groups.

II. IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource?

   The Stark Site complex possesses information that is regionally significant. The presence of this rare (for Central Montana) and exotic artifact type suggests that these peoples may have been among the earliest Crow to move into the area after splitting off from North Dakota agricultural groups. The timing and other factors critical to an understanding of the initial movement of the Crow people to the Montana-Wyoming area is problematical and has generated considerable research interest. The opportunity to investigate the activities of late prehistoric Plains nomad societies at a time when they were initially entering the area is unusual and may be quite significant, not only for an understanding of Crow and Hidatsa ethnohistory, but of understanding the ethnohistory of numerous other groups who entered the North American Plains during the late prehistoric and early historic time.

2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change?

   The Stark Site complex has qualities or circumstances that make it fragile and vulnerable. The area is well known to artifact collectors and is easily accessible by a county road. The reports for sites in the complex include several references to unauthorized digging in site deposits. With repeated collection and vandalism, this valuable and interesting group of sites could be stripped of diagnostic artifacts and otherwise rendered useless for scientific and educational purposes in the future.

III. RESOURCE SPECIALIST'S RECOMMENDATION FOR ACEC CONSIDERATION IN THE RMP

It is the specialist's recommendation that the Stark Site be retained as an ACEC. The Stark Site meets relevance criterion 1 as a significant cultural property. It also meets importance criteria 1 and 2 as it possesses information that is regionally significant and the sites are vulnerable and fragile. The area is approximately 799 public surface acres in

size and is considered eligible for nomination to the National Register of Historic Places. Although bison kill and butchering sites on the Northwestern Plains are not uncommon, the Stark Site complex represents the greatest density of such sites known on public land in south-central Montana. The presence of both kill and processing sites dating over a considerable span of time provides the opportunity to compare hunting and related strategies by various groups using the site over differing time periods. The area is considered significant for its potential on the prehistory of Native American societies in the plains environment.

Approval by Associate Field Manager	/s/ Craig R. Drake Signature	9/30/2009 Date
Concurred by Field Manager	/s/ James M. Sparks Signature	9/30/2009 Date

ACEC NOMINATION EVALUATION

NAME: **Sykes Ridge Rare Plant ACEC** LOCATION: T. 9 S., R. 28 S.

SIZE: 11,600 acres NOMINATED BY: Public (Peter Lesica)

RATIONALE: Rare Plant Protection EVALUATED BY: Nora Taylor

In order to be considered as a potential ACEC and analyzed in resource management plan alternatives, an area must meet both the relevance and importance criteria:

I. RELEVANCE (must contain one or more of the following):

1. A significant historic, cultural, or scenic value (including but not limited to rare or sensitive archeological resources and religious or cultural resources important to Native Americans).

2. A fish and wildlife resource (including but not limited to habitat for endangered, sensitive or threatened species, or habitat essential for maintaining species diversity).

3. A natural process or system (including but not limited to endangered, sensitive, or threatened plant species; rare, endemic, or relic plants or plant communities which are terrestrial, aquatic, or riparian; or rare geological features.

   The proposed ACEC contains six bureau sensitive plants: Lesica's bladderpod, obscure evening-primrose, dwarf mentzelia, Daggett rockcress, Wind River milkvetch, yellow bee plant.

4. Natural hazards (including but not limited to areas of avalanche, dangerous flooding, landslides, unstable soils, seismic activity, or dangerous cliffs). A hazard caused by human action may meet the relevance criteria if it is determined through the resource management planning process that it has become part of a natural process.

II. IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource?

   The Sykes Ridge area has numerous sites of Bureau sensitive species.

2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change?

   This is an area of high endemism with populations of rare and regionally endemic species and communities.

3. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA?

4. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare?

5. Poses a significant threat to human life and safety or to property?

III. RESOURCE SPECIALIST'S RECOMMENDATION FOR ACEC CONSIDERATION IN THE RMP

Do not designate as an ACEC because this area is already part of the East Pryor ACEC. Under all alternatives for the East Pryor ACEC, adequate protection for the rare plant resources will be included as part of the management actions. The majority of this proposed ACEC is also within the boundaries of the Pryor Mountain and Bighorn Tack-on Wilderness Study areas. The Interim Management Plan for WSAs also provides adequate protection for rare plants.

Approval by Associate Field Manager	/s/ Craig R. Drake Signature	9/30/2009 Date
Concurred by Field Manager	/s/ James M. Sparks Signature	9/30/2009 Date

ACEC NOMINATION EVALUATION

NAME: **Weatherman Draw ACEC** LOCATION:

SIZE: 4,365 acres (Alt A), 4,986 acres (Alt B), 12,277 acres (Alt C), 12,277 acres (Alt D) NOMINATED BY: BLM and public

RATIONALE: protect unique cultural values EVALUATED BY: Carolyn Sherve-Bybee, Jay Parks

In order to be considered as a potential ACEC and analyzed in resource management plan alternatives, an area must meet both the relevance and importance criteria:

I. RELEVANCE (must contain one or more of the following):

1. A significant historic, cultural, or scenic value (including but not limited to rare or sensitive archeological resources and religious or cultural resources important to Native Americans).

Weatherman Draw contains significant historic, cultural and scenic values.

There has been almost 80 years of work in the Weatherman Draw ACEC. The intriguing thing about this is that the majority of the work was driven towards finding and recording rock art. During the 1960s and 1970s most of the large panels were recorded and Loendorf focused his famous studies on the Valley of the Shields. This seminal work triggered emphasis on the rock art in the area by other archaeologists. The focus on rock art tended to skew the data set towards one aspect of the prehistoric use of the area.

In 2003, it was determined that a systematic inventory of the area was needed. Since 2003 the inventory of the Weatherman Draw and the surrounding area has focused on determining the nature of the cultural landscape. More to the point, it has focused on the settlement and spatial patterns of the area. This research is showing how the people who created the rock art in Weatherman Draw used and lived on the land.

Of the 80 recorded rock art sites within Weatherman Draw, many of these sites contain the distinctive styles of characteristic of Northern Plains aboriginal rock art of the past two millennia. The wide variety of motifs and styles visible on panels present evidence for evolutionary trends within styles or periods, for sequential styles varying through time, and possibly for parallel styles executed contemporaneously for differing functions or by different prehistoric groups. Data available from these sites can address a number of important research questions on the chronology and function of rock art among prehistoric and historic hunting societies and on Plains ethnography. Recent advances in dating techniques and innovations in ethnographic analogy and interpretation of ethnographic records are generating renewed interest in the interpretative potential of rock art studies.

Similarities in motifs among various panels at Weatherman Draw (for example in painted shield design), and similarities in method of execution (such as the technique of smoothing or preparing the surface where shields are subsequently painted; or the use of multiple colors in shield pictographs) argue for some internal relation among the sites. In some cases the motifs or techniques used on Weatherman panels are seldom found elsewhere in the region. The Weatherman Draw sites are relatively densely concentrated on the landscape, and are isolated on all sides by at least several miles of terrain where prehistoric rock art of any kind is rare to absent.

The close association of sites or loci marked by fire-cracked rock, flaked stone, hearths, or other debris suggests that the latter sites may have served, at least in part, as staging areas for the people producing the rock art.

Weatherman Draw is also an area of high religious importance for many Native Americans. The Blackfeet, Comanche, Crow, Eastern Shoshone, Kiowa, Northern Arapaho, Northern Cheyenne, Standing Rock Sioux, Spirit Lake Sioux, Yankton Sioux, Nez Perce, Leech Lake Ojibwe, and the Fort Peck Assiniboine and Sioux are just some of the Native American communities who place high religious significance on this area. The Weatherman Draw area is still being used for religious purposes by many tribes. Each of these groups recognizes that the rock art in the Weatherman Draw area is an indicator that the area has great cultural and spiritual significance to past Native Americans, and therefore it has significance to present day native communities. The tribes have placed more or less emphasis on the continued physical integrity of the rock art panels.

In addition to the rock art and prehistoric habitation sites, the Weatherman Draw ACEC and surrounding area contain historic coal mines (found both in and outside of the ACEC), historic homesteads, evidence of native American (Crow) horse traps/corrals, vision quest and sacred sites (which are still in use) and historic graffiti.

II. IMPORTANCE (characterized by one or more of the following):

1. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource?

   The panels in Weatherman Draw include examples of rock art that is unique on public lands in Montana and as the majority of the rock art in Weatherman Draw consists of pictographs, these are among the most fragile cultural resources the BLM administers in Montana. Investigation of these sites has demonstrated that the Weatherman Draw panels and adjacent cultural deposits are yielding important data relevant to the construction of a chronology of rock art manufactured on the Northwestern Plains

2. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change?

   The threats to the continued existence of rock art in Weatherman Draw are both environmental and cultural. The rock art panels will continue to be susceptible to the slow degradation of the sandstone surfaces on which they were constructed, and to exfoliation, which breaks spalls of sandstone off the rock face, and could after years of moisture buildup, instantly damage or destroy a panel.

   The second threat is vandalism, which is present at the sites (24CB408, 24CB630, 24CB1023). The modern damage to the rock art is either by graffiti or by an effort to make the rock art more visible by tracing over the glyphs with chalk or other substances.

   As portions of the Weatherman Draw ACEC are considered to be of religious significance to the Crow and other tribes with affinity to the area, the solitude and the viewshed from specific sites are very important to religious practices.

III. RESOURCE SPECIALIST'S RECOMMENDATION FOR ACEC CONSIDERATION IN THE RMP

It is the specialist's recommendation that the Weatherman Draw ACEC be retained and the ACEC be expanded to include the additional sites found in the area that reflect the use of the land by the people who created the rock art within the existing Weatherman Draw ACEC. This recommendation is based on the outstanding cultural and natural values and recognizing that preservation of those values is in the interest of the public.

The Weatherman Draw ACEC meets relevance criterion 1 and importance criteria 1 and 2.

The Weatherman Draw area is well know regionally as the locus of a remarkable series of prehistoric and historic rock art panels. Several tribes have expressed interest in the Weatherman Draw area, based on the reported archaeological sites and the traditional values their presence implies. The area is also known locally as a rugged, picturesque landscape and the more accessible portions of the Draw are visited regularly by hikers and other recreationists.

Approval by Associate Field Manager	/s/ Craig R. Drake Signature	9/30/2009 Date
Concurred by Field Manager	/s/ James M. Sparks Signature	9/30/2009 Date

Vision quest site still in use in the Weatherman Draw ACEC

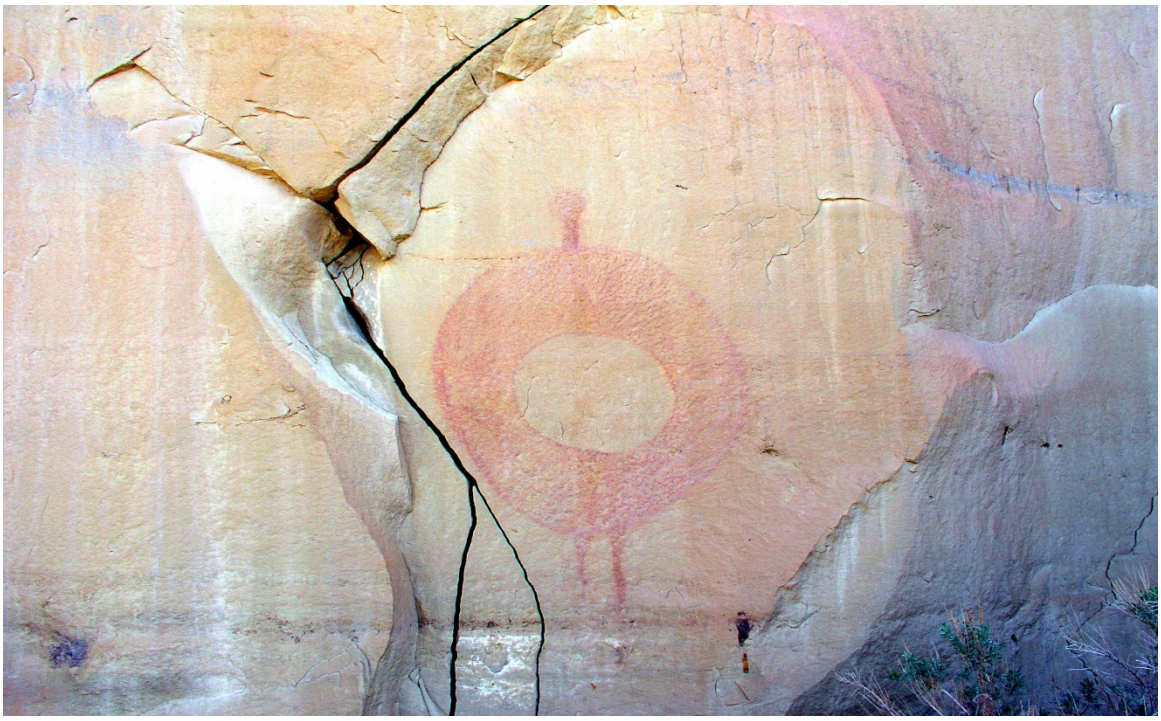
Provinse Site

Provinse Site

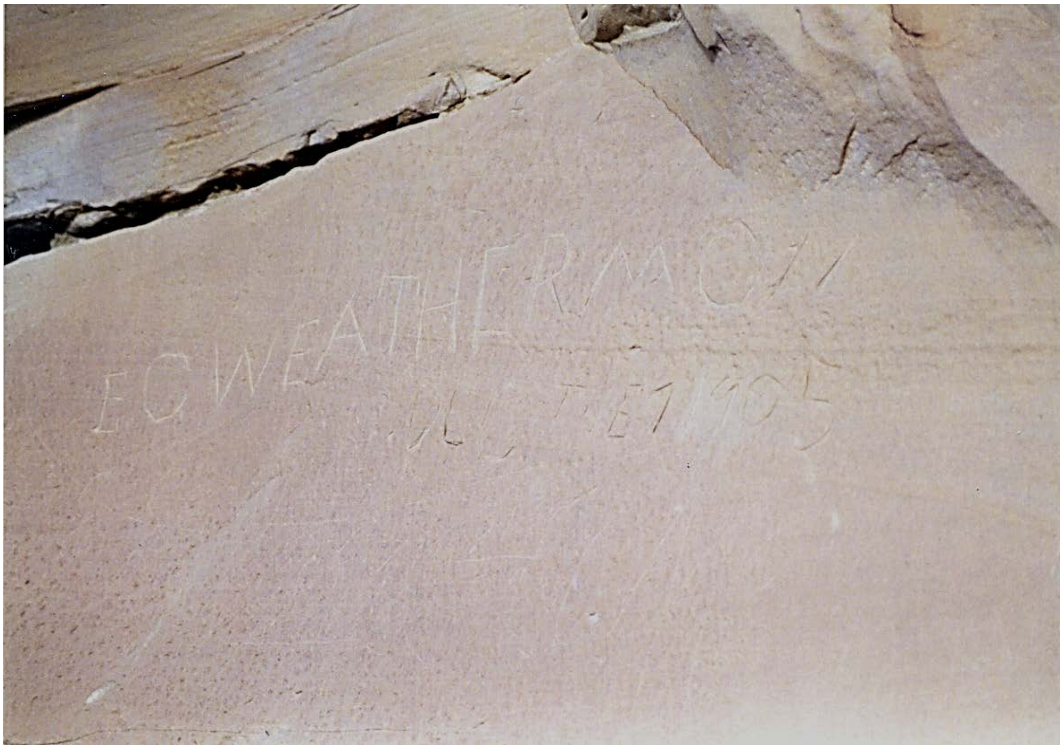
Bear Two-Shield site

Valley of the Shields

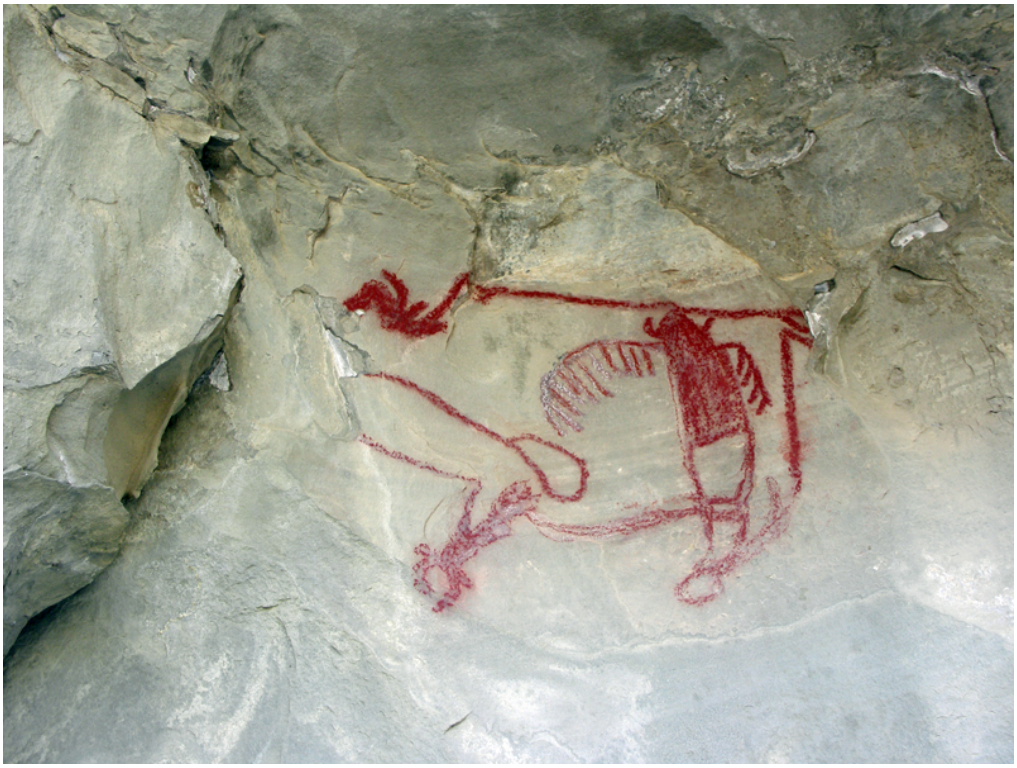
Two Meter Man



E.C. Weathermon



Red Buffalo



Rock art panel located on the 615 acre acquisition

Historic coal mining site

ACEC NOMINATION EVALUATION

NAME: **Greater-Sage Grouse Habitat ACEC**

LOCATION: portions of Carbon and Musselshell Counties, Montana

SIZE: 154,140 acres

NOMINATED BY: WildEarth Guardians

RATIONALE: Greater-Sage Grouse Habitat

EVALUATED BY: Carolyn Sherve-Bybee, Jay Parks

In order to be considered as a potential ACEC and analyzed in resource management plan alternatives, an area must meet both the relevance and importance criteria:

I. RELEVANCE (must contain one or more of the following):

1. A significant historic, cultural, or scenic value (including but not limited to rare or sensitive archeological resources and religious or cultural resources important to Native Americans).

   No significant historic or cultural values are known. Scenic values are moderate, but are similar to those of many other areas in the planning area.

2. A fish and wildlife resource (including but not limited to habitat for endangered, sensitive or threatened species, or habitat essential for maintaining species diversity).

   Yes, the nomination meets the relevance criterion for wildlife resources. The nominated area provides habitat for greater sage-grouse (154,140 acres), a BLM sensitive species, and the area has also been identified as a core area by Montana Fish Wildlife and Parks.

3. A natural process or system (including but not limited to endangered, sensitive, or threatened plant species; rare, endemic, or relic plants or plant communities which are terrestrial, aquatic, or riparian; or rare geological features.

   Yes, the nomination also meets the criterion for a natural system or process because of the condition of the sagebrush habitat in the nomination area.

4. Natural hazards (including but not limited to areas of avalanche, dangerous flooding, landslides, unstable soils, seismic activity, or dangerous cliffs). A hazard caused by human action may meet the relevance criteria if it is determined through the resource management planning process that it has become part of a natural process.

   No natural hazards are known.

II. IMPORTANCE (characterized by one or more of the following):

5. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource?

   No. Although the area contains habitat for greater sage-grouse conservation as noted in the nomination material, the area is not significantly unique or more important than other habitat areas in this region.

   Greater sage-grouse are distributed throughout the western United States. The portion of the distribution in Montana, Wyoming, North Dakota, South Dakota, Alberta, and Saskatchewan are

designated as Management Zone I (Stiver et al. 2006). Management zones are delineations of greater sage-grouse populations and sub-populations within floristic zones with similar management issues. Within Management Zone I in Montana, Montana Fish, Wildlife and Parks designated core areas (MFWP 2009) and Wyoming Game and Fish has also designated core areas in Wyoming (Wyoming Game and Fish, 2009). In addition, Montana Audubon has also designated five important bird areas for sage-steppe associated birds, including greater sage-grouse, in Montana, most of which are contained within the MFWP core areas.

While all of these areas are considered important to greater sage-grouse conservation, the areas are dispersed throughout the region and are not significantly unique to a specific region or planning unit. In addition, greater sage-grouse habitat in these core areas is owned by a number of different entities and habitat on BLM lands is not distinct from habitat managed by other ownership.

6. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change?

   No, the area is not particularly fragile or sensitive to change as compared to other sites in Montana.

7. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA?

   Yes, it satisfies national priority concerns.

8. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare?

   No safety or public welfare concerns are known.

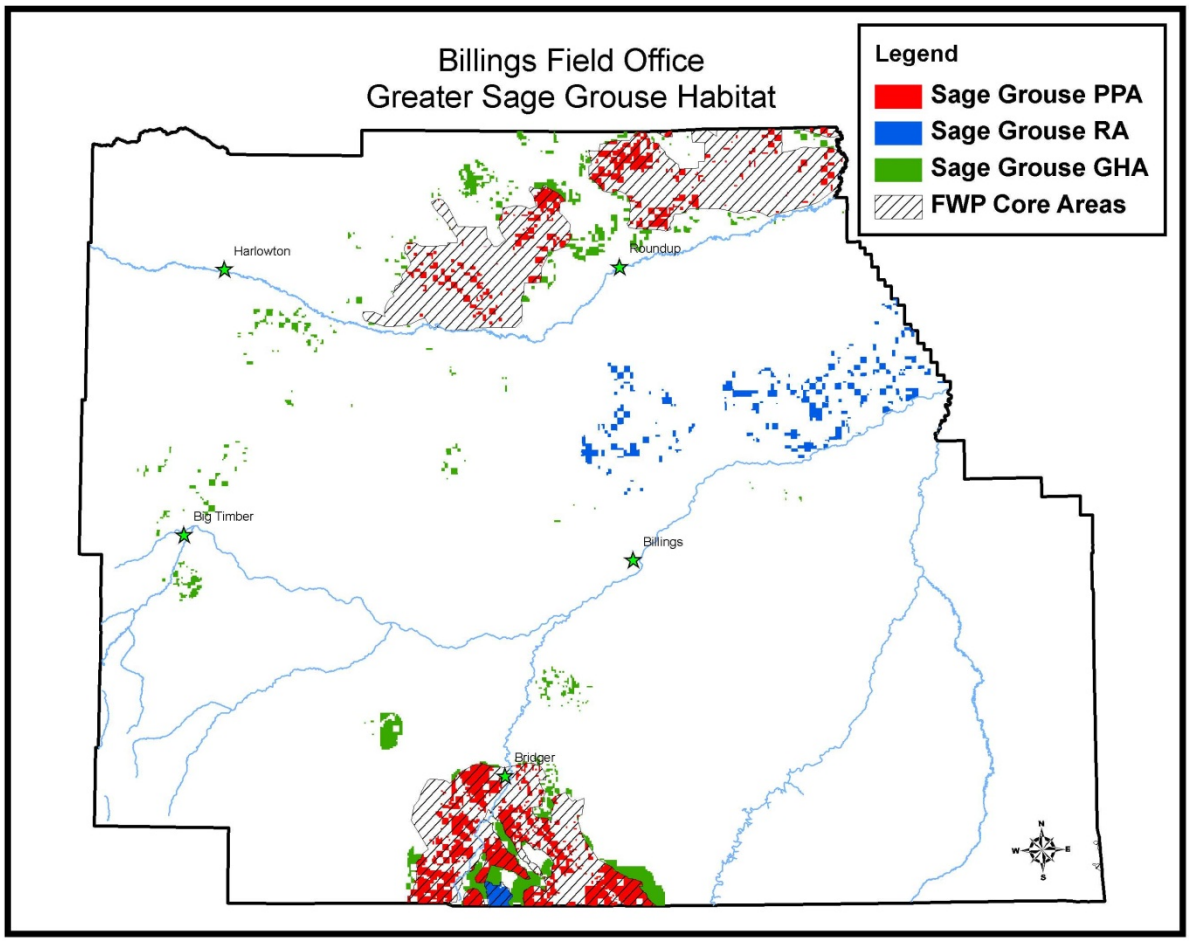
9. Poses a significant threat to human life and safety or to property?

   No significant threats.

IV. RESOURCE SPECIALIST'S RECOMMENDATION FOR ACEC CONSIDERATION IN THE RMP

Approval by Associate Field Manager _____ _____
Signature Date

Concurred by Field Manager _____ _____
Signature Date

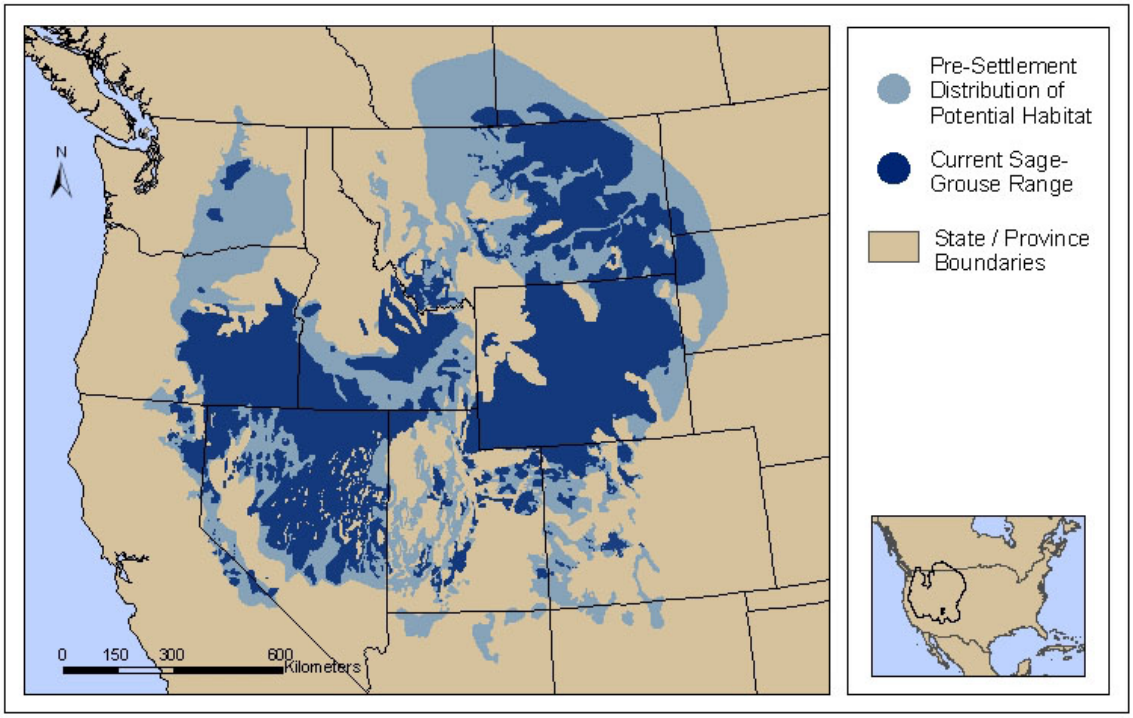


This map shows the Greater Sage-Grouse Protection Priority Areas (PPA), Restoration Areas (RA), and General Habitat Areas (GHA), as well as areas identified by Montana Fish, Wildlife, and Parks as sage-grouse core areas within the Billlings Field Office. The areas identified as Sage-Grouse PPA are being proposed as an ACEC.

Background Information:

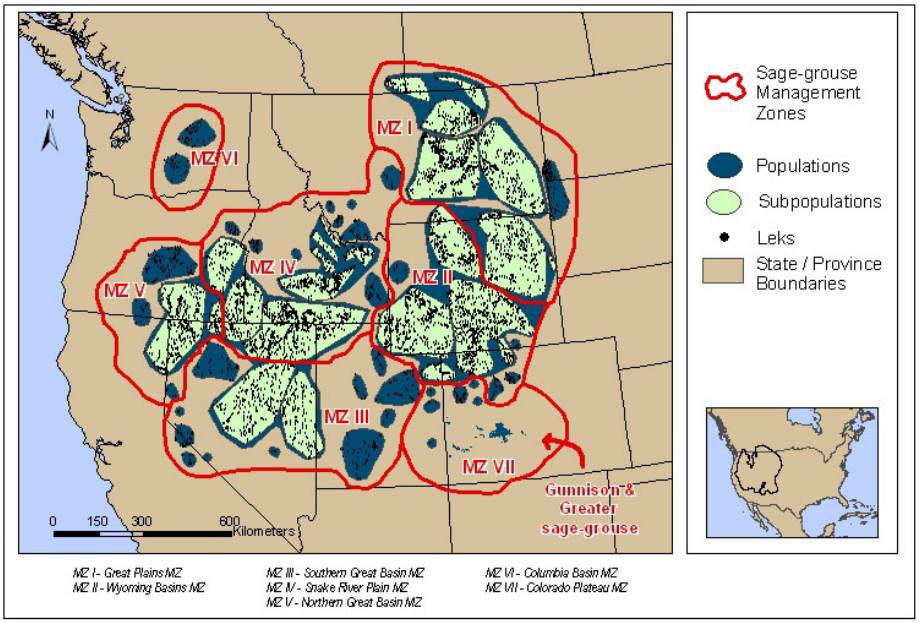
Greater sage-grouse are distributed throughout the western United States (Figure 1). The portion of the distribution in Montana, Wyoming, North Dakota, South Dakota, Alberta, and Saskatchewan is designated as Management Zone I (Figure 2) (Stiver, et al. 2006). Management zones are delineations of greater sage-grouse populations and sub-populations within floristic zones with similar management issues.

Figure 1
Greater Sage-Grouse Distribution



Source: Stiver, et al. 2006

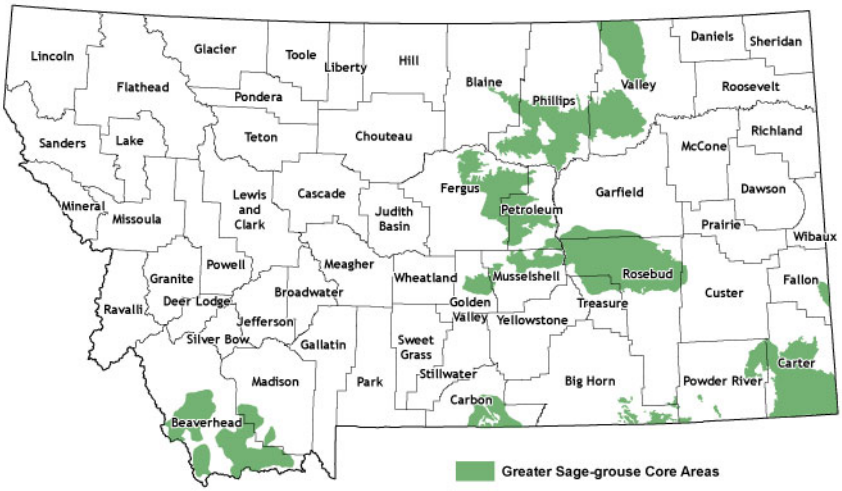
Figure 2
Greater Sage-Grouse Management Zones (MZ)



Source: Stiver, et al. 2006

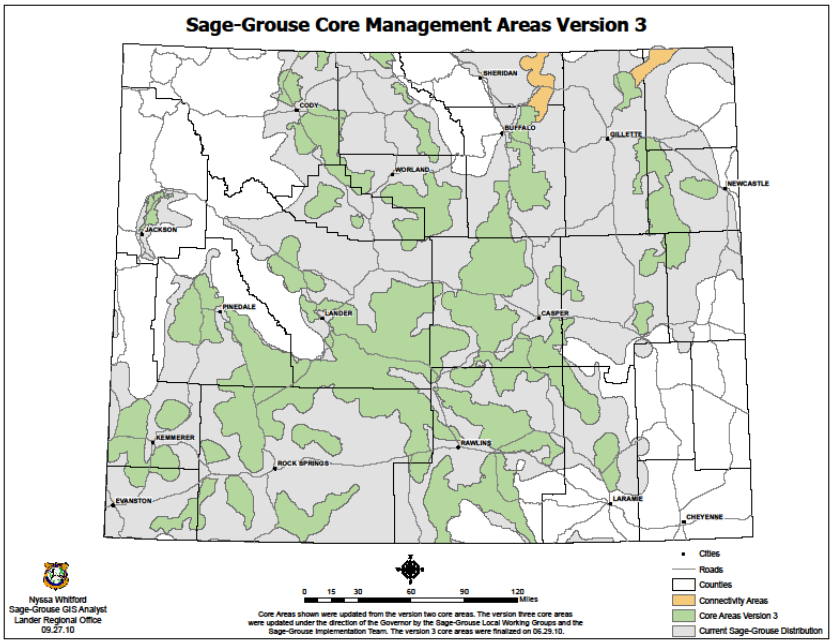
Within Management Zone I in Montana, Montana Fish, Wildlife and Parks (MFWP) has designated core areas[1] (Figure 3) (MFWP 2009) and Wyoming Game and Fish has also designated core areas in Wyoming (Figure 4) (Wyoming Game and Fish 2009).

Figure 3
Greater Sage-Grouse Core Areas (Montana)



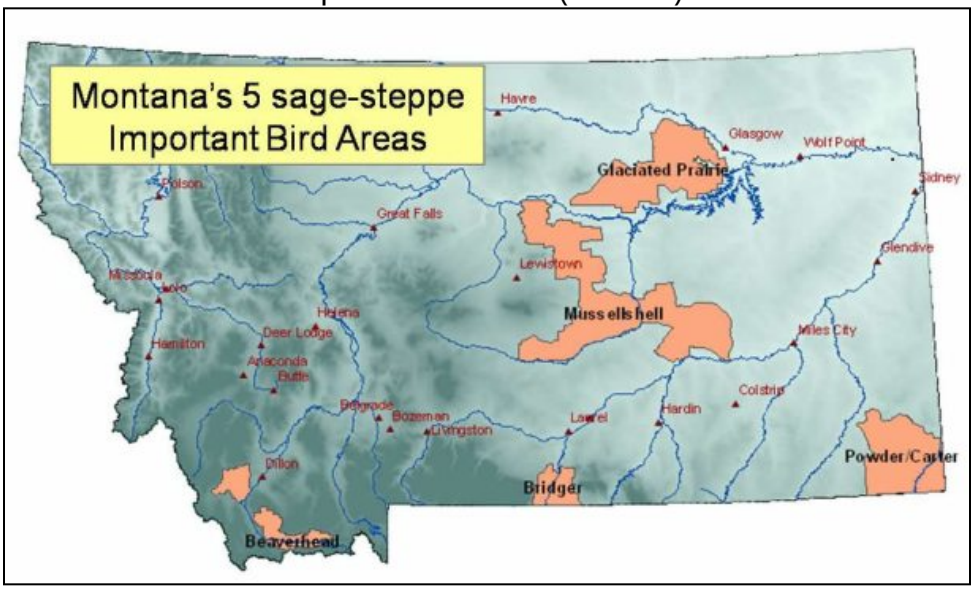
[1] Sage-grouse core areas are habitats associated with 1) Montana's highest densities of sage-grouse (25% quartile), based on male counts and/or 2) sage-grouse lek complexes and associated habitat important to sage-grouse distribution (MFWP 2009).

Figure 4
Greater Sage-Grouse Core Areas (Wyoming)



In addition, Montana Audubon has designated five important bird areas for sage-steppe associated birds, including greater sage-grouse, in Montana (Figure 5), most of which are contained within the MFWP core areas.

Figure 5
Important Bird Areas (Montana)



Source: Montana Audubon 2011 at http://mtaudubon.org/birds/sageiba.html_

All of these areas are considered important to greater sage-grouse conservation. In addition, greater sage-grouse habitat in these core areas is owned by a number of different entities and habitat on BLM lands is not distinct from habitat managed by other ownership.

ACEC NOMINATION EVALUATION

NAME: **Steamboat Butte** LOCATION: [redacted]

SIZE: 680 acres NOMINATED BY: Montana Wilderness Association (Mark Good)

RATIONALE: unique cultural and paleontological values EVALUATED BY: Carolyn Sherve-Bybee

In order to be considered as a potential ACEC and analyzed in resource management plan alternatives, an area must meet both the relevance and importance criteria:

II. **RELEVANCE** (must contain one or more of the following):

1. A significant historic, cultural, or scenic value (including but not limited to rare or sensitive archeological resources and religious or cultural resources important to Native Americans).

There are no known or recorded paleontological sites within the 680 acres evaluated for ACEC nomination.

Within the 680 acres proposed identified as the Steamboat Butte complex, a total of 10 sites have been recorded. However no documentation or research has been done in this area since 1988.

1968 – 24YL0576
1972 – 24YL0633
1988 – 24YL0774
1987 – 24YL0775, 24YL0776, 24YL0777, 24YL0778, 24YL0779, 24YL0780, and 24YL0781

Included in these sites are two rockshelters, a bison kill site, a cribbed log structure, two occupation sites, wicki-ups, and several petroglyph panels/sites.

A rockshelter was excavated in 1974 by Rocky Mountain College for the BLM Billings Resource Area Office due to the extensive vandalism that had occurred prior to 1974. "The shelter shows evidence of having been extensively pot-hunted sometime in the past. The vandalism seems to have been systematic, since there is an eroding backpile of dirt from screening at the south end of the shelter. Lithic debris on top of the butte includes random scattered flakes as well as concentrations of flakes discarded by pot-hunters. Some of the rock art has been outlined with chalk, and additional carving of initials and dates has been done on the sandstone walls, though not on the rock art panel itself. Many of the petroglyphs and pictographs are very worn and faded" (Heidenreich 1974). See **Figure 1**.

Several wildland fires have occurred in the Steamboat Butte area (Hawk Creek Fire 1998 and 2005, Steamboat Fire 2005). It was reported to the BiFO archaeologist in 2008 that one of the Hawk Creek fires burned up/through several of the wicki-ups in the northern portion of the area identified for the proposed ACEC.

2. A fish and wildlife resource (including but not limited to habitat for endangered, sensitive or threatened species, or habitat essential for maintaining species diversity).

3. A natural process or system (including but not limited to endangered, sensitive, or threatened plant species; rare, endemic, or relic plants or plant communities which are terrestrial, aquatic, or riparian; or rare geological features.

4. Natural hazards (including but not limited to areas of avalanche, dangerous flooding, landslides, unstable soils, seismic activity, or dangerous cliffs). A hazard caused by human action may meet the relevance criteria if it is determined through the resource management planning process that it has become part of a natural process.

II. IMPORTANCE (characterized by one or more of the following):

10. Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource?

The rock art, occupation sites, etc. at Steamboat Butte are not more than locally significant. There are several similar habitation sites, consisting of cribbed and conical logged structures in Hoskins Basin National Register District, there are similar several occupation sites and bison kill sites located at the Stark Site ACEC, and the rock art at Steamboat Butte is similar to that at Castle Butte (**Figure 2**).

11. Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change?

Rock art is known for being fragile and sensitive. However, the rock art at Steamboat Butte is not considered unique or exemplary. Much of the rock art has been chalked and it is very similar to the rock art at Castle Butte ACEC (**Figure 3**).

12. Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA?

13. Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare?

5. **Poses a significant threat to human life and safety or to property?**

V. RESOURCE SPECIALIST'S RECOMMENDATION FOR ACEC CONSIDERATION IN THE RMP

Steamboat Butte was considered and evaluated for ACEC nomination during the 1998 ACEC amendment. At that time, it either did not meet relevance or importance or it was decided that the area did not need special management as the nomination was not carried forward in the 1998 ACEC amendment. There is no documentation in the 1998 ACEC amendment about the consideration of Steamboat Butte as a proposed ACEC. However, there are notes in the cultural resources files that this area was considered and evaluated for ACEC nomination.

It is the specialist's recommendation that this area not be considered for an ACEC nomination. It was evaluated under one of the Relevance criterion and several sites within the 680 acres are considered to be eligible for the National Register of Historic Places, however, more work is needed to evaluate the significance of the entire area. The Steamboat Butte area was also evaluated under two of the Importance criteria, but did not meet either of the criteria. It is therefore recommended that Steamboat Butte not be considered for an ACEC nomination.

Approval by Associate Field Manager _____ _____
Signature Date

Concurred by Field Manager _____ _____
Signature Date

Figure 1: photo from 1974 report on excavation at Steamboat Butte

Plate 14. TWO ANTHROPOMORPHIC FIGURES.

These figures (and those in Plate 15) are the most complex of the designs on the panel. The figure on the left has a breast plate or pendant on the chest; bands, tattoos, or other circular decorations on the arms; and a necklace or choker. It is difficult to distinguish feet. The left arm has a hand with five fingers. There is an ear on the head, apparently. The figure on the right has what appears to be a braid, animal skin, feather decoration, or long hair hanging from the head. It is wearing a belt or waistband, and at least one foot is shown. The arms are worn away or attenuated. There are other lines on both figures, but they are not identifiable. The two figures once may have held hands or linked arms. About twenty-nine inches tall. Note the unidentifiable form below the couple (see Plate 23).

Figure 2: 2008 photo

Figure 3: 2008 photo showing chalking of pictographs

Figure 4: ongoing vandalism on Steamboat Butte

Figure 5: Collector's artifact pile at Steamboat Butte

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Appendix U:
Cultural Resources

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List of Tables

U. Cultural Resources

U.1 Introduction

Management of cultural resources is directed primarily, but not exclusively, by two laws: the National Historic Preservation Act of 1966, as amended, and the Archaeological Resources Protection Act of 1979. The National Historic Preservation Act requires management and enhancement of significant historic properties and the Archaeological Resources Protection Act requires protection of archaeological resources (sites and objects of 100 years or more in age). The Federal Land Policy and Management Act directs the Bureau of Land Management to manage public lands on the basis of multiple uses and to "protect the quality of historical resources and archaeological values." This act provides for the periodic inventory of public lands and resources. See Appendix A for full citations of all the laws, regulations and policies guiding cultural and heritage resources.

U.2 Goal

Identify, preserve, and protect significant cultural resources and ensure that they are available for appropriate uses by present and future generations (Federal Land Policy and Management Act, Section 103(c), 201(a), and (c); National Historic Preservation Act, Section 110(a); Archaeological Resources Protection Act, Section 14 (a)).

Seek to reduce imminent threats and resolve potential conflicts from natural or human-caused deterioration, or potential conflict with other resource uses (Federal Land Policy and Management Act, Section 103(c), National Historic Preservation Act, Section 106, 110(a)(2)) by ensuring that all authorizations for land use and resource use would comply with the National Historic Preservation Act (NHPA), Section 106.

Maintain viewsheds of important cultural resources whose settings contribute significantly to their scientific, public, traditional, or conservation values.

Provide research opportunities that would contribute to our understanding of the ways humans have used and influenced the landscape.

Manage historic trails to realize their educational, recreational, and scientific values.

Enhance public understanding of, and appreciation for, cultural resources through educational outreach and heritage tourism opportunities.

U.3 Objective

Cultural Resources on BLM-administered land would be protected and maintained in stable condition. Appropriate management actions would be determined after evaluation and allocation of cultural resource use categories through cultural resource project plans.

U.4 Management Direction

The BLM would prioritize inventories to identify sites eligible to the National Register.

The BLM would allocate all cultural resources in the Billings Field Office, whether already recorded or projected to occur on the basis of existing data synthesis (including cultural landscapes), or not projected to occur but later identified through inventory, to the following uses according to their nature and relative preservation value. *These use allocations pertain to cultural resources, not to areas of land.* Each resource would be assigned to a primary use category, but that assignment would not preclude management from other use categories. All sites determined eligible to the National Register of Historic Places would be allocated to and managed for Scientific, Public, Traditional, and/or Conservation for Future Use.

- The six types of use allocations are: Scientific Use, Conservation for Future Use, Traditional Use, Public Use, Experimental Use, and Discharged from Management. See the Cultural category in the glossary for definitions; also see Table U-1 for desired outcomes.
- The focus would be on four of the six cultural resource use allocations: Scientific Use, Public Use, Traditional Use, and Conservation for Future Use. These allocations currently generate the majority of issues within the Billings Field Office and therefore are of high importance.
- The remaining two cultural resource use allocations – Experimental Use and Discharged from Management – would not be emphasized for the following reasons. Experimental Use: Because there are few activities in the Billings Field Office where the destructive nature of impacts on archaeological sites are uncertain or unknown, this allocation would not be emphasized. Discharged from Management: Cultural resource use allocation may occur, especially under Alternative C, but this cultural resource use allocation would not be emphasized because conducting a program driven by this goal would defeat the long-term preservation of these resources.

The BLM would allocate and manage all sites determined not eligible to the National Register of Historic Places and not containing archaeological resources as Discharged from Management Use. All sites determined eligible to the National Register of Historic Places would be allocated and managed to Scientific, Public, and/or Conservation for Future Use. However, if another use becomes evident or proposed after use allocation has occurred, the use allocation may be changed through plan maintenance.

The following thirteen classes of site types found in the Billings Field Office have specific management needs based on each site type. Priorities for inventory, and appropriate management actions have been identified for each site type based on perceived threats and risks.

Table U-1 Cultural Use Allocations and Desired Outcomes

Use Allocation[1]	Desired Outcomes
Scientific Use	Preserved until research potential is realized
Conservation for Future Use	Preserved until conditions for use are met
Traditional Use	Long-term preservation
Public Use	Long-term preservation, on-site interpretation
Experimental Use	Protected until used
Discharged from Management	No use after recordation; not preserved

[1] The majority of the cultural properties in a given geographic area will fall into categories (a) and (f). The less common properties in categories (b) – (e) are likely to be associated with particular settings that can be delineated geographically in the planning process. As the plan is developed, properties in categories b-d will require the most attention to balance their proactive uses with other land and resource uses.

U.4.1 Parameter – Cultural Resource Use Allocation: Rock Art Sites

Aboriginal rock art of the planning area includes petroglyphs (incised or pecked images) and pictographs (painted images). Within the planning area, rock art is found on rock outcrops, cliffs or rockshelters, but is also found on erratic boulders that range in size from a half meter to several meters in diameter. The rock art sites within the planning area include, but are not limited to sites within Weatherman Draw ACEC, Petroglyph Canyon ACEC, Castle Butte ACEC, Paul Duke Site, Steamboat Butte, and Pompeys Pillar National Monument.

U.4.1.1 Management Direction

U.4.1.1.1 Management:

- Any rock art site with evidence of public use would be considered for allocation to Public Use.
- Any rock art site with no evidence of public use would be allocated to Conservation Use and/or Scientific Use and would be considered for Public Use as appropriate.
- All rock art sites eligible to the National Register of Historic Places under Criterion c would be preserved in place and would not be discharged from management.
- Best and most accurate technologies available would be used to photograph and gather locational information at all rock art panels (for example, digital photographs and GPS readings with position error no greater than 20 feet).
- Detailed measured drawings and sub-meter global positioning system locations would be taken of all panels.
- Scientific use would be allowed subject to management plans which minimize physical damage to rock art.

- Condition monitoring of rock art sites would be conducted on at-risk/threatened rock art sites annually.
- Livestock and human contact with rock art panels would be limited through physical barriers (fences or natural barriers such as plantings or boulder placement).
- Emergency stabilization would be allowed if natural or cultural threats are causing loss of integrity to rock art.
- Fire potential would be evaluated and fuels removed where there is threat of loss.
- Use of site stewards for monitoring would be encouraged.
- Informational signs on rock site etiquette and the Archaeological Resources Protection Act of 1979 would be posted at all rock art sites, as appropriate.

U.4.1.1.2 Scientific Use:

- Surface collection of artifacts on non-rock art portions of sites may be permitted under the Archaeological Resources Protection Act of 1979 if there is threat of loss or destruction.
- Excavation would be allowed subject to management plan with appropriate research design.

U.4.1.1.3 Public Use:

- Site-specific recreation management plans/interpretative plans would be developed for all Public Use rock art sites before implementing Cultural Resource Project Plan actions.
- At least one interpretative trail/footpath or kiosk would be considered at each rock art site allocated to Public Use.
- Visitor registers would be installed at all Public Use sites.

U.4.1.1.4 Priorities for Inventory:

- Potential threats identified in Cultural Resource Project Plans
- Those areas containing rock art identified for prescribed or wildland fire use
- Existing designated sites

All National Register eligible rock art sites would be allocated and managed for Scientific, Conservation, Traditional, and/or Public Use, and development of interpretative sites would be implemented as appropriate.

U.4.2 Parameter – Cultural Resource Use Allocations: Rockshelter and Cave Sites

There are numerous rockshelter/cave sites located in the planning area. The large number of rockshelters and caves is likely a factor of the topography of central Montana which contains numerous mountain ranges and outcrops. The rockshelter and cave sites include, but are not limited to Last Canyon Cave.

U.4.2.1 Management Direction

U.4.2.1.1 Management:

- Fire potential would be evaluated and fuels would be removed where there is threat of loss. Preserve in place and allow emergency stabilization if natural or cultural threats are causing loss of integrity to sites.
- Appropriate signs with information on site etiquette and the Archaeological Resources Protection Act of 1979 would be posted where evidence of ongoing Public Use exists.
- Conduct a Class II inventory of areas identified as high potential for aboriginal site occurrence on a priority basis as identified in Cultural Resource Project Plans.
- Use of site stewards for monitoring would be encouraged.

U.4.2.1.2 Scientific Use:

- BLM would evaluate loss of scientific data due to vandalism by estimating the cost of restoration and repair. Partnerships with scientific researchers to assist in evaluating loss of scientific data on vandalized sites would be encouraged.
- Partnerships for excavation/scientific research would be developed to assist the BLM to understand the paleo-environmental record.

U.4.2.1.3 Conservation for Future Use:

- Cost of restoration and repair would be evaluated as soon as vandalism is detected.
- Gates would be installed on caves where there vandalism has occurred or there is threat of resource loss.

U.4.2.1.4 Public Use:

- Visitor registers would be installed and informational brochures would be created based on priorities established in Cultural Resource Project plans.
- Specific recreation management plan/interpretative plan would be developed for all rockshelter cave sites developed for Public Use.

U.4.2.1.5 Priorities for Inventory:

- Potential threats identified in Cultural Resource Project Plans

- Those areas containing rockshelters identified for prescribed or wildland fire use
- Existing designated sites

All National Register eligible sites would be allocated and managed for Scientific, Conservation, Traditional, and Public Use. Development of interpretative sites would be implemented as appropriate.

U.4.3 Parameter – Cultural Resource Use Allocations: Aboriginal Occupation Sites and Structures (prehistoric and protohistoric)

Tipi rings, stone circles, and ring sites: This is a relatively common site type in the study area and includes circles of stone interpreted as having been used to hold down tipi lodge covers. Conical and cribbed log structures are often stand alone structures with few associated artifacts. Tipi ring sites include, but are not limited to Demi-John Flat National Historic District and the Bandit Site (48BH0460). Conical and cribbed log structures include, but are not limited to the structures found within Hoskins Basin Archaeological District.

U.4.3.1 Management Direction

U.4.3.1.1 Management:

- Fire potential would be evaluated and fuels would be removed where there is threat of loss.
- Appropriate signs with information on site etiquette and the Archaeological Resources Protection Act of 1979 would be posted where evidence of public use exists.
- Cultural Resource Project Plans would be developed that further define this class of sites and clarify acceptable management actions.
- Excavation would be allowed subject to management plan with appropriate research design (which conserves samples for future use).
- All sites initially allocated to Conservation, Scientific, Traditional, or Public Use would be subject to site-specific activity plans that preserve portions of the sites for future use.
- Use of site stewards for monitoring would be encouraged.

U.4.3.1.2 Scientific Use:

- National Register nominations would be completed for all sites allocated to Scientific Use on a priority basis as identified in Cultural Resource Project Plans.
- Excavation would be allowed subject to management plan with appropriate research design.
- Partnerships for excavation/scientific research would be encouraged.

U.4.3.1.3 Public Use:

- Continue to produce materials and programs on "Leave What You Find" principles and environmental ethics.

U.4.3.1.4 Priorities for Inventory:

- Potential threats identified in Cultural Resource Project Plans
- Existing designated sites

Development of interpretative sites would be implemented as appropriate.

U.4.4 Parameter – Cultural Resource Use Allocation: Lithic Scatters/Workshops

The term lithic scatter is very broadly applied to a range of sites containing stone cultural material. These may be sites representing the remains of limited chipped stone tool manufacture or repair, generally viewed as having ephemeral use and low information value, or sites with greater variety of artifacts, features, and attributes, as well as unknown depositional characteristics. The term lithic scatter appears as a catch-all for site with a variety of data potential. Site components described as workshops generally seem subjectively classified on the basis of lithic debitage content observed on the surface.

U.4.4.1 Management Direction

U.4.4.1.1 Management:

- Fire potential would be evaluated and fuels would be removed where there is threat of loss.
- Appropriate signs with information on site etiquette and the Archaeological Resources Protection act of 1979 would be posted where evidence of public use exists.
- Cultural Resource Project Plans would be developed that further define this class of sites and clarify acceptable management actions.
- Excavation would be allowed subject to management plan with appropriate research design (which conserves samples for the future).
- All sites initially allocated to Conservation, Scientific, Experimental, or Discharged from Management Use would be subject to site-specific activity plans that preserve portions of the sites for future use.
- Continue to produce material and give programs on "leave what you find" principles and environmental ethics.
- Use of site stewards for monitoring would be encouraged.

U.4.4.1.2 Scientific Use:

- National Register nominations would be completed for all eligible sites allocated to Scientific Use on a priority basis as identified in Cultural Resource Project Plans.

U.4.4.1.3 Priorities for Inventory:

- Potential threats identified in Cultural Resource Project Plans
- Existing designated sites

U.4.5 Parameter – Cultural Resource Use Allocation: Communal Kill Sites

These sites are also called ambush game drives, buffalo jumps, bison pounds or traps, or other kill sites including processing areas. They are primarily defined by the occurrence of high numbers of animal bone, generally in a bone bed, and a high density of hunting and butchering tools in the artifact assemblages. These sites include, but are not limited to the sites found in the Stark Site ACEC.

U.4.5.1 Management Direction

U.4.5.1.1 Management:

- Fire potential would be evaluated and fuels would be removed where there is threat of loss.
- Appropriate signs with information on site etiquette and the Archaeological Resources Protection act of 1979 would be posted where evidence of public use exists.
- Cultural Resource Project Plans would be developed that further define this class of sites and clarify acceptable management actions.
- Excavation would be allowed subject to management plan with appropriate research design (which conserves samples for the future).
- All sites initially allocated to Conservation, Scientific, or Experimental would be subject to site-specific activity plans that preserve portions of the sites for future use.
- Use of site stewards for monitoring would be encouraged.

U.4.5.1.2 Scientific Use:

- National Register nominations would be completed for all eligible sites allocated to Scientific Use on a priority basis as identified in Cultural Resource Project Plans.

U.4.5.1.3 Public Use:

- Continue to produce materials and give programs on “leave what you find” principles and environmental ethics.

U.4.5.1.4 Priorities for Inventory:

- Potential threats identified in Cultural Resource Project Plans
- Existing designated sites

U.4.6 Parameter – Cultural Resource Use Allocation: Aboriginal Trails

Documentation of actual use of a trail or trail system during prehistory is difficult and evidence used to support such sue is often circumstantial. Documented use during the historic period is often used to argue use during the prehistoric period. Some researchers suggest that some linear arrangements of cairns may mark trail systems. Others suggest linear clusters or concentrations of archaeological sites along prominent landforms (e.g. high ridges or ridge systems, river valleys, drainage divides) may indicate prehistoric trail use. These sites include, but are not limited to Meeteetse Trail, travois trails in Demi-John Flat National Register District, Bad Pass Trail, and the Nez Perce NHT.

U.4.6.1 Management Direction

U.4.6.1.1 Management:

- An intensive archaeological inventory of the corridor of each site would be done to establish baseline information on a priority basis as identified in Cultural Resources Project Plans.
- An historic context report for each resource would be written on a priority basis as identified in Cultural Resource Project Plans.
- Use of site stewards for monitoring would be encouraged.

U.4.6.1.2 Scientific Use:

- Trail related sites would be inventoried and condition recorded on a priority basis as identified in Cultural Resources Project Plans.
- Excavation would be allowed subject to management plan with appropriate research design (which conserves samples for future use).

U.4.6.1.3 Conservation for Future Use:

- Informational signs would be posted at all major intersections along existing Public Use sites.
- Excavation would be allowed subject to management plan with appropriate research design (which conserves samples for future use).
- Trail related sites would be inventoried and condition recorded.

U.4.6.1.4 Public Use:

- Informational signs would be posted at all major intersections along Public Use sites, as appropriate.
- Activity level cultural resource project plans would be prepared for public use sites that would identify interpretive needs including signs, interpretive kiosks, etc.
- National Register nominations would be completed for all Public Use sites on a priority basis as identified in Cultural Resource Project Plans.

U.4.6.1.5 Priorities for Inventory:

- Potential threats identified in Cultural Resource Project Plans
- Existing designated National Scenic and Historic Trails
- Routes under national study

The BLM would manage the cultural historic landscape (setting) around National Historic Trails according to the National Historic Preservation Act. Designated national historic trails would be managed according to the National Scenic and Historic Trail Act (16 USC sections 1241-1251) and the BLM's National Scenic and Historic Trails Strategy and Work Plan (2006).

The BLM would allocate and manage all National Register eligible historic trails for Scientific, Conservation, Traditional, and Public Use.

National Historic Trails would be allocated to Public Use and should have Cultural Resource Project Plans prepared to better balance Public, Scientific, and Conservation Use. Interpretative sites would be established at Public Use sites as appropriate.

U.4.7 Parameter – Cultural Resource Use Allocations: Lithic Procurement Sites/Quarries (bedrock and surface)

Bedrock quarries are defined by the existence of bedrock exposures at the site and surface quarries are defined by areas where lithic material occurs as "free rock" in cobble, nodular, or pebble form. Much of the study area is located on the glaciated plains where lithic materials are dominated by quartzite derived from glacial cobbles that are ubiquitous in glacial deposits. These sites include, but are not limited to the numerous quarries found in the Pryor Mountains.

U.4.7.1 Management Direction

U.4.7.1.1 Management:

- Fire potential would be evaluated and fuels would be removed where there is threat of loss.
- Appropriate signs with information on site etiquette and the Archaeological Resources Protection Act of 1979 would be posted where evidence of public use exists.

- Cultural Resource Project Plans would be developed that include addressing mineral collection of non-artifacts from quarry/source locations.
- Use of site stewards for monitoring would be encouraged.

U.4.7.1.2 Scientific Use:

- National Register nominations would be completed for all sites allocated to Scientific Use on a priority basis as identified in Cultural Resource Project Plans.

U.4.7.1.3 Public Use:

- Information would be made available that would enable the public to distinguish between artifacts and mineral specimens would be developed and produced.
- Continue to produce materials and give programs on "leave what you find" principles and environmental ethics.

U.4.7.1.4 Priorities for Inventory:

- Potential threats identified in Cultural Resource Project Plans
- Existing designated sites

U.4.8 Parameter – Cultural Resource Use Allocations: Vision Quest Sites, Sacred Sites, Traditional Use Areas, Traditional Cultural Properties, Ethnohistoric Sites

Vision quest sites are considered liked to ceremonial and religious activities. Archaeologists generally distinguish vision quest sites as u-shaped or oval stone features forming low enclosures. Vision quest sites are often found on prominent parts of the landscape such as mountains, bluffs, hills, cliffs, rock outcrops, and buttes. Vision quest sites include, but are not limited to vision quest sites in the Pryor Mountains and at Four Dances ACEC.

U.4.8.1 Management Direction

U.4.8.1.1 Management:

- When identified, locations and boundaries of vision quest sites, ethnohistoric sites, sacred sites, traditional use areas, and Traditional Cultural Properties would be described with Global Positioning Systems.
- When identified, ethnohistoric sites, sacred sites, traditional use areas, and Traditional Cultural Properties would be recorded.
- Fire potential would be evaluated and fuels removed where there is threat of loss.
- National Register nominations would be completed on a priority basis as identified in Cultural Resource Project Plans.

- Pending approval of Cultural Resource Project Plans, all sites would be allocated to Conservation Use.
- Use of site stewards for monitoring would be encouraged.

U.4.8.1.2 Priorities for Inventory:

- Potential threats identified in Cultural Resource Project Plans
- Existing designated sites

All National Register eligible ethnohistoric sites would be allocated and managed primarily for Conservation Use unless subject to Cultural Resource Project Plans.

All Traditional Cultural Properties identified would be allocated and managed primarily for Traditional Use.

All vision quest sites identified would be allocated and managed primarily for Traditional and Conservation Use.

All sacred sites or traditional use areas identified would be allocated and managed for Conservation Use.

U.4.9 Parameter – Cultural Resource Use Allocation: Historic Features

Historic features include, but are not limited to historic irrigation systems (canals, ditches, laterals, pumping station/houses, headgates, etc.), stock ponds and reservoirs, often includes CCC constructed features,

U.4.9.1 Management Direction

U.4.9.1.1 Management:

- Fire potential would be evaluated and fuels would be removed where there is threat of loss.
- Appropriate signs with information on site etiquette and the Archaeological Resources Protection Act of 1979 would be posted where evidence of public use exists.
- Historic context reports would be written on a priority basis as identified in Cultural Resource Project Plans.
- Historic structure reports would be written on a priority basis as identified in Cultural Resource Project Plans.
- Level I documentation (measured drawings, plans, elevations, photos, and narratives) on all standing structures would be completed on a priority basis as identified in Cultural Resource Project Plans.

- Photo documentation of historic features and landscapes would be obtained.
- Use of site stewards for monitoring would be encouraged.

U.4.9.1.2 Scientific Use:

- Excavation would be allowed subject to management plan with appropriate research design (which conserves samples for future use.)

U.4.9.1.3 Conservation Use:

- Conservation of the setting would be emphasized.
- Stabilization and/or rehabilitation of standing structures would be done on a priority basis as identified in Cultural Resource Project Plans.
- Discharged from Management:
- Subsequent to scientific use, when preservation in place is impractical, sites may be discharged.

U.4.9.1.4 Public Use:

- National Register nominations would be completed for all Public Use sites on a priority basis as identified in Cultural Resource Project Plans.
- Standing structures would be considered for adaptive uses.

U.4.9.1.5 Priorities for Inventory:

- Potential threats identified in Cultural Resource Project Plans
- Existing designated sites

All of the National Register eligible sites would be allocated and managed for Scientific Use and/or Public Use. Sites may be Discharged from Management when not eligible for the National Register of Historic Places.

U.4.10 Parameter – Cultural Resource Use Allocation: Historic Roads and Trails

Historic roads and trails in the planning area include, but are not limited to the Bridger Cut-Off Trail, Fort Ellis to Fort Keogh (Road to Tongue River) Military Trail, Bozeman Trail, Meeteetse Trail, and the Lewis and Clark National Historic Trail.

U.4.10.1 Management Direction

U.4.10.1.1 Management:

- An intensive archaeological inventory of the corridor of each site would be done to establish baseline information on a priority basis as identified in Cultural Resources Project Plans.
- An historic context report for each resource would be written on a priority basis as identified in Cultural Resource Project Plans.
- Use of site stewards for monitoring would be encouraged.

U.4.10.1.2 Scientific Use:

- Road/trail related sites would be inventoried and condition recorded on a priority basis as identified in Cultural Resources Project Plans.
- Excavation would be allowed subject to management plan with appropriate research design (which conserves samples for future use).

U.4.10.1.3 Conservation for Future Use:

- Informational signs would be posted at all major intersections along existing Public Use sites.
- Excavation would be allowed subject to management plan with appropriate research design (which conserves samples for future use).
- Road/trail related sites would be inventoried and condition recorded.

U.4.10.1.4 Public Use:

- Informational signs would be posted at all major intersections along Public Use sites, as appropriate.
- Activity level cultural resource project plans would be prepared for public use sites that would identify interpretive needs including signs, interpretive kiosks, driving guides, etc.
- National Register nominations would be completed for all Public Use sites on a priority basis as identified in Cultural Resource Project Plans.

U.4.10.1.5 Priorities for Inventory:

- Potential threats identified in Cultural Resource Project Plans
- Existing designated National Scenic and Historic Trails
- Routes under national study

The BLM would manage the cultural historic landscape (setting) around National Historic Trails according to the National Historic Preservation Act. Designated national historic trails would be managed according to the National Scenic and Historic Trail Act (16 USC sections 1241-1251) and the BLM's National Scenic and Historic Trails Strategy and Work Plan (2006).

The BLM would allocate and manage all National Register eligible historic roads and trails for Scientific, Conservation, and Public Use.

National Historic Trails would be allocated to Public Use and should have Cultural Resource Project Plans prepared to better balance Public, Scientific, and Conservation Use. Interpretative sites would be established at Public Use sites as appropriate.

U.4.11 Parameter – Cultural Resource Use Allocations: Historic Structures and/or Homesteads

Historic homesteads/farmsteads are the most common historic sites in the planning area and the best represented historic time period is 1900-1909.

U.4.11.1 Management Direction

U.4.11.1.1 Management:

- Historic context reports would be written on a priority basis as identified in Cultural Resources Project Plans.
- Historic structure reports would be written on a priority basis as identified in Cultural Resources Project Plans.
- Level I documentation (measured drawings, plans, elevations, photos, and narratives) on all standing structures would be completed on a priority basis as identified in Cultural Resources Project Plans
- Photo documentation of historic features and landscapes would be obtained.
- Fire potential would be evaluated and fuels would be removed where there is threat of loss.
- An intensive archaeological inventory of the resources (structure or homestead) would be completed for baseline information based on priorities identified in Cultural Resources Project Plans.
- Standing structures would be stabilized or rehabilitated on a priority basis as identified in Cultural Resources Project Plans.
- Use of site stewards for monitoring would be encouraged.

U.4.11.1.2 Scientific Use:

- Signs with information on site etiquette and the Archaeological Resources Protection Act of 1979 would be posted as appropriate.
- Surface collection of artifacts may be permitted under the Archaeological Resources Protection Act of 1979 if there is threat of loss or destruction.
- Data recovery would be permitted in those instances where future protection is not feasible.
- Excavation would be allowed subject to management with appropriate research design (which conserves samples for future use).

U.4.11.1.3 Conservation for Future Use:

- Excavation would be allowed subject to management plan with appropriate research design (which conserves samples for future use).
- Signs with information on site etiquette and the Archaeological Resources Protection Act of 1979 would be posted as appropriate.
- Stabilization and/or rehabilitation of standing structures would be done on a priority basis as identified in Cultural Resource Project Plans.

U.4.11.1.4 Public Use:

- At least one kiosk with interpretation panel would be placed for each resource, as appropriate.
- National Register nominations would be completed for all Public Use sites based on priorities developed in Cultural Resource Project Plans.
- Preservation and reuse of historic buildings would be considered as appropriate.

U.4.11.1.5 Priorities for Inventory:

- Potential threats identified in Cultural Resource Project Plans
- Those areas containing historic structures or homesteads identified for prescribed or wildland fire use
- Existing designated sites

All National Register eligible sites with evidence of unauthorized excavation would be allocated and managed for Conservation Use and/or Scientific Use in order to perform data recovery in those instances where future protection is not feasible. The remaining National Register eligible sites would be allocated and managed for Scientific and/or Public Use.

The BLM would allocate and manage all of the National Register eligible sites with standing structures for Conservation and/or Public Use.

Interpretative sites would be developed as appropriate.

U.4.12 Parameter – Cultural Resource Use Allocations: Historic Industrial/Development (mines, oil and gas, etc.) Structures and Landscapes

Historic industrial/development sites include, but are not limited to the historic coal mines in Weatherman Draw, the historic oil and gas development in Elk Basin, and the historic mining/prospecting in the Pryor Mountains

U.4.12.1 Management Direction

U.4.12.1.1 Management:

- Fire potential would be evaluated and fuels would be removed where there is threat of loss.
- Appropriate signs with information on site etiquette and the Archaeological Resources Protection Act of 1979 would be posted where evidence of public use exists.
- Historic context reports would be written on a priority basis as identified in Cultural Resource Project Plans.
- Historic structure reports would be written on a priority basis as identified in Cultural Resource Project Plans.
- Level I documentation (measured drawings, plans, elevations, photos, and narratives) on all standing structures would be completed on a priority basis as identified in Cultural Resource Project Plans.
- Photo documentation of historic features and landscapes would be obtained.
- Use of site stewards for monitoring would be encouraged.

U.4.12.1.2 Scientific Use:

- Excavation would be allowed subject to management plan with appropriate research design (which conserves samples for future use.)

U.4.12.1.3 Conservation Use:

- Conservation of the setting would be emphasized.
- Stabilization and/or rehabilitation of standing structures would be done on a priority basis as identified in Cultural Resource Project Plans.

U.4.12.1.4 Discharged from Management:

- Subsequent to scientific use, when preservation in place is impractical, sites may be discharged.

U.4.12.1.5 Public Use:

- National Register nominations would be completed for all Public Use sites on a priority basis as identified in Cultural Resource Project Plans.
- Standing structures would be considered for adaptive uses.

U.4.12.1.6 Priorities for Inventory:

- Potential threats identified in Cultural Resource Project Plans
- Existing designated sites

All of the National Register eligible sites would be allocated and managed for Scientific Use and/or Public Use. Sites may be Discharged from Management when not eligible for the National Register of Historic Places.

U.4.13 Parameter – Cultural Resource Use Allocations: "Other" Sites

"Other" is defined as those sites not falling into any of the above 12 site types.

U.4.13.1 Management Direction

U.4.13.1.1 Management:

- Fire potential would be evaluated and fuels would be removed where there is threat of loss.
- Appropriate signs with information on site etiquette and the Archaeological Resources Protection Act of 1979 would be posted where evidence of public use exists.
- Use of site stewards for monitoring would be encouraged.

U.4.13.1.2 Priorities for Inventory:

- Potential threats identified in Cultural Resource Project Plans
- Existing designated sites

All National Register eligible sites would be allocated and managed for Scientific and/or Conservation Use with Public Use being monitored. Scientific Use would be permitted if it does not destroy features.

Table U-2 Cultural Resource Use Categories, National Register Eligibility and Preservation/National Register Nomination Criteria

Cultural Resource Use Category	National Register Eligibility	Preservation / National Register Nomination	Site Types Generally Included
Scientific Use	Usually eligible (under Criterion d)	Long-term preservation not critical; medium National Register nomination priority	Prehistoric: sites with high artifact count and diversity, high complexity, and larger size Historic: sites with archaeological and historic values, and generally poor structural integrity
Conservation for Future Use	Always eligible (generally eligible under Criteria d, a, or c and possibly b for historic sites)	Long –term preservation is required; highest nomination priority	Prehistoric: sites inherently complex, or rare, or fragile, and exhibit exceptional scientific values (e.g. wickiups, deeply stratified deposits, or large quarries) Historic: sites inherently complex, or rare, or fragile, generally significant standing structures (stabilization and preservation required)
Traditional Use	May be eligible (generally under Criteria a and d, possibly b and c as well)	Long-term preservation is desirable; nomination priority is determined in consultation with the appropriate cultural group(s)	Sites and locations determined in consultation with appropriate cultural group(s) Prehistoric may include: burial locations, vision quest locations, pictographs and petroglyphs, certain tipi ring sites Historic/Modern: plant gathering locations, areas considered sacred for religious purposes, tradition use areas, etc.
Public Use	Usually eligible (generally Criteria a, b, and c, possibly d as well)	Long-term preservation is desirable; high nomination priority	Prehistoric: high interpretative potential and can insure protection Historic: high interpretative potential and can insure stabilization and protection and/or adaptive reuse
Experimental Use	May be eligible (generally under Criterion d if at all)	Long-term preservation is not anticipated; low nomination priority	Prehistoric: lithic scatters of limited artifact density and complexity Historic: trash scatters, collapsed structures with no integrity or context
Discharged from Management	Not eligible	Long-term preservation and management are not considerations; nomination is inappropriate	Prehistoric: isolated finds, surface lithic scatters <50 items Historic: isolated prospect pits, trash scatters <50 items, sites < 50 years old

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Appendix V:
Recreational Setting Characteristics

V. Recreational Setting Characteristics

Primitive Classification:

- Physical:
  - More than ½ mile from either mechanized or motorized routes.
  - Undisturbed natural landscape.
  - No structures. Foot/horse and water trails only.

- Social:
  - Fewer than 3 encounters/day at camp sites and fewer than 6 encounters/day on travel routes.
  - Fewer than or equal to 3 people per group.
  - No alteration of the natural terrain. Footprints only observed. Sounds of people rare.

- Operational:
  - Foot, horse, and non-motorized float boat travel.
  - No maps or brochures available on-site. Staff is rarely present to provide on-site assistance.
  - No on-site posting/signing of visitor regulations, interpretive information or ethics. Few use restrictions

Back Country Classification

- Physical:
  - Within ½ mile of four-wheel drive vehicle, ATV and motorcycles routes.
  - Character of the natural landscape retained. A few modifications contrast with character of the landscape (e.g. fences, primitive roads).
  - Maintained and marked trails, simple trailhead developments and basic toilets.

- Social:
  - 3-6 encounters/day off travel routes (e.g., campsites) and 7-15 encounters/day on travel routes
  - 4-6 people per group.
  - Areas of alteration uncommon. Little surface vegetation wear observed. Sounds of people infrequent.

- Operational:
  - Mountain bikes and perhaps other mechanized use, but all is non-motorized.
  - Basic maps, staff infrequently present (e.g. seasonally, high use periods) to provide on-site assistance.
  - Basic user regulations at key access points. Minimum use restrictions.

Middle Country Classification:

- Physical:
  - Within ½ mile of four-wheel drive vehicle, ATV and motorcycles routes.
  - Character of the natural landscape retained. A few modifications contrast with character of the landscape (e.g. fences, primitive roads).
  - Maintained and marked trails, simple trailhead developments and basic toilets.

- Social:
  - 7-14 encounters/day off travel routes (e.g., staging areas) and 15-29 encounters/ day on travel routes
  - 7-12 people per group.
  - Small areas of alteration. Surface vegetation showing wear with some bare soils. Sounds of people occasionally heard.

- Operational
  - Four-wheel drives, all-terrain vehicles, dirt bikes, or snowmobiles in addition to non-motorized, mechanized use.
  - Area brochures and maps, staff is occasionally (e.g. most weekends) present to provide on-site assistance.
  - Some regulatory and ethics signing. Moderate use restrictions. (e.g. camping, human waste).

Front Country Classification

- Physical:
  - Within ½ mile of low-clearance or passenger vehicle routes (includes unpaved County roads and private land routes).
  - Character of the natural landscape partially modified but none overpower natural landscape (e.g. roads, structures, utilities).
  - Rustic facilities such as campsites, restrooms, trailheads, and interpretive displays.

- Social:
  - 15-29 encounters/day off travel routes (e.g., campgrounds) and 30 or more encounters/day on travel routes.
  - 13-25 people per group.
  - Small areas of alteration prevalent. Surface vegetation gone with compacted soils observed. Sounds of people regularly heard

- Operational:
  - Two-wheel drive vehicles predominant, but also four wheel drives and non-motorized, mechanized use.
  - Information materials describe recreation areas & activities, staff periodically present (e.g. weekdays & weekends).
  - Rules, regulations and ethics clearly posted. Use restrictions, limitations and/or closures.

Rural Classification

- Physical:
  - Within ½ mile of paved/primary roads and highways.
  - Character of the natural landscape considerably modified (agriculture, residential or industrial).
  - Modern facilities such as campgrounds, group shelters, boat launches, and occasional exhibits.

- Social:
  - People seem to be generally everywhere.
  - 26-50 people per group.
  - A few large areas of alteration. Surface vegetation absent with hardened soils. Sounds of people frequently heard.

- Operational:
  - Ordinary highway auto and truck traffic is characteristic.
  - Information described to the left, plus experience and benefit descriptions, staff regularly present (e.g. almost daily).
  - Regulations strict and ethics prominent. Use may be limited by permit, reservation, etc.

Urban Classification

- Physical:
  - Within ½ mile of streets and roads within municipalities and along highways.
  - Urbanized developments dominate landscape.
  - Elaborate full-service facilities such as laundry, restaurants, and groceries.

- Social:
  - Busy place with other people constantly in view.
  - Greater than 50 people per group.
  - Large areas of alteration prevalent. Some recreation. Constantly hear people.

- Operational:
  - Wide variety of street vehicles and highway traffic is ever-present.
  - Information described to the left, plus regularly scheduled on-site outdoor demonstrations and clinics.
  - Enforcement in addition to rules to reduce conflicts, hazards, and resource damage.

Appendix W:
Realty, Cadastral Survey, and Lands

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W. Realty, Cadastral Survey, and Lands

Section 102(a)(1) of the Federal Land Policy Management Act (FLPMA) provides that Congress declares that it is the policy of the United States that… "the public lands be retained in Federal ownership, unless as a result of the land use planning procedure provided for in this Act, it is determined that disposal of a particular parcel will serve the national interest;…"

W.1 General Information Pertaining to Land Ownership Adjustments

W.1.1 Land Exchanges

This type of real estate transaction is typically processed under the authority of the FLPMA and involves the discretionary, voluntary exchange of lands or interests in lands between the Federal government and a non-Federal party. It is required that:

Sec. 206(b) - the Federal and non-Federal lands involved be located in the same state

Sec. 206(b) - the Federal and non-Federal lands be of equal value, or in certain circumstances, approximately equal in value

Sec. 206(a) - exchanges be completed only after a finding that the public interest would be well served

In considering whether an exchange is in the public interest, the BLM policy is to give consideration to the following (43 CFR 2200.0-6):

- achieve better management of Federal lands,
- meet the needs of state and local residents and their economies, and
- secure important objectives, including but not limited to, protection of fish and wildlife habitats, cultural resources, watersheds, wilderness and aesthetic values; enhancement of recreation opportunities and public access; consolidation of lands and/or interests in lands; consolidation of split estate; expansion of communities; accommodation of land use authorizations; promotion of multiple-use values; and fulfillment of public needs.

In making the public interest determination, there needs to be a finding that: the resource values and the public objectives that the Federal lands or interests to be conveyed may serve if retained in Federal ownership are not more than the resource values of the non-Federal lands or interests and the public objectives they could serve if acquired, and the intended use of the conveyed Federal lands will not significantly conflict with established management objectives on adjacent Federal lands and Indian trust lands.

W.1.2 Land Exchanges vs. Other Methods of Disposal/Acquisition

To help assure the integrity of state and local tax bases, land exchange would be the first priority for both acquisition of non-Federal land and the conveyance of Federal lands into non-Federal ownership of those parcels identified for disposal, except under the following circumstances:

1. where there is a competitive market situation and multiple entities are interested in a parcel of land, land sale may be considered, or

2. where one of the following situations apply, a disposal method other than exchange may be considered:

    a) resolving inadvertent unauthorized use or occupancy,

    b) providing for community expansion and development,

    c) meeting obligations completing state indemnity selections, and

    d) creating facilities or service for public health, safety and welfare.

W.1.3 Sales

Sales of public lands are authorized under section 203 of FLPMA and offered at not less than fair market value. Public lands determined suitable for sale are offered only on the initiative of the BLM. Such sales have to meet at least one of the following FLPMA sales criteria:

> Sec. 203(a)1) – such tract because of its location or other characteristics is difficult and uneconomic to manage as part of the public lands, and is not suitable for management by another Federal department or agency; or
>
> Sec. 203(a)(2) – such tract was acquired for a specific purpose and the tract is no longer required for that or any other Federal purpose; or
>
> Sec. 203(a)(3) – disposal of such tract will serve important public objectives, including but not limited to, expansion of communities and economic development, which cannot be achieved prudently or feasibly on land other than public land and which outweigh other public objectives and values, including, but not limited to, recreation and scenic values, which would be served by maintaining such tract in Federal ownership.

The preferred method of sale of public lands is by competitive bidding at public auction. However, modified competitive bidding may be used to protect on-going uses, to assure compatibility of the possible uses with adjacent lands, or to avoid dislocation of existing users. Direct sale may be used when the public lands offered for sale are completely surrounded by lands in one ownership with no public access, or where the lands are needed by state or local governments or non-profit corporations, or where necessary to protect existing equities in the lands or resolve inadvertent unauthorized use or occupancy.

W.1.4 Conveyance of Federally-Owned Mineral Interests – Section 209(b), FLPMA

Section 209(b) of FLPMA provides for the conveyance of mineral interests owned by the United States where the surface is or will be in non-Federal ownership. There must be a finding that: 1) there are no known mineral values in the land, or 2) that the reservation of the mineral rights in the United States is interfering with or precluding appropriate non-mineral development of the land and that such development is a more beneficial use of the land than mineral development. Such conveyance of mineral interests can only be made to the existing or proposed record owner of the surface upon payment of administrative costs and the fair market value of the interests being conveyed.

W.1.4.1 Purchases

Purchases of lands or interest in lands would be limited to cases where no practical alternatives exist, high public values would be obtained, and purchase funds are appropriated. Such actions would need to meet the acquisition criteria for the particular alternative being considered.

W.1.4.2 Methods of Acquisition

Acquisition of lands or interests in lands would be by methods such as exchange, purchase, and/or donation.

W.1.4.3 Methods of Disposal

Disposal methods to implement land ownership adjustment actions would not vary by alternative, and generally would include the following: a) exchanges b) sales c) Recreation and Public Purposes Act conveyances d) airport grants e) state indemnity grants.

Mineral patents are not considered a land ownership adjustment for the purposes of this plan.

Three adjustment categories (defined below), will be established and utilized, based on the BLM land tenure adjustment classes. These three categories are:

> Category I: Lands managed in Category I – Retention would include all ACECs, WSAs, Lands with Wilderness Characteristics, archeological sites/historic districts, and lands acquired through LWCF, National Historic Trails, National Monuments or other congressionally-designated areas. Lands within Category I would not be transferred from BLM management by any method for the life of the plan.
>
> Category II: Retention/Limited Land Ownership Adjustment (no land disposals through sale). Public lands within Category II would not be available for sale under section 203 of FLPMA. However, lands within this category could be exchanged for lands or interest in lands. Some public lands in Category II may contain resource values protected by law or policy. If actions cannot be taken to adequately mitigate impacts from disposal of those lands, those parcels would be retained.

Category III (Disposal – land ownership adjustments, including sale): These lands generally have low or unknown resource values or are isolated or fragmented from other public land ownerships making them difficult to manage. Public land parcels in this category are relatively smaller in size (typically 160 acres or less). A listing of the legal descriptions of these disposal parcels can be found at the end of this Appendix (under Legal Descriptions of Disposal Tracts by Alternative). These parcels have been found to potentially meet the sale criteria of section 203(a)(1) of FLPMA and could be made available for sale, however, exchange could have priority over disposal by FLPMA sale.

W.2 Land Ownership Adjustment Criteria

Three types of land ownership adjustment criteria will be adopted (retention, disposal, and acquisition) to provide guidance in categorizing BLM administered land, and in making decisions concerning specific actions.

W.2.1 General Criteria

1. Requirements of applicable laws, executive orders and regulations will be followed.

2. Priority will be determined by the area directly impacted and the significance of the resources in descending order of National, regional, statewide and local. Both economic and non-economic values will be considered in assessing resource significance.

3. A critical level of significance will be assigned to resource values if they are adversely impacted over an area larger than the specific tract being considered for any land ownership adjustment action.

4. Public value losses which cannot be mitigated will be assigned a higher level of significance than those which can be mitigated.

5. A higher level of significance will be assigned to public values which are associated with solving chronic management problems.

W.2.2 Retention Criteria

Lands identified in Category I (Retention) would remain in public ownership. Lands managed in Category I (Retention) would include all ACECs, WSAs, National Historic Trails, National Monuments, and other special designations, Lands with Wilderness Characteristics, archeological sites/historic districts, and lands acquired through LWCF. Lands within Category I would not be transferred from BLM management by any method for the life of the plan.

Lands identified in Category II would likely remain as BLM administered land. Although the underlying philosophy is long-term public ownership, adjustments in retention areas involving exchanges and/or sales may occur when the public interest is served. Some public lands in Category II may contain resource values protected by law or policy. If actions cannot be taken to

adequately mitigate impacts from disposal of those lands, those parcels would be retained. Considerations for retention of public lands include:

1. Areas containing moderate to high resource values and/or characteristics. These include but are not limited to:

   - Land along rivers, streams, lakes, dams, ponds, springs, and trails
   - Riparian areas, community watersheds and/or flood plains
   - Areas that contain T&E species of wildlife or aquatic or vegetation
   - Areas with special status wildlife species, or aquatic species or vegetative species
   - Important general wildlife habitat areas
   - Recreation sites and areas with high recreational values
   - Significant cultural resource sites
   - Geologic areas containing unique or rare features or formations
   - Areas with important or unique forest/woodland values (consider the value of the forest type and potential for carbon sequestration and habitat diversity).
   - Lands with vegetation characteristics that exhibit moderate or higher value carbon sequestration potential.
   - Other areas containing moderate to high resource values and/or characteristics

2. Lands with a combination of moderate to high multiple-use values which dictate retention in public ownership.

3. Areas of National environmental significance: These include but are not limited to:

   - Wilderness
   - Wilderness Study Areas and former WSAs being studied for protective management
   - Wild & Scenic Rivers
   - National Scenic & Historic Trails and Study Trails
   - Lands containing nationally significant cultural resource sites nominated to or eligible for the National Register of Historic Places
   - National Conservation areas and National Monuments
   - Wetlands and Riparian Areas under Executive Order 11990
   - Other Congressionally Designated Areas and Study Areas
   - Areas of Critical Environmental Concern

4. Areas of National economic significance. These include but are not limited to:

   - Designated Mineral Resource Areas where disposal of the surface would unnecessarily interfere with the logical development of the mineral estate, e.g., surface minerals, coal, phosphate, known geologic structures, etc.
   - Lands containing strategic minerals needed for National defense.

5. Lands which provide public access and contain previously mentioned public values which, when considered together, warrant their retention

6. Lands used in support of National defense: These include but are not limited to U.S. Military and National Guard maneuver areas.

7. Areas where future plans will lead to further consolidation and improvement of land patterns and management efficiency.

8. Areas which the general public, state and local government consider suitable for public ownership.

9. Lands withdrawn by the BLM or other Federal agencies for which the purpose of the withdrawal remains valid and the resource uses can be managed concurrently by BLM.

10. Lands that contribute significantly to the stability of the local economy by virtue of Federal ownership.

11. Lands acquired through LWCF funding and donations.

12. Guidelines for the retention of the mineral estate are fairly well described and are mandated under FLPMA. These require that the mineral estate be reserved by the U.S. in all land disposals except in some cases where exchanges are involved. In exchanges, the mineral estate may be reserved by both parties presuming there will be no material interference with development of the mineral resource due to disposal of the surface estate. If values are equal, mineral estate title may pass with the surface estate.

W.2.3 Acquisition Criteria

The following criteria will be used to evaluate proposals which would result in the acquisition of non-Federal lands and/or interest in lands through exchange, fee purchase, donation or other transactions. Priority will be determined on the basis of multiple-use analysis. The greater the number of resource programs and public values served, the higher the priority for acquisition. All proposals will be evaluated to determine if the non-Federal lands meet any of the following specific criteria:

1. Contain moderate to high resource values and/or characteristics.

   - Land along rivers, streams, lakes, dams, ponds, springs, and trails
   - Riparian areas, community watersheds and/or flood plains
   - Areas that contain T&E species of wildlife or aquatic or vegetation
   - Areas with special status wildlife species, or aquatic species or vegetative species
   - Important general wildlife habitat areas
   - Recreation sites and areas

- Significant cultural resource sites
- Geologic areas containing unique and/or scarce features
- Areas with important or unique forest/woodland values (consider the value of the forest type and potential for carbon sequestration and habitat diversity).
- Lands with vegetation characteristics that exhibit moderate or higher value carbon sequestration potential.
- Other areas containing moderate to high resource values and/or characteristics

2. Have the potential for enhancement, manageability or investment opportunity of existing BLM administered lands, particularly lands within or adjoining special designations units (NM, NHT, ACEC, etc.).

3. Facilitate access to BLM administered land retained for long-term public use.

4. Enhance congressionally designated areas, rivers, or trails.

5. Primarily focused in the "retention" areas. (Acquisition outside of retention areas may be considered if the action leads to and/or facilitates long-term needs or program objectives).

6. Facilitate National, state and local BLM priorities or mission statement needs.

7. Will enhance existing or future activity plans on BLM administered land.

8. Stabilize or enhance local economies or values.

9. Meet long-term BLM land management goals as opposed to short-term BLM land management goals.

10. Are of sufficient size to improve use of adjoining BLM administered land or, if isolated, large enough to allow for the identified potential public land use.

11. Allow for more diverse use, more intensive use, or a change in uses to better fulfill the Bureau's mission.

12. Enhance the opportunity for new or emerging BLM administered land uses or values.

13. Contribute to a wide spectrum of uses or large number of public land users.

14. Secure for the public significant water related land interests. These interests will include lake shore, dam shore, river front, stream, and pond or spring sites.

15. Consolidate mineral estates with surface estates to improve potential for development while improving resource management and economic values of existing BLM administered lands.

16. Avoid the following when considering acquisition proposals:

- Acquiring lands or interests in lands that present management problems that outweigh the expected benefits of such an acquisition, including but not limited to:
- presence of hazardous materials
- abundance of noxious weeds
- access situation is inadequate for managing the property for the purpose(s) for which it would be obtained, etc.
- acquisition of small, isolated tracts
- split estates, structures, water rights, unacceptable third party rights (outstanding rights)
- uncertainty as to ownership, boundary location, gaps or overlaps without certainty of location

W.2.4 Access Criteria

The BLM shall endeavor to maintain existing access, provide future access, mark public access on the ground and document geospatially public access in the land tenure records system to BLM administered lands in coordination with other Federal agencies, state and local governments, and private landowners.

W.2.4.1 Specific Access Criteria

1. Obtain access to BLM administered lands in retention areas. (Acquisition of access outside of retention areas may be considered if the action leads to and/or facilitates long term needs or program objectives).

2. Protect, maintain, mark on the ground, and document geospatially existing access to BLM administered lands.

3. Manage access to BLM administered lands within BLM's multiple-use mandate.

4. Acquire access on the basis of the following considerations:

   Where there are moderate to high resource values on existing BLM administered land.

   Where there is public demand which is closely tied to resource values.

   Access to larger blocks or parcels of BLM administered land have priority. The presence of important resource values may justify acquiring access to smaller tracts.

   For those projects on BLM administered lands in which substantial public monies have been spent, and in which continuing diverse public use is expected, permanent exclusive access for the general public should be obtained. For lesser investment projects and/or those to which general public use will need to be limited, nonexclusive easements should be obtained.

Although the Bureau is not required to provide access to mineral resources, the acquisition of such access could be useful in controlling the construction of multiple and unnecessary access routes within the same general area.

Priority would be placed on acquiring easements on roads where landowners are willing to allow public access through their lands.

Priority would be placed on acquiring easements where landowners or third parties are willing to contribute to the on the ground marking, land description preparation, gathering of associated geospatial data, and documentation on BLM land tenure records system.

W.2.5 Disposal Criteria

These are lands identified for potential removal from BLM administration through transfer to other Federal agencies, or by exchange, sale or R&PP Patent to state, county or local public entities, or by exchange or sale to private entities, private groups, private organizations or individuals. Disposal decisions will be made in the public interest based upon the following criteria:

1. Widely scattered parcels which are difficult and uneconomical to manage with anything beyond minimal custodial administration and have no significant public values.

2. Lands acquired for a specific Federal purpose which are no longer required for that or any other Federal purpose.

3. Lands with high public values proper for management by other Federal agencies, or state or local governments.

4. Lands which will serve important public objectives (such as community expansion) as provided in FLPMA.

5. Small parcels of BLM administered land contiguous to National Forest land may be considered for transfer to the U.S. Forest Service through a Public Land Order. Other BLM administered land may be considered for transfer where appropriate.

6. Small parcels of BLM administered lands contiguous to State land may be considered for transfer to the State of Montana. Other BLM administered land may be considered for transfer where appropriate.

7. Lands of limited public value and no public access.

8. Lands where disposal would aid in aggregating or repositioning other BLM administered lands or land resource values in retention areas to facilitate National, state and local objectives, unless purchased with LWCF funds.

9. Lands with general unauthorized use problems, if the lands are not required for public purposes.

10. Lands with unauthorized occupancy use where permanent structures are involved.

W.2.5.1 Potential Disposal Parcels

The following lands are identified for disposal through sale under section 203(a) of FLPMA if important recreation, wildlife, watershed, threatened or endangered species habitat, and/or cultural values are not identified during an intensive inter-disciplinary review process. These lands would also be available for transfer to another agency or to local governments, as needed, to accommodate community expansion and other public purposes. Detailed information on each tract, including legal description, acreage, and rationale for categorization, is contained in the Land Tenure table below. Tracts identified from the original 1984 Billings RMP ROD (FLTFA tracts) are identified within the table.

Any federal surface managed by the BLM within the BiFO, which was not specifically evaluated in the land tenure adjustment analysis is considered to be classified as a Category II, unless they fall within the definition of Category I lands.

Under the current planning process an additional 194 tracts were analyzed for tenure adjustment criteria for a total of 331 tracts analyzed for the current RMP. Acreages are derived from Master Title Plat information or GIS shape files and are approximate. An effort has been made to ensure that the table is correct; however errors may still exist in legal description, or acreage, and will be again reviewed through detailed project level proposals.

Land Tenure Disposal Tracts By Alternative

Alternative A*

Legal Description Principal Meridian, Montana	Acres
T. 1 N., R. 15 E., sec. 33, SESE	40.00
T. 2 N., R. 26 E., sec. 8, NE	160.00
T. 2 N., R. 26 E., sec. 8, SW	160.00
T. 2 N., R. 26 E., sec. 10, NE	160.00
T. 2 N., R. 26 E., sec. 14, N2NE	80.00
T. 3 N., R. 25 E., sec. 26, NE, E2SW, N2SE	320.00
T. 3 N., R. 27 E., sec. 4, SW	160.00
T. 3 N., R. 27 E., sec. 18, E2	320.00
T. 3 N., R. 27 E., sec. 24, SWSE, N2SESE, SWSESE	70.00
T. 3 N., R. 28 E., sec. 2, N2NE, SENE, NENW, SESW, NESE, S2SE	320.00
T. 3 N., R. 28 E., sec. 4, NENE	40.00

Land Tenure Disposal Tracts By Alternative	
Alternative A*	
Legal Description Principal Meridian, Montana	Acres
T. 3 N., R. 28 E., sec. 4, NWNW	40.00
T. 3 N., R. 28 E., sec. 10, N2	320.00
T. 3 N., R. 28 E., sec. 14, SWSW	40.00
T. 4 N., R. 28 E., sec. 34, E2	320.00
T. 4 N., R. 29 E., sec. 24, W2	320.00
T. 4 N., R. 29 E., sec. 34, SWNE, W2SW, SESW, SE	320.00
T. 4 N., R. 30 E., sec. 19, lots 1, 2, 3, 4 sec. 19, E2, E2W2	583.84
T. 4 N., R. 31 E., sec. 24, NENE	40.00
T. 4 N., R. 31 E., sec. 24, E2SE	80.00
T. 4 N., R. 32 E., sec. 22, N2NW, SWNW, W2SW	200.00
T. 4 N., R. 32 E., sec. 30, lots 1, 2, 3, 4	141.96
T. 5 N., R. 33 E., sec. 32, SWNW, N2SW, SESW	160.00
T. 1 S., R. 12 E., sec. 24, NENW, S2NW, N2SW, SWSW	240.00
T. 1 S., R. 13 E., sec. 18, SESW	40.00
T. 1 S., R. 14 E., sec. 6, lot 7 sec. 6, SESW	73.74
T. 1 S., R. 14 E., sec. 6, SENW	40.00
T. 1 S., R. 14 E., sec. 8, W2NW	80.00
T. 1 S., R. 14 E., sec. 18, lots 3, 4 sec. 18, SESW	109.45
T. 1 S., R. 15 E., sec. 1, S2SENW	20.00
T. 1 S., R. 15 E., sec. 2, SENE, N2SE	120.00
T. 1 S., R. 16 E., sec. 4, SENE, NESE	80.00
T. 1 S., R. 16 E., sec. 12, lots 9, 10, 11, 12	159.62

Land Tenure Disposal Tracts By Alternative	
Alternative A*	
Legal Description Principal Meridian, Montana	Acres
T. 1 S., R. 16 E., sec. 18, NWNE, NENW	80.00
T. 1 S., R. 16 E., sec. 29, NW, E2SW, NWSE	280.00
T. 1 S., R. 17 E., sec. 29, SWSE	40.00
T. 1 S., R. 18 E., sec. 24, NWNE, NW, NWSE	240.00
T. 1 S., R. 18 E., sec. 24, SWSW	40.00
T. 1 S., R. 18 E., sec. 26, NWNW	40.00
T. 1 S., R. 18 E., sec. 26, SE	160.00
T. 1 S., R. 19 E., sec. 32, N2NE	80.00
T. 1 S., R. 25 E., sec. 25, lot 3	10.10
T. 2 S., R. 18 E., sec. 9, SESE	40.00
T. 2 S., R. 18 E., sec. 10, NESW	40.00
T. 2 S., R. 19 E., sec. 8, SENE	40.00
T. 2 S., R. 19 E., sec. 8, N2SW	80.00
T. 2 S., R. 23 E., sec. 20, N2NE	80.00
T. 3 S., R. 19 E., sec. 23, SWNE, NESW, NWSE	120.00
T. 3 S., R. 22 E., sec. 1, W2SW sec. 2, E2SE	160.00
T. 3 S., R. 22 E., sec. 9, NENE	40.00
T. 3 S., R. 22 E., sec. 10, SWNE	40.00
T. 3 S., R. 22 E., sec. 14, NESW	40.00
T. 3 S., R. 23 E., sec. 9, NWNE	40.00
T. 3 S., R. 23 E., sec. 22, S2NW	80.00
T. 4 S., R. 16 E., sec. 2, SWNW, NESW, NWSE	120.00
T. 4 S., R. 17 E., sec. 5, NESW, N2SE	120.00

Land Tenure Disposal Tracts By Alternative	
Alternative A*	
Legal Description Principal Meridian, Montana	Acres
T. 4 S., R. 17 E., sec. 8, SESW sec. 17, NENW, S2NW	160.00
Total	7,528.71
*Denotes 1984 RMP ROD (FLTFA tracts)	

Land Tenure Disposal Tracts By Alternative	
Alternative B	
Legal Description Principal Meridian, Montana	Acres
T. 10 N., R. 13 E., sec. 21, lots 7, 9 sec. 25, lots 1, 2, 3 sec. 26, lots 1, 2 sec. 27, lots 4, 5, 6, 7 sec. 31, lots 8, 9 sec. 34, lots 5, 6, 7, 8, 9	49.89
Total	49.89

Land Tenure Disposal Tracts By Alternative	
Alternative C	
Legal Description Principal Meridian, Montana	Acres
T. 1 N., R. 15 E., sec. 33, SESE	40.00
T. 1 N., R. 16 E., sec. 14, N2NW	80.00
T. 2 N., R. 13 E., sec. 34, SWSW	40.00
T. 2 N., R. 15 E., sec. 20, NWNW	40.00
T. 2 N., R. 16 E., sec. 4, SWSW	40.00
T. 2 N., R. 17 E., sec. 22, NENE	40.00
T. 2 N., R. 17 E., sec. 24, NWNE	40.00
T. 2 N., R. 17 E., sec. 30, lots 3, 4 sec. 30, NESW	77.70

Land Tenure Disposal Tracts By Alternative	
Alternative C	
Legal Description Principal Meridian, Montana	Acres
T. 2 N., R, 29 E., sec. 9, NENE	40.00
T. 3 N., R. 14 E., sec. 20, lot 5	40.15
T. 3 N., R. 16 E., sec. 20, N2NE	80.00
T. 3 N., R.16 E., sec. 22, NESE	40.00
T. 3 N., R. 16 E., sec. 30, SESE	40.00
T. 4 N., R. 16 E., sec. 32, W2NW	80.00
T. 4 N., R. 17 E., sec. 26, NENE	40.00
T. 4 N., R. 19 E., sec. 2, SESW	40.00
T. 4 N., R. 19 E., sec. 8, NWNW	40.00
T. 4 N., R. 32 E., sec. 10, NE	80.00
T. 5 N., R. 14 E., sec. 8, SWSE	40.00
T. 5 N., R. 16 E., sec. 20, SWNE	40.00
T. 6 N., R. 13 E., sec. 2, SESE	40.00
T. 6 N., R. 13 E., sec. 10, NENE	40.00
T. 6 N., R. 13 E., sec. 10, SWNW	40.00
T. 6 N., R. 13 E., sec. 14, NENW	40.00
T. 6 N., R. 14 E., sec. 22, S2SW	80.00
T. 6 N., R. 20 E., sec. 24, S2N2	160.00
T. 7 N., R. 14 E., sec. 24, SWSW	40.00
T. 8 N., R. 17 E., sec. 4, NWSE	40.00
T. 9 N., R. 12 E., sec. 12, NENW	40.00

Land Tenure Disposal Tracts By Alternative	
Alternative C	
Legal Description Principal Meridian, Montana	Acres
T. 10 N., R. 13 E., sec. 21, lots 7, 9 sec. 25, lots 1, 2, 3 sec. 26, lots 1, 2 sec. 27, lots 4, 5, 6, 7 sec. 31, lots 8, 9 sec. 34, lots 5, 6, 7, 8, 9	49.89
T. 10 N., R. 14 E., sec. 6, lot 2 sec. 6, SWNE	79.07
T. 10 N., R. 15 E., Sec. 8, SWSW	40.00
T. 10 N., R. 17 E., sec. 34, SESW	40.00
T. 1 S., R. 14 E., sec. 12, NESW	40.00
T. 1 S., R. 14 E., sec. 23, SWNE	40.00
T. 1 S., R. 14 E., sec. 26, NWNE	40.00
T. 1 S., R. 15 E., sec. 2, SENE, N2SE	120.00
T. 1 S., R. 15 E., sec. 6, lot 7	32.43
T. 1 S., R. 15 E., sec. 6, NESW	40.00
T. 1 S., R. 15 E., sec. 9, SWSE, SESW	80.00
T. 1 S., R. 15 E., sec. 18, lot 3	33.52
T. 1 S., R. 15 E., sec. 18, SENE	40.00
T. 1 S., R. 15 E., sec. 21, NESW	40.00
T. 1 S., R. 15 E., sec. 23, E2SW	80.00
T. 1 S., R. 15 E., sec. 27, S2SE	80.00
T. 1 S., R. 15 E., sec. 33, S2SW	80.00
T. 1 S., R. 16 E., sec. 4, SENE, NESE	80.00
T. 1 S., R. 16 E., sec. 18, NWNE, NENW	80.00
T. 1 S., R. 17 E., sec. 29, SWSE	40.00
T. 1 S., R. 17 E., sec. 31, lot 1	34.31

Land Tenure Disposal Tracts By Alternative	
Alternative C	
Legal Description Principal Meridian, Montana	Acres
T. 1 S., R. 18 E., sec. 24, SWSW	40.00
T. 1 S., R. 18 E., sec. 26, NWNW	40.00
T. 2 S., R. 13 E., sec. 14, NWNE	40.00
T. 2 S., R. 13 E., sec. 21, SWNW	40.00
T. 2 S., R. 13 E., sec. 34, NENW	40.00
T. 2 S., R. 13 E., sec. 34, NWSE	40.00
T. 2 S., R. 15 E., sec. 2, NWSE	40.00
T. 2 S., R. 15 E., sec. 3, SESW	40.00
T. 2 S., R. 15 E., sec. 4, SESE	40.00
T. 2 S., R. 15 E., sec. 11, NWNW	40.00
T. 2 S., R. 16 E., sec. 10, NWNW	40.00
T. 2 S., R. 16 E., sec. 12, SESW	40.00
T. 2 S., R. 16 E., sec. 17, N2SW	80.00
T. 2 S., R. 16 E., sec. 20, NESE	40.00
T. 2 S., R. 17 E., sec. 10, SWSW	40.00
T. 2 S., R. 17 E., sec. 24, SWSW	40.00
T. 2 S., R. 17 E., sec. 28, SWNW	40.00
T. 2 S., R. 17 E., sec. 30, lot 2	36.55
T. 2 S., R. 18 E., sec. 9, SESE	40.00
T. 2 S., R. 18 E., sec. 10, NESW	40.00
T. 2 S., R. 23 E., sec. 20, N2NE	80.00
T. 3 S., R. 22 E., sec. 1, W2SW sec. 2, E2SE	160.00
T. 3 S., R. 22 E., sec. 10, SWNE	40.00

Land Tenure Disposal Tracts By Alternative	
Alternative C	
Legal Description Principal Meridian, Montana	Acres
T. 3 S., R. 22 E., sec. 14, NESW	40.00
T. 3 S., R. 23 E., sec. 22, S2NW	80.00
T. 4 S., R. 15 E., sec. 31, SESE	40.00
T. 4 S., R. 19 E., sec. 35, SENE	40.00
T. 4 S., R. 20 E., sec. 12, SENW	40.00
T. 4 S., R. 21 E., sec. 28, NWNE	40.00
T. 4 S., R. 23 E., sec. 6, lot 3	39.87
T. 5 S., R. 19 E., sec. 5, SESE	40.00
T. 5 S., R. 20 E., sec. 6, SWSE	40.00
Total	4,223.49
*Denotes 1984 Billings RMP ROD (FLTFA tracts)	

Land Tenure Disposal Tracts By Alternative	
Alternative D	
Legal Description Principal Meridian, Montana	Acres
T. 4 S., R. 19 E., sec. 35, SENE	40.00
T. 5 S., R. 19 E., sec. 5, SESE	40.00
T. 5 S., R. 20 E., sec. 6, SWSE	40.00
T. 10 N., R. 13 E., sec. 21, lots 7, 9 sec. 25, lots 1, 2, 3 sec. 26, lots 1, 2 sec. 27, lots 4, 5, 6, 7 sec. 31, lots 8, 9 sec. 34, lots 5, 6, 7, 8, 9	49.89
Total	169.89
*Denotes 1984 Billings RMP ROD (FLTFA tracts)	

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Appendix X:
Lands with Wilderness Characteristics

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X. Lands with Wilderness Characteristics

X.1 Background

In an increasingly developed world, public lands with wilderness characteristics (as defined in the Wilderness Act, 16 U.S.C. 1131 (C) provide social cultural, economic scientific, and ecological benefits for present and future generations. Many of America's most treasured landscaped include pubkic lands with wilderness characetristicts that provide visitors with rare oipportunities for solitude and personal reflection. In addition, many of these lands have culturally significant and scared sites imporatant to native tribes. Many people and communities value these lands for hunting and fishing, observing wildlife, hiking, and other non-motorized and non-mechanized recreational uses. Lands with Wilderness characteristics are also imporatatnt for their scientific, cultural and historic objects, which further our understanding of human and natural history, the functions of healthy ecosystems, and how human activities change our world. They also provide a variety of valuable ecosystem services, including carbon sequestration, watershed protection, and air purification, and may containb habitat for numerous threatened and endangered species and other rare biological resources worthy of protection. Managing an area to protect its wilderness caharcetristics provides unique opportunities and benefits for present and futrure generations that may otherwise be irreparably lost.

Management of this resource is thus a high priority for the BLM, and the natural state of such lands should be protected to the extent possible, consistent with the BLM's planning and management authorities and its multiple-use mission. The BLM shall protect Lands with Wilderness Characteristics (LWCs) when undertaking land use planning and when making project-level decisions by avoiding impairment of their wilderness characteristics unless the BLM concludes, as part of its decision-making process, that impairment of wilderness characteristics is appropriate and consistent with applicable requirements of law and other resource management considerations. Where the BLM concludes that authorization of uses that may impair wilderness characteristics is appropriate, the BLM shall document the reasons for its determination and consider measures to minimize impacts on those wilderness characteristics. Where the BLM concludes that protection of wilderness characteristics is appropriate, the BLM shall protect the wilderness resources through land use planning.

X.2 Purpose and Authority

Principal authorities affecting the consideration of LWCs in the planning process are:

A. The Federal Land Policy and Management Act of 1976, 43 U.S.C. 1701 *et seq*. (FLPMA), exclusive of 43 U.S.C. 1782. FLPMA specifically states that preserving and protecting certain public lands in their natural condition is part of the BLM's mission. *See* 43 U.S.C. 1701(a)(8). FLPMA provides direction for inventories in Sections 102(a)(2), 201(a), and 202(c)(4) and (9), and land use planning in Section 202. These sections direct the BLM to prepare and maintain an inventory of all public lands and their resources and values. These sections also direct the Bureau to rely, to the extent available, on inventory information in the development of land use plans.

B. The Wilderness Act of 1964, 16 U.S.C. 1131 *et seq*.
C. National Environmental Policy Act of 1969, 42 U.S.C. 4321 *et seq*. (NEPA)
D. Naval Petroleum Reserves Production Act of 1976, 42 U.S.C. 6501 *et seq.* (NPRPA)
E. Alaska National Interest Lands Conservation Act (ANILCA), Section 1320, 43 U.S.C. 1784
F. Council on Environmental Quality (CEQ) Regulations, 40 CFR 1500-1508
G. BLM Regulations, 43 CFR 1601-1610, 43 CFR 2360.0-1 *et seq.*
H. Department of the Interior (DOI) NEPA Regulations, 43 CFR Parts 46.
I. BLM Manuals 6310 (Inventory Process) and 6320 (Planning Process).

X.3 Process

Regardless of past inventory, the BLM must maintain, i.e. keep current, an inventory of the wilderness resource on public lands. Keeping an inventory current requires gathering information and preparing a permanent file for any new inventory. It is essential that an adequate record of the inventory and subsequent updates be maintained that documents inventory findings, including relevant narratives, maps, photographs, citizen information, and any other relevant information The wilderness inventory may need to be updated when:

1. The public or the BLM identifies wilderness characteristics as an issue during scoping in a National Environmental Policy Act (NEPA) analysis;
2. An RMP is being developed or an amendment or revision is being initiated;
3. The BLM has new information concerning resource conditions, including where the public has submitted new wilderness characteristics information that meets the BLM‟s minimum threshold.
4. The BLM has determined that the land appears to have wilderness characteristics and a proposed project may impair those apparent characteristics; or
5. Additional lands are acquired.

The BLM must document the existing conditions as opposed to potential conditions that may result from a future planning decision. Where inventory data exists, a team familiar with the area may conduct much of the inventory using available information (e.g., existing maps and photos) and field checking as necessary. The wilderness inventory process directive does not mean that the BLM must conduct a completely new inventory and disregard the inventory information that it already has for a particular area. Rather, the BLM must ensure that its current inventory is updated with appropriate information to conform to FLPMA and BLM Manuals 6310 and 6320.

When citizen information regarding wilderness characteristics is received, BLM staff will document the submitted materials including: date of submission; name of proponent; name of proposal and/or area identified by the proponent; BLM District(s) and Field Office(s) affected; type of material submitted (e.g., narrative, map, photo); and, whether or not the public information meets the minimum standard for further review by BLM.

The minimum standard that citizen information must meet in order for BLM to consider the information during a wilderness inventory update process requires a submission of the following information to BLM: (a) a map of sufficient detail adequate to determine specific boundaries of the area in question; (b) a detailed narrative that describes the wilderness characteristics of the

area and documents show that information significantly differs from the information in prior inventories conducted by BLM regarding the wilderness values of the area; and, (c) photographic documentation.

When citizen information regarding wilderness characteristics meets the minimum standard for further review, as soon as practicable, the BLM staff will evaluate the information regarding the validity of proposed boundaries of the area(s), the existence of roads and other boundary features, the size of the area(s), and the presence or absence of wilderness characteristics. This evaluation may be based on relevant information available in the office (prior BLM inventories, interdisciplinary team knowledge, aerial photographs, field observations, maps, etc.). Field checking may also be needed. BLM Staff will compare existing BLM knowledge with the submitted information and determine if the conclusion reached in previous BLM inventories remains valid, and will document the findings. These findings will be available to the public and BLM will retain a record of the evaluation and findings as evidence of BLM's consideration.

When the BLM confirms that LWCs exist, BLM Manual 6320 establishes the BLM's policy on considering LWCs in land use plans, land use plan amendments or revisions, and management of LWCs as administratively designated Wild Lands. The guidance also establishes the BLM's policy for considering project-level decisions in areas that have not yet been inventoried and analyzed consistent with the new policy described in BLM Manual 6310.

X.4 Unit Descriptions and Evaluation Summary

A total of 13 separate units, some with multiple tracts, were identified as initially meeting the criteria identified in BLM Manual 6310. These units are identified below and evaluated. Some additional areas were identified as possibly meeting the size criteria, but it was readily apparent to the BLM staff that they are bisected by obvious roads and were thus not evaluated further. However, when any doubt existed, the staff reviewed the area.

X.4.1 Pryor Mountain Unit

X.4.1.1 Prior Review:

Tract 1 is approximately 2,873 acres in size. This parcel is separated from The Pryor Mountains WSA by an established road (Sykes Ridge Road) but is adjacent to the Big Horn Tack-On WSA to the south and lands administratively endorsed for wilderness designation by the NPS in the Bighorn Canyon National Recreation Area to the southeast. Private lands form the northern boundary and the west boundary is a combination of a vehicle road, private lands and Custer National Forest lands. Previously it was a separate parcel of the Big Horn Tack-On Study Area since it was isolated by a Montana State land parcel. The other portion of the Study Area was designated as the Big Horn WSA. The state land was subsequently acquired and the Tract is now contiguous with the WSA.

Tract 2 is approximately 497 acres in size. It is adjacent to the Pryor Mountains WSA to the west, south, and north, while the Sykes Ridge road forms the boundary to the east.

Tract 3 is approximately 143 acres in size. It is adjacent to the Big Horn Tack-On WSA on the north, east, and south sides. The west side is the Sykes Ridge road. It is separated from Tract 2 by the road and together they compose a section of land which was formally Montana State lands. They were not previously inventoried for wilderness character since they were acquired after the inventory effort. They were subsequently recommended for potential wilderness designation in the *Montana Statewide Wilderness Study Report* (1991) and were noted as being outside the WSA.

Tract 4 is approximately 445 acres in size. It is adjacent to the Pryor Mountains WSA to the west, south, and north, while the road forms the boundary to the east. It was initially dropped from wilderness consideration and not included in either the Pryor Mountain or the Big Horn Tack-On WSAs due to the human use pattern at the time, although it was recommended for possible wilderness designation in the *Montana Statewide Wilderness Study Report* (1991).

Tract 5 is an irregular shape and the boundary is formed by a combination of vehicle routes and a ROW. It is approximately 512 acres in size with 224 acres in Wyoming and 288 acres in Montana. The Pryor Mountains WSA is located to the west and the Big Horn Tack-on WSA is located to the east. It was initially unclear whether the two routes were roads or trails or a combination of both. The lands were not included in either WSA, although it was recommended for possible wilderness designation in the *Montana Statewide Wilderness Study Report* (1991).

Tract 6 is located adjacent to the Pryor Mountains WSA to its north. It is approximately 1,074 acres in size and is completely within Wyoming. The boundary is either a county maintained road or a Power Line ROW to the south, east, and west. The lands were inventoried in the initial effort and human activities at the time were noted as being intrusive and not of a primitive type. These activities were considered to have reduced the level of solitude to less than an outstanding level.

Tract 7, approximately 327 acres in size, was previously inventoried and the effort at that time identified several human improvements which were substantially noticeable, including vehicle routes and a fence line along the boundary.

Tract 8, approximately 269 acres in size, was found to have extensive evidence of uranium exploration and development located throughout the Tract. This included tailings piles, access roads, etc., and the lands were found to not possess wilderness character.

X.4.1.2 Unit Analysis:

The Pryor Mountains range in elevation from around 8,480 feet in the north end down to around 3,780 feet in the southeastern end of the range.

The upper elevations of the Pryor Mountains are characterized by patches of Douglas fir, particularly on the north slopes, with occasional open parks.

Understory is generally sparse in the dense Douglas fir stands. Shrub species include snowberry, ninebark, spirea, and juniper. Limber pine is also present, along with bluebunch wheat grass, needle-and-thread grass, bluegrasses, forbs, and sedges. In the open, unforested areas, vegetation

is composed primarily of shrubs and grasses. Big sagebrush and shrubby cinquefoil are the dominant shrubs. Grasses include mountain brome, Kentucky bluegrass, and bluebunch wheatgrass. Common forbs are balsam root, geranium, and Eriogonum.

The mid elevations of the Pryor Mountains consist mostly of mountain shrubs. Utah juniper occupies the upper elevations gradually blending into mountain mahogany and eventually into big sagebrush Black sage, rabbitbrush, and skunkbrush sumac may also be present along with bluebunch wheatgrass, needle-and-thread grass, three-awn, and sandberg bluegrass.

The red desert/saltshrub occurs on the lower slopes of the Pryor Mountains. Vegetation is generally sparse and scattered. Saltbushes of the Atriplex genus compose the majority of the vegetation.

There is no commercial timber harvest on the lands.

There is no licensed livestock use.

There are no active oil and gas leases.

All of the lands are within the Pryor Mountain Wild Horse Range (PMWHR): however, since the management plan for the PMWHR was written with possible wilderness designation in mind, very little wilderness conflict exists with management of the wild horse range. The PMWHR was established by an Act of Congress in 1968.

Tract 1: There is extensive evidence of uranium exploration located throughout the Tract. This includes tailings piles, access roads, etc. The presence of these impacts was noted in the initial WSA inventory and the lands were found to not possess wilderness character. Although time has passed, these impacts have not significantly reduced naturally or have not been rehabbed manually.

Tract 3: The Crooked Creek National Natural Area covers a portion of this land. This area provides significant fossil evidence of Early Cretaceous terrestrial fossil vertebrates and is one of only two known areas representing this period of life on the North American continent. It has produced eight new species and three new genera of dinosaurs. It was established in 1966.

X.4.1.3 Finding:

The lands are primarily in a natural condition, with a few, mostly well screened intrusions. Topography and vegetation screen these intrusions, which are mostly located adjacent to the designated road network and not in the interior of the Tracts.

Tract 1: A historical site, Pen's Cabin, is located in T. 8 S., R. 28 E., section 7. Pen's cabin was built about 1925. This site is a popular recreation attraction and the localized area is not in a natural condition due to human impacts from dispersed camping. There are two communication sites located on T. 8 S., R. 28 E., Section 6 and T. 8 S., R. 28 E., Section 21. These localized sites are not in a natural condition, but the rest of the Tract is. The total impact area is approximately 10 acres.

Tract 2: The lands are in a natural condition. The terrain and vegetation along Sykes Ridge road does not lend itself to cross-country OHV use or dispersed camping. There is a user-created foot trail leading to Frog's Fault Cave, which is only a short distance from the road. It attracts recreational use of an unknown level.

Tract 3: The lands are in a natural condition. The terrain and vegetation along Sykes Ridge road does not lend itself to cross-country OHV use. There are several wide spots along the road where vehicles park for scenic views or use as pull outs for opposing traffic but these are not major intrusions into the Tract and some are rehabbing naturally. None of these routes were evaluated by the BLM.

Tract 4: BLM has determined that both vehicle routes used as boundaries meet the classification of a road, and that the parcel is isolated from either WSA. Accordingly, these lands do not meet the size criteria for evaluation and lack wilderness character. See the Road Analysis Forms for details. This Tract will not be evaluated further since it does not meet the stand-alone size criteria.

Tract 5: BLM has determined that a portion of Tract 5 is isolated from the rest of the Tract by a vehicle route which is classified as a road. This portion of the Tract is approximately 46 acres in size and is located in portions of T. 58 N., R. 95 W., Sections 22, 23, and 26. Although it has been recommended for wilderness designation (BLM Montana Statewide Wilderness Study Report, 1991), this portion of Tract will not be evaluated further since it does not meet the stand-alone size criteria.

Tract 6: The BLM closed the sole vehicle route identified during the initial inventory when the 1984 Billings RMP was signed. It has since naturally rehabbed and is not substantially noticeable. The electrical power line noted as an intrusion was used as a portion of the boundary in this effort and was not included in the area under consideration. The evidence of uranium exploration was determined to be minor in scale and size and is not substantially noticeable due to its location in the remote and generally untraveled interior of the Tract. Cattle are no longer grazed in the area. The natural condition of the landscape has improved from what was earlier observed since human use trends have changed through time and the lands are now in a natural condition.

Tract 7: The initial inventory identified several human improvements which were substantially noticeable, including vehicle routes and a fence line along the boundary. These impacts have been reduced or removed. The vehicle routes have naturally rehabbed after closure in the RMP of 1984. The land condition has improved and the lands are now in a natural condition.

Tract 8: There is extensive evidence of uranium exploration located throughout the Tract. This includes tailings piles, access roads, etc. The presence of these impacts was noted in the initial WSA inventory and the lands were found to not possess wilderness character. Although time has passed, these impacts have not significantly reduced naturally or have not been rehabbed manually. The east boundary was set along aliquot parts, an artificial boundary, but an attempt at using natural features and human impact boundaries was determined to be too difficult to manage. This Tract is not in a natural condition and the initial conclusions are still appropriate. The Tract will not be evaluated further.

X.4.2 Dry Creek Unit

X.4.2.1 Prior Review:

The unit was originally inventoried as Dry Creek (MT-067-200) in the earlier inventory and the new inventory has the same boundaries. The unit is characterized by rolling landforms which gently rise towards the west and it contains scattered trees in only its western portion. The rest of the unit is grasslands and sage. The area is mountain foothills, with vegetation being a pale green and the soils are a grey gumbo clay with a few minimal light tan shale outcropping. Most drainages on the east side are configured such that they lead directly toward a State Highway.

X.4.2.2 Unit Analysis:

The unit covers approximately 6,425 acres of public lands. The entire unit is grazed commercially under permit from BLM and there are at least 5 miles of existing range fence, one spring development, and a stock tank. There are approximately 6 miles of vehicle routes which are mostly used for rangeland management. These routes are not classified as roads by BLM. A natural gas pipeline with a ROW crosses the extreme northeast corner of the unit and isolates a small portion of the lands from the rest of the unit. For recreational purposes the area does attract some upland bird hunting and horseback riding, and although use levels are not known, they are estimated to be low due to lack of cover and browse for wildlife.

X.4.2.3 Finding:

The unit is essentially in a natural condition, with the exception of the area where the ROW is located. The unit landscape is such that that all the drainages in the southern third open to the State Highway. The central and eastern portions of the unit have little tree cover or extensive topographic screening. The highest level of solitude is possible in Sections 31 and 32, where even in this area there is limited vegetative cover. The unit does not have a high level of solitude, let alone an outstanding level. While the expectation of meeting anyone in the unit is low, the opportunity for an outstanding recreational experience is also low since there is almost no attraction value. No supplemental values were identified. The lands do not meet the wilderness characteristic criteria and will not be evaluated further.

X.4.3 Deer Mountain Unit

X.4.3.1 Prior Review:

The unit was originally inventoried in the earlier effort as Deer Mountain, (MT-067-201). It had the same boundaries. The unit is formed by a single, narrow north-south ridgeline sparsely vegetated by conifers along the summit spine of the ridge and in the draws. The ridgeline drops off sharply to the east.

This unit was studied in the initial and intensive phases of the earlier Wilderness inventory and was dropped from further consideration at the end of the inventory.

X.4.3.2 Unit Analysis:

The unit is approximately 9,496 acres in size. This type of landform is known as a "Cuesta Scarp". The geological feature is a supplemental feature in the unit.

There is a pipeline ROW in the southern region which bisects the unit into two separate units.

There are possibly other pipelines as well. Several additional developments are proposed and in the process of being evaluated and processed.

The narrow configuration of the unit hinders an expectation of solitude since any traffic can be heard from many points, even though timber does reduce some impact.

X.4.3.3 Finding:

The pipeline ROW bisects the unit into two smaller portions, neither of which meets the size criteria by themselves. The lands will not be evaluated further.

X.4.4 Bear Creek Unit

X.4.4.1 Prior Review:

Originally this unit was inventoried as Bear Creek Unit (MT-067-204). From flat prairie on the west and north, Bear Creek rises to low bentonite domes and ridges in the center section. The only vegetation in the unit is sparse range grasses, sagebrush, and scrub timber.

The unit is bordered by Bear Canyon road and a parcel of Montana State lands on the north, Gyp Springs road on the east, Blue Wash Road on the northeast, and the Montana/Wyoming border on the south.

This unit was dropped following the intensive inventory phase when it was found to lack naturalness due to extensive human impacts, mostly from mineral exploration and development occurring on much of the area. It was also noted that the level of solitude was low and the opportunity for primitive recreation was mostly adversely impacted by other human activities.

X.4.4.2 Unit Analysis:

The unit is approximately 8.930 acres in size. The BLM established the Petroglyph Canyon ACEC for protection of the petroglyphs found on the rock formations in the area. Although use levels are low, the area does attract both commercial and casual primitive recreation (for viewing the rock art) and semi-primitive recreation (OHV touring – transiting from Wyoming to the higher elevations in the Pryors. The unit is heavily impacted along the southern and western boundaries by past and present bentonite mining operations. The majority of the documented vehicle routes are not receiving regular and continuous use. There are range improvements but they are not substantially noticeable**.**

X.4.4.3 Finding:

Having approximately 8,930 acres, the unit meets the size criteria. The western region and the southern region along the private land boundary are not in a natural condition due to human impacts, both historical and ongoing. Only the central and eastern regions are in a natural condition. There are outstanding levels of solitude present based on the configuration and size of the unit, as well as its actual use levels. There are outstanding opportunities for primitive recreation and a portion of the area (the ACEC) is being actively marketed as a destination. There are special features present in the unit as well (the ACEC resources).

The BLM staff has determined that it is practical to establish an alternative boundary which excludes the existing impacts along the southern boundary and the western region while still meeting the size criteria. This boundary uses a point-to-point line from a Montana State land parcel corner (Section 16) to the corner point common to Sections 19, 20, 29 and 30, which results in an area of approximately 5,659 acres having wilderness characteristics and two portions totaling approximately 3,271 acres lacking wilderness characteristics.

X.4.5 Burnt Timber Canyon Unit

X.4.5.1 Prior Review:

Originally inventoried in 1979 as portions of the Burnt Timber Unit (MT 067-205), this unit was initially dropped in the Final Inventory Decision of 1980, but due to protests received by BLM during the public comment period, was subsequently reviewed further. Ultimately these portions were not part of the Unit which was established as the Burnt Timber WSA in 1991 due to the existence of uranium mining claims and a BLM enclosure, vehicle routes, a horse trap, and several other human impacts in the vicinity of Demi-John Flat, which is a flat and open bench on the west side of the WSA and other areas along the WSA boundary on the east side.

X.4.5.2 Unit Analysis:

The area is approximately 7,204 acres in size and divided into two separate parcels. The area has not seen further mining development since the prior inventory. The BLM facilities noted in the initial inventory have been removed. Several minor ways evaluated in the initial inventory are naturally rehabbing and essentially no longer usable.

Tract 1, approximately 1,816 acres in size, is separated from the Pryor Mountains WSA by a maintained road. It is adjacent to the Burnt Timber WSA on its east side. The west boundary is a combination of private lands and the WSA boundary, which is a primitive vehicle route. The route is naturally rehabbing and essentially unusable. There are mining impacts including test pits and some routes which are still readily visible to a casual observer since they are in the foreground in the viewshed. The BLM has a new wildlife guzzler and conducts regular vehicle access to maintain it.

Tract 2, approximately 5,388 acres in size, is adjacent to the Burnt Timber WSA to the west. It is bordered on the west by a road, on the south by the Montana/Wyoming border, and on the east side by a combination of private lands, a road, and a minor and primitive vehicle route, which is

naturally rehabbing and not usable. Although the lands are within a BLM grazing allotment, no use has occurred for a number of years. Commercial Range operators do trail cattle along the unit boundary road between the lower elevation private lands to the south and the Forest Service lands further north.

X.4.5.3 Finding:

Tract 1 still has visible evidence of human impacts and is not in a natural condition, although overall the condition has improved from the previous inventory. The BLM has new facilities which will have motorized access use and which have a localized impact. The area does offer solitude and primitive recreation opportunities, when considered with the adjacent WSA. This area is not in a condition for further evaluation at this time, although management actions may improve its condition in the future and warrant a new evaluation.

Tract 2 is in a natural condition, and its size and configuration, together with its topography and vegetation, offers both outstanding primitive recreation opportunity and solitude. There are supplemental features present as well.

X.4.6 Weatherman Draw Unit

X.4.6.1 Prior Review:

Originally inventoried in 1979 as Weatherman Draw, (MT-067-202), approximately half the unit is covered with timber and the remainder is grasslands, interspersed with sagebrush. The unit consists of rolling hills of 3,600 feet to 5,000 feet above sea level.

This unit was dropped following the initial inventory phase when it was found to lack naturalness due to extensive human impacts from mineral exploration.

X.4.6.2 Unit Analysis:

The lands include approximately 11,603 acres of public lands and meet the size criteria. The BLM staff identified the presence of the human impacts which were found in the earlier effort and which remain substantially noticeable.

There are a number of new impacts as well, including a number of primitive vehicle routes identified for the new RMP effort.

The lands are commercially grazed under permit by BLM and there are a number of localized developments (fence lines, etc.) related to the operation which does not substantially detract from the natural condition.

There is a pipeline ROW in the northern portion.

The area receives a fair amount of casual and commercial recreational visitation, especially during summer months.

The staff review found opportunities for primitive recreation and solitude is not at an outstanding level due to the configuration of the unit and recreational use numbers, types, and seasonal uses. The recreation is mostly related to hunting and is mostly semi-primitive motorized.

A portion of the unit has been designated as the Weatherman Draw ACEC for the protection of significant cultural resources which is a supplemental resource.

X.4.6.3 Finding:

The unit meets the size criteria, but the current conditions have changed on the ground, and the results of the long-term restriction of vehicle use do not support the earlier decision that the unit lacks naturalness. The visual impacts do not attract the notice of a casual observer. The vehicle routes are not being used except for non-motorized primitive recreation along with some minor administrative use, but for the most part are naturally rehabbing. The area does offer a high level of solitude and primitive recreation and the area does attract both casual and commercial primitive recreation use. . There are supplemental resources present. The unit does meet the conditions for further consideration for Wilderness Character.

X.4.7 Jack Creek Unit

X.4.7.1 Prior Review:

Originally inventoried in 1979 as the Jack Creek Unit (MT-067-203), the general vegetative type is grass and sagebrush except on sandstone outcrops where juniper is found. The topographic features are high angle fault scarps which run in an easterly to northeasterly direction separated by relatively flat valley bottoms.

This unit was dropped following the initial inventory phase when it was found to lack naturalness due to extensive human impacts from mineral exploration.

X.4.7.2 Unit Analysis:

The area includes approximately 7,823 acres of public lands. The BLM staff identified the presence of the human impacts which were found in the earlier effort and which remain substantially noticeable.

There are a number of new impacts as well, including a number of primitive vehicle routes identified for the new RMP effort.

The lands are commercially grazed under permit from BLM and there are a number of localized developments (3 miles of fence lines, at least one spring development, etc.) related to the grazing operation but which does not substantially detract from the natural condition.

There is a pipeline ROW located in the unit.

There are active Bentonite mining claims located on the unit, which are related to the ongoing mining operation on the adjacent private lands.

The staff review found opportunities for primitive recreation and solitude is not at an outstanding level due to the configuration of the unit and recreational use numbers, types, and seasonal uses. The recreation is mostly related to upland bird and big-game hunting and is mostly semi-primitive motorized.

X.4.7.3 Finding:

While the unit meets the size criteria, the current conditions on the ground support the earlier decision that the unit lacks naturalness. The ROW isolates a substantial area and this reduces the area under consideration. The area as a whole does offer a level of solitude and primitive recreation but not at an outstanding level. There are no supplemental resources present. The entire unit does not meet the conditions for further consideration for Wilderness Character.

X.4.8 Little Wall Creek Unit

X.4.8.1 Prior Review:

Originally inventoried in 1979 as Little Wall Creek Unit (MT-067-214), this area consists of a typical grassland/sagebrush type common to eastern Montana. No major topographic features are present. The area is low rolling hills with little topographic relief.

This unit was dropped following the initial inventory phase when it was found to lack naturalness due to extensive human impacts from agricultural development and other activities, lack of outstanding levels of primitive recreation and solitude and no supplemental features being present.

X.4.8.2 Unit Analysis:

The area covers approximately 17,816 acres in size of which all are public lands.

The area is commercially grazed under a BLM permit. There are at least 6 reservoirs, approximately 20 miles of fence, 2 wells and 1 corral associated with this operation.

Approximately 750 acres are under cultivation for crested wheatgrass.

Invasive halogeton is prevalent throughout the unit.

There are no commercial recreation permits and only minimum casual recreational use.

There are several oil and gas leases present, but no development has occurred.

There are a number of vehicular routes noted on the new BLM travel inventory which bisect the unit.

X.4.8.3 Finding:

The lands are not in a natural condition due to invasive species and human impacts, which are localized, but noticeable due to lack of topography and vegetation screening. The opportunity for

solitude and primitive recreation is not of an outstanding level. There is little topographical or vegetation screening possible. There are no supplemental values present. These lands do not meet the wilderness characteristics criteria.

X.4.9 Islands

X.4.9.1 Prior Review:

The BLM staff inventoried 9 islands in the earlier wilderness inventory effort. All were located along the Yellowstone River. They were all evaluated together as one single unit (Yellowstone Islands MT-067-210). All of the islands were dropped from further study during the initial inventory phase as lacking opportunity for solitude due to their proximity to offsite human disturbances and in some cases it was also noted that there was a lack of vegetation screening.

The new inventory determined that the conditions noted earlier had changes through time: Due to shifting currents, weather events, and vegetation growth some islands were no longer isolated by river channels. Several new islands were also located due to these same factors. It was also noted that some of the earlier observations of offsite intrusions did not meet current BLM policies. The inventory identified and evaluated 10 individual islands or groupings of small islands which are partially or wholly administered public land islands on the Yellowstone River.

X.4.9.2 Unit Analysis:

Current status plats and aerial photos reveal that there are 10 individual islands or groupings of small islands which are partially or wholly administered public land islands on the Yellowstone River. There are 4 islands on the Clarks Fork of the Yellowstone River as well. The islands total approximately 1,075.4 acres in size, of which approximately 351.6 acres are public lands managed by BLM. The largest island was 165 acres and the smallest was 3.8 acres.

Boulder River, Stillwater River, and the Musselshell River were also examined, but no islands were located on public lands.

All the islands appear to be very low lying and several may be transitory since they appear to be mostly graveled sand bars. After an initial examination of historical documents, it appears that the hydrology of the river can alter size, shapes and features of islands rapidly and repeatedly. An initial inventory was started in FY 2011 but very high water and flooding conditions stopped the process and may have altered the initial determination. This initial inventory could only be done using aerial photos and Land Status Plats. The islands were field inventoried at different time periods in 2013, during the June high flows, as well as again during low water in the fall of 2013.

The islands are numbered from west to east for the Yellowstone River and south to north on the Clark's Fork of the Yellowstone River.

The Yellowstone River flows northeast through Montana from its source in the southern Absaroka range in Wyoming to its junction with the Missouri River in North Dakota. The

Billings Field Office includes approximately 150 miles of this river between Springdale and Custer, Montana.

The Clarks Fork of The Yellowstone River (not to be confused with the Clark Fork River), is a tributary of the Yellowstone River, 150 miles long in Montana and Wyoming. It rises in southern Montana, in the Beartooth Mountains, and southwest of Granite Peak. It flows southeast into the Shoshone National Forest in northwest Wyoming, then northeast back into Montana. It passes the communities of Belfry, Bridger, Fromberg, and Edgar, and joins the Yellowstone approximately 2 miles southeast of Laurel, Montana. The actual junction of the rivers is managed by the BLM as the Sundance Recreation Area.

For the Yellowstone River, typically the western islands have willow and old growth vegetation with an understory of shrubs and grasses. As one progresses eastwards, cottonwoods predominate, but willows, thick shrubs, and even open meadows of range grasses are found.

For the Clark's Fork of the Yellowstone River, these conditions occur as one goes north.

Invasive species such as tamarisk, Russian olive, etc. have established themselves all along the river corridors.

The BLM has Alternatives in the RMP currently under development by the BiFO that all public lands located along the Yellowstone River be managed as an ACEC for resource concerns and for conformity with adjacent FO RMPs.

The Yellowstone River is the pathway of the Lewis and Clark Expedition and has the congressionally designated Lewis and Clark National Historic Trail along its course. Pompeys Pillar National Monument is located adjacent to the River approximately 30 miles east of Billings.

A portion of the Clark's Fork of The Yellowstone River has the congressionally designated Nez Perce (Nee-Me-Poo) National Historic Trail which follows its course.

Both River segments have portions of the State of Montana designated Bozeman Historical Trail which follow their courses.

The Billings Field Office manages a number of lands along the Yellowstone River for their recreational opportunities. The Sundance Lodge Recreation Area and the Four Dances Natural Area/ ACEC have islands located on them.

Yellowstone River:

Island 1: Located in T. 1 S., R. 13 E., Section 8, found west of the community of Big Timber. The island is approximately 3.8 acres in size and is composed of all public lands. The lands are located adjacent to the southern bank of the river.

Island 2: Located in T. 1 N., R. 14 E., Section 19, found just west of the community of Big Timber. It is a total of 113 acres in size, of which approximately 77 acres are public lands.

Island 3: Located in T. 3 S., R. 21 E., Section 9. Four small islands grouped together, the islands are located just west of the community of Columbus and are approximately 45 miles west of Billings.

Island A is approximately 2.3 acres total size – all public lands managed by BLM.
Island B is approximately 2: 3.8 acres total size – 2.5 acres BLM and 1.3 acres private.
Island C is approximately 3.4 acres total size – 1.8 acres BLM and 1.6 acres private.
Island D is approximately 10.1 acres total size – 8.2 acres of BLM and 1.9 acres private.

Island 4: located in T. 2 S., R 24 E., Section 13. This parcel is in close proximity to the Sundance Recreation Area and is near the junction point of the Clarks Fork of the Yellowstone River and the main course of the Yellowstone River. It is a total of 81 acres, of which 34 acres are BLM.

Island 5: Located in T. 1 S., R. 25 E., Section 25. This parcel is a small portion of a larger island and is the western point (upstream side) of the island. The total island size is approximately 313 acres of which 9 acres are BLM.

Island 6: Located in T. 1 S., R 26 E., Section 2. This island is part of the Four Dances Natural Area ACEC managed by the BLM. It is located in mid channel in the downtown section of Billings and is in close proximity to an Oil Refinery, a powerhouse, and Interstate Highway 90. The total size is 23 acres, of which 12 acres are BLM.

Island 7: Located in T. 1 N., R 27 E., Section 8. This island has two separate BLM parcels. It is located east of Billings by the community of Lockwood. The approximate total size of the island is 152 acres, of which the two BLM parcels are 16 acres and 28 acres. The island is dominated by a cottonwood gallery with wetland plant community understory, including willows, sedge, rush and other riparian obligate species. The lands are part of the BLM Grazing Allotment # 5483.

Island 8: Located in T. 3 N., R. 30 E., Sections 19 and 20. This island is known locally as Bundy Island. The approximate total BLM lands are 80 acres and 24 acres. It is located a short distance west of the Pompeys Pillar National Monument and is separated from it by private lands.

Island 9: Located in T. 3 N., R 30 E., Sections 21 and 22. This island is known locally as Pompeys Pillar Island. It is just downstream (east) from the Pompeys Pillar National Monument. The approximate size of the island is 165 acres, of which 105 acres are managed by BLM. This island is dominated by a grassy field surrounded by a mature cottonwood gallery and wetland plant communities. The immediate area, including Pompey's Pillar National Monument, is well known as a birding mecca. There is a bald eagle nest on this island and it is used extensively by hikers and hunters, accessed through PPNM and by river boat.

Island 10: Located in T. 4 N., R. 33 E., Section 7. This island is located just west of the community of Custer and is near 7 mile Flat. The total size of the island is approximately 84 acres, of which 19 acres are BLM. Vegetation comprises willows, tamarisk, and immature cottonwoods on BLM, but there is a mature cottonwood gallery on the privately owned portion of the island.

Clark's Fork of the Yellowstone River:

Island 1: located near the community of Bridger, Montana in T. 7 S., R 23 E., Section 4. The island is approximately 2 acres in size. The island is adjacent to property owned and managed by the State of Montana as a Fishing Access Site (FAS).

Island 2: Located in T. 3 S., R 24 E., Section 18. There are two islands located in close proximity to each other and they are just downstream (north) of the community of Bridger, Montana. The southern island is approximately 6 acres in size and the north island is approximately 8 acres in size.

Island 3: Located in T. 2 S., R 24 E., Section 23. The island, which is approximately 30 acres, is located south east of the junction of State Highway 310 and State Highway 212 at the community of Rockvale, Montana. The public lands are on the north half of the island and comprise approximately 13 acres in size.

Island 4: Located at T. 1 S., R 23 E., Section 4. This island is located in the Sundance Lodge Recreation Area and is just upstream from the junction of the Clark's Fork of the Yellowstone River and the Yellowstone River. The island was estimated as having a total of 5 acres, of which 2 acres are lands managed by the BLM.

X.4.9.3 Finding:

For the Yellowstone River islands:

Island 1 was found to not be an island by definition since the channel separating it from the southern river bank had silted in and was not considered for its wilderness characteristics further. It does not have wilderness characteristics.

Island 2 was found to possess wilderness characteristics since it is in a natural condition, has an outstanding level of solitude and primitive recreation, and a Special Features present.

Island 3 was found to have a high feeling of isolation, to be in a natural condition, and to have primitive recreation occurring on them, as well as possessing supplemental values. These islands have wilderness characteristics.

Island 4 was found to possess wilderness characteristics. The island has significant screening and depth for an outstanding level of solitude and primitive recreation. The human impacts that were recorded are overgrown, screened form view except when in close proximity, and these may even have historical significance.

Island 5 was found to have been significantly affected by the previous years of flooding and is not considered to be an island by the review team any longer since the channel was silted up and the main course of the river had shifted to the extent that the parcel was simply contiguous with the surrounding landscape. This area does not possess wilderness characteristics.

Island 6 was found to have significant human developments on it which caused it to be not in a natural condition. As well, there is no opportunity for solitude. There is a potential primitive

recreation and the island does have supplemental values. This island does not have wilderness characteristics present.

Island 7 was found to be readily accessible from Johnson Road by motorized vehicles. The channel which once separated it from the river bank has silted in and is vegetated along much of its former course. There is evidence of motorized vehicle use with several minor ATV tracks present. There are invasive plants species (knapweed, tamarisk, thistle, dock, and others) present due to previous flooding events, as well as some evidence of illegal firewood cutting. The Team determined that these two parcels are not islands and lack wilderness characteristics.

Portions of **Island 8** were found to be not in a natural condition. The agricultural field, although rehabbing, is a noticeable intrusion. The western portion of the parking lot appears to be on BLM land as well. The remainder of the parcel is in a natural condition. Opportunity for primitive recreation is high as the adjacent Fishing Access Site serves as shoreline access.

Island 9 was found to be in an essentially natural condition, although somewhat modified by human impacts found throughout the island. The BLM team considers that it lacks an outstanding level of naturalness, although it has an outstanding level of primitive recreation and that although there are specials features present, the land lacks wilderness characteristics.

Island 10 was found by the BLM staff to lack an outstanding level of solitude, although it is in a natural condition. The land lacks wilderness characteristics.

For The Clark's Fork River islands:

Determination: The BLM staff review has determined that **Island 4** in the Clark's Fork of the Yellowstone River is no longer separated from the reminder of the public land (Sundance Lodge Recreation Area) since his original river channel has changed course. This unit does meet the criteria for evaluation. The BLM staff also determined that **Island 3** in the Clark's Fork of the Yellowstone River had substantive man-made impacts resulting from a recent fire, the rehab efforts, and a water diversion structure which taken together has cumulatively reduced the naturalness level throughout the island. This unit does not have wilderness characteristics. The BLM staff determined that **Island 1** was not separated from the river bank due to the course of the river changing. It was noted that this may change as this particular area seems to have a highly active sediment flow. It is not an island at this time. **Island 2** was found to have invasive species and lack the opportunity for outstanding level of solitude, while possessing excellent primitive recreational values. It does not have wilderness characteristics.

Due to extensive works of man found along the riverbanks, and the islands' small sizes, there might be little sense of solitude; however, there may be some vegetation screening or location in the river channel which may affect the determination. Interstate Highway 90 and the mainline of the Northern Pacific Rail Road parallel the Yellowstone River for much of the distance, but not always right by the river and there are rolling hills and curves in the road and Rail Road courses. The islands do provide outstanding opportunities for primitive recreation since access is limited to boat only and the Yellowstone River is a popular fishing destination. However, the Yellowstone River is open for motorboat use, which is a semi-primitive activity. User percentages are not known.

Unless noted above, the islands do appear to be in a natural condition and may have the potential for further wilderness consideration. The BLM Interdisciplinary team concluded that 126 acres of public land in islands on the Yellowstone River have wilderness characteristics. None of the island units inventoried on the Clark's Fork of the Yellowstone River were determined to possess wilderness characteristics.

X.4.10 Meeteetse Unit

X.4.10.1 Prior Review:

During initial Wilderness inventory a preliminary staff review identified these lands as meeting the size requirement (over 5,000 acres) but probably mostly lacking naturalness due to the presence of roads, and lacking opportunity for solitude and primitive recreation on most of the lands due to lack of topography and vegetation screening. However, it was noted that a small portion of the area did have potential for further in-depth evaluation, if some private lands were acquired. Subsequent to private land acquisition in 2009, this and the larger BLM lands are the area which is the subject of the following formal review and analysis as a Wilderness Character Inventory Unit.

The lands have never been formally inventoried for their wilderness character. One parcel of lands (560 acres) was acquired by the BLM in 2009 (DOI-BLM-MT-C010-2009-0042 EA). A portion of the remainder of the unit is located within the Meeteetse Spires ACEC (960) acres, established in 1999 for protection and enhancement of the rare plant *Shoshona pulvina*, hazardous cliffs, and the scenic values of the spires. Additional portions are public lands located north, south and east of the ACEC and the recently acquired land parcel.

The western boundary is a combination of private lands and National Forest Service; the southern and northern boundaries are private lands and Montana State lands, and the eastern boundary is private lands. They total approximately 18,940.8 acres in size

X.4.10.2 Unit Analysis:

One parcel of land (560 acres) was acquired by the BLM in 2009 (DOI-BLM-MT-C010-2009-0042 EA). A portion of the remainder of the unit is located within the Meeteetse Spires ACEC (960) acres, established in 1999 for protection and enhancement of the rare plant *Shoshona pulvina*, hazardous cliffs, and the scenic values of the spires. Additional portions are public lands located north, south and east of the ACEC and the recently acquired land parcel.

The area is located on the base of the eastern slope of the Beartooth Mountains, approximately 5 miles south of the community of Red Lodge Montana. The terrain rises steeply from 5,600 feet to 7,200 feet in the distance of less than 1.5 miles. The Meeteetse Spires, the main geological formation in the area, are formed by a tilted layer of sedimentary rocks at the edge of the Beartooth Uplift and are remnants of upturned Madison Limestone.

The area is in the rain shadow of the Beartooth Mountains and exhibit an extremely abrupt change in annual precipitation from 26 inches along the west side of the unit to 6 inches less than one mile to the east of the spires.

The lower slopes are a combination of communities of Limber Pine and Douglas Fire; Limber Pine and Rocky Mountain Juniper; montane riparian forest; and Douglass Fir forests with Lodgepole Pine near the USFS boundary. There is some evidence of blister rust and mountain pine beetle kill, but the vast majority of the timber in the area is healthy.

The public lands are adjacent to National Forest lands managed as the "Line Creek Research Natural Area", a Forest Service "Roadless Area" with roadless prescriptions but not recommended by the USFS for potential Wilderness designation.

A small hunting cabin, constructed in 2007 by the previous private landowner, is located in the recently acquired parcel. It is used under BLM permission for research purposes by Rocky Mountain College. It is located in T. 8 S. R. 20 E., Section 35.

There are a number of blocks of private land in-holdings present which are being developed.

The lands are managed as Visual Resource Management (VRM) Class II and III.

There is a commercial recreation operator conducting activities in the area under permit to the BLM and licensed by the State of Montana. The commercial operator brings international, national, and regional clients to the area. General recreational use levels are considered to be low although most of the information is anecdotal. Most activities are hunting and sightseeing.

The Meeteetse Spires Trail, a county maintained vehicle route, enters the unit from the north and continues southerly. It bisects the unit and isolates several parcels from the rest of the unit.

There are three Montana State land parcels which are either edge holdings or inholdings.

There are six separate inholdings present, which vary in size. Several have been subdivided for development purposes.

The vehicle route to the cabin is maintained only by passage of vehicle and would be maintained only in emergency, not for access, but for natural resource protection if it causes severe erosion. This route ends at the Forest Service boundary. It is approximately 1.5 miles in length. The route itself is open for administrative use only and has a gate on it at the State land boundary.

There is a primitive vehicle route in the southern portion of the unit, running north westerly. It dead-ends at the Forest Service boundary and is approximately 3 miles in length. It is not maintained by the BLM. It was previously considered a road and isolates a portion of the unit south of it from the rest of the unit. It is substantially noticeable and is a main access into the general area.

There are a number of primitive vehicle routes in the south central portion of the unit, generally running westerly or southerly, apparently constructed at one time for private land, range or timber access.

The acquisition lands are not grazed commercially due to very shallow soils. The rest of the proposed area is located in portions of 3 grazing allotments. These are the Bear Creek (4148)

grazing allotment, the Bischoff (5203) grazing allotment, and the Grove Creek (5225) grazing allotment.

There is a 50 foot wide Forest Service Hiking trail (ROW 71926), located in T. 8 S., R 20 E., Section 27. It crosses a portion of the unit from east to west. The actual trail tread width as constructed varies but is not as wide as the ROW.

Some of the lands have been previously leased for potential oil and gas development, although there has been no development.

The public lands south of the recently acquired parcel have been proposed for possible ACEC designation in at least one Alternative in the draft Billings RMP. Under FLPMA, establishment of ACECs for resource concerns is a priority.

X.4.10.3 Finding:

The Meeteetse Spires Trail and several other vehicle routes which have been determined to be roads bisect portions of the unit into separate parcels. These are identified on the field map, in the road inventory files, and described here:

Tract 1: 23.4 acres in size. Isolated from the rest of unit by Meeteetse Trail, less than 5,000 acres in size and thus lack wilderness character. This parcel will not be considered further.

Tract 2: 977 acres in size. Isolated from the rest of unit by Meeteetse Trail and a vehicle route determined to be a road, less than 5,000 acres in size and thus lack wilderness character. This parcel will not be considered further.

Tract 3: 373 acres in size. Isolated from the rest of unit by Meeteetse Trail and a vehicle route determined to be a road, less than 5,000 acres in size and thus lack wilderness character. This parcel will not be considered further.

Tract 4: 87 acres in size. Isolated from the rest of unit by a vehicle route determined to be a road, less than 5,000 acres in size and thus lacks wilderness character. This parcel will not be considered further.

Tract 5: 3,841 acres in size. Isolated from the rest of unit by a vehicle route determined to be a road, less than 5,000 acres in size and thus lacks wilderness character. Additionally, the parcel has a number of other vehicle determined to be roads or vehicle routes which receive routine use, lacks vegetation and topographical screening. This parcel will not be considered further.

Tract 6: 356 acres in size. Isolated from the rest of unit by a vehicle route determined to be a road, less than 5,000 acres in size and thus lacks wilderness character. This parcel will not be considered further.

Tract 7: A very small parcel of 0.6 acres in size in a corner of the unit isolated by Meeteetse Road from the rest of the public lands. It is less than 5,000 acres in size. This parcel will not be considered further.

Tract 8: Approximately 2.9 acres in size in a corner of the unit and isolated from the rest of the unit by a vehicle roué determined to be a road. It is less than 5,000 acres in size and lack wilderness character. This parcel will not be considered further.

Tract 9: Approximately 10,809 acres in size. This large, central region of the unit has a number of vehicle routes which are somewhat noticeable and used on at least an occasional basis, as well as most of the private land inholdings. Several range developments and their access routes are also visible from a distance due to topography and lack of vegetation screening. This parcel will not be considered further.

Tract 10: The remainder of the unit, approximately 2,149 acres along the west side of the unit, has man-made facilities and structures which are substantially unnoticeable and which do not detract from the surrounding environment. Vehicle routes #2 and #3 are minor, naturally rehabbing, and do not substantially attract casual attention. Vehicle route #1, the route to the cabin, is not open to the public except as a non-motorized trail. It is visible within the view shed of the canyon which it goes up, however.

There is a primitive vehicle route in the southern portion of the unit, running north westerly. It dead-ends at the Forest Service boundary and is approximately 1 mile in length. It is not maintained by the BLM and is not being used. It is identified as vehicle route #2 in the Road Analysis Forms.

There is a primitive vehicle route in the south central portion of the unit, running west, apparently constructed at one time for range or timber access. It is approximately 0.25 miles in length and dead-ends near the south eastern corner of the recently acquired private lands. It is not maintained by the BLM. It is not being used. It is identified as vehicle route #3 in the Road Analysis Forms

Conclusion:
There are natural attractions in Tract10 of the unit which have outstanding primitive recreational opportunities, which include the Meeteetse Spires and other local geological formations. There are limited numbers of primitive motorized vehicle routes which may be used for non-motorized access. The FS trails (both designated and non-designated) on public lands within the unit are non-motorized. The terrain is challenging and more visitor risk is assumed to be present. Self-reliance is necessary.

The land in Tract 10 is considered significant for the presence of a rare plant species, *Shoshona pulvinata,* which is known in only three locations in Montana and twelve locations world-wide. It is not a federal species candidate for federal listing, but is a BLM sensitive plant species.

Tract 10 includes the lands already designated as the Meeteetse Spires ACEC.

Additionally, the lands are within the Yellowstone Grizzly Bear Recovery Zone and critical habitat for the Canada Lynx. There are nesting Peregrine Falcons in the rock spires. A wolf pack was eliminated from the area after preying on livestock, but the area is known habitat.

Of the entire Unit, only the lands in Tract 10 are considered to have wilderness characteristics, and these do not meet the size criteria. However, the boundary does provide the opportunity to manage it as a separate unit, so the Staff feels that the exemption criteria apply. The boundary is set as being the Forest Service/ BLM on the west, private lands on the south, and the east has a combination of Montana State lands and the Meeteetse Road, vehicle the north boundary is private lands.

X.4.11 Bad Canyon Unit

X.4.11.1 Prior Review:

No prior wilderness inventory has been done for this parcel. It is less than 5,000 acres in size and is isolated from other BLM lands. Following the new wilderness inventory guidelines in BLM Manual 6301 the BLM staff and members of the public recommended a review be done and an evaluation be prepared. The public lands are located adjacent to lands managed by the Custer National Forest, but which are not recommended for possible Wilderness designation. The lands include approximately 2,036 acres of public lands and there are no private land inholdings.

X.4.11.2 Unit Analysis:

The unit is bordered by private lands on all sides except the south, which are National Forest lands.

There is no motorized access to this parcel. The BLM does have a non motorized ROW across private lands and there is an undeveloped trailhead located on the south side of the unit.

The area is extensively timbered with scenic geological formations.

The riparian corridor is in a natural condition, with few invasive species present.

Bad Creek contains a stable population of Yellowstone Cut-throat trout, which is a native species, listed as endangered, and is a supplemental feature for the unit. The lands are important habitat for Grizzly Bear. The riparian corridor serves as an important wildlife migration corridor.

The trout, and the natural scenery, attract an unknown number of casual recreationists, mostly from the local communities, but the location is advertized as a destination in several publications regionally. There are no known commercial recreation operators. All recreational use is primitive in nature. The surrounding private lands have strictly restricted access as well.

A portion of the unit was previously burned in a wild fire, but is naturally rehabbing.

There is one motorized vehicle route which enters the unit from the east across Forest lands. It is naturally rehabbing and is not open for use. There is one vehicle route which accesses the lands from the south. It is maintained only by use and is not open to general use across private lands.

There are portions of five grazing allotments in the unit. The allotments are 5492, 5582, 5558, 5562, and 5548.

X.4.11.3 Finding:

The unit is in a natural condition. There is plentiful vegetation and topographical screening for an outstanding level of solitude. The area has significant geological, riparian, wildlife, and scenery resources which provide an outstanding level of primitive recreation attractions and experiences. The opportunity for this kind of recreation is further enhanced by the administrative lack of motorized access across the private lands. The lands in the unit are less than the minimum size criteria however, and although the unit is configured in a long and relatively narrow shape which by itself does not lend itself to wilderness management, the canyon within the unit can be managed by itself, or the entire unit along private/public land boundaries.

X.4.12Lake Mason Unit

Prior Review

The area inventoried in this effort was slightly different from the earlier effort since the BLM staff identified several potential changes in vehicle routes which might affect the determination. A number of vehicle routes were inventoried during the course of the BLM Travel Management Planning conducted during FY 2009-2011 as part of the new Billings Field Office RMP effort. Several routes were classified at that time as being less than roads, including Grazing District Road located in the southern region of the unit.

The public lands are completely surrounded by private and Montana State lands. There are two (2) parcels of Montana State lands totaling 800 acres which are completely isolated within the unit, as well as two (2) private lands parcel inholdings which total approximately 170 acres in size. The Inventory area totals approximately 10, 504 acres of public land in size.
The lands are composed of a sage-brush grass steppe ecosystem with only a few scattered trees present. The terrain is one of low rolling hillsides broken by a few small washes with little elevation change. There are few low outcroppings of rock. There are no permanent water sources present. There are invasive plant species which are common throughout the unit.

Unit Analysis:

There is a power line ROW which cuts through a portion of the southern area of the unit.
A portion of the eastern boundary of the unit is formed by an isolated USDI Fish and Wildlife parcel of the Lake Mason National Wildlife Refuge. A portion of the western boundary of the unit is formed by a Montana State land parcel. The remainder of the inventory unit is formed by private/public lands boundary.

A county maintained road (Snowy Mountain Road) cuts through the north portion of the unit from east-west and isolates approximately 320 acres from the rest of the unit. This part of unit does not meet the size criteria and does not have any wilderness characteristics.

On the east side of the unit approximately 1,320 acres of public lands are isolated by another county maintained road (an extension of the Lake Mason Road) running north-south. This portion of the unit has no wilderness characteristics since it does not meet the size criteria either.

The lands are commercially grazed under permit from BLM as part of Grazing Allotments 4981, 4975, and 4988. There are a number of related facilities including stock ponds, a windmill, access routes, and fence lines. These are localized impacts and do not substantially detract from the natural condition.

The unit receives some recreational use, mostly upland game hunting. Use numbers are unknown but are estimated by both BLM staff and State of Montana Fish, Wildlife and Parks staff to be very low. The lands are part of a State of Montana Block Management hunting unit. There are no commercial, competitive or organized groups under permit from the BLM using these lands. The area is not being marketed by any individual or government entity as a major recreational destination.

The lands are critical sage grouse habitat, which extends over a much large area than just this unit.

The BLM route inventory process found that there are 13 separate vehicle routes totaling approximately 21 miles in length.

Finding:
Although current human use levels are apparently very low and the expectation of meeting anyone on the unit is also very low, there is very little vegetation or topographical screening present, so any human caused sights and sounds would be noticeable at a large distance. There is not an outstanding level of solitude present. The area does not offer itself as a recreation destination. There are no specific attractions present other than a large open space of public lands, which are themselves set in the middle of a large expanse of open and undeveloped landscape. The lands will not be evaluated further.

X.4.13Timber Canyon Unit

X.4.13.1 Prior Review:

No prior wilderness inventory was conducted on this land parcel. No clear indication of why it was not is available. Following the new guidelines the BLM staff recommended a review be done and an evaluation be prepared. The public lands are located adjacent to lands managed by the Custer National Forest, but which are not recommended for possible Wilderness designation. The lands include approximately 6,414 acres of public lands and there are no private land inholdings.

The Timber Canyon unit is located about 60 miles east of Red Lodge. The soils in the Timber Canyon area are derived from limestone and sandstone formations. The limestone uplifts and formations contain a number of caves and sinkholes.

This mountain range was never glaciated, is rather dry, and contains some very steep terrain and some of the canyons are deeply incised in the limestone

X.4.13.2 Unit Analysis:

The BLM road analysis determined that there seven (7) routes which meet the criteria as roads. These are identified on the BLM Surface Management Status Map (*Bridger, 2000*) as routes 1039, 1046, 1046, 1047, 1048, 1049, 1050, and 1051. Three of them (1046, 1047, and 1051) connect to designated Forest Service roads, while 1039 connects to 1046 and 1050 connects to a power line located off public lands. Cumulatively, these routes cut the unit into small parcels.

There is a power-line ROW located along portions of the western edge of the unit.

The lands are grazed commercially under permit from BLM as Allotment 4135. There are a number of associated range developments present.

The unit has never received heavy use by recreationists, although it does receive regular use by recreationists passing through it while going to more popular destinations on the Forest lands lying above it. Recreation opportunities include deer and small game hunting, hiking, and snowmobiling. Many primitive trails and old mining roads provide easy motorized access. The unit has no commercial outfitters operating on it.

There are reported to be some archeological and paleontological sites on the unit but an intensive inventory has not been done.

X.4.13.3 Finding:

The lands have a number of established vehicle routes which qualify as roads. These cut the unit into smaller parcels, none of which meet the size criteria. The configuration of the parcel does not lend itself or portions of the unit, to management as wilderness. The area as a whole does offer a level of solitude and primitive recreation but not at an outstanding level. Semi-primitive motorized recreation is the type of activity now occurring on it. There are supplemental resources present. The entire unit does not meet the conditions for further consideration for Wilderness Character.

X.5 Conclusion

Table X-1: Lands with Wilderness Characteristics Review Finding

Lands With Wilderness Characteristics Review Finding			
Name of unit	Total Acres	Wilderness Character	Non-Wilderness Character
A. Pryor Mountain Unit Tract 1	2,873 acres	2,873 acres	0 acres
Tract 2	497 acres	497 acres	0 acres
Tract 3	143 acres	143 acres	0 acres
Tract 4	445 acres	0 acres	445 acres
Tract 5	559 acres	512 acres	47 acres
Tract 6	1,074 acres	1,074 acres	0 acres
Tract 7	327 acres	327 acres	0 acres
Tract 8	269 acres	0 acres	269 acres
B. Dry Creek Unit	6,425 acres	0 acres	6,425 acres
C. Deer Mountain Unit	9,496 acres	0 acres	9,496 acres
D. Bear Creek Unit	8,930 acres	5,659 acres	3,271 acres
E. Burnt Timber Unit Tract 1	1,816 acres	703 acres	1,113 acres
Tract 2	5,388 acres	5,375 acres	13 acres
F. Weatherman Draw Unit	11,603 acres	6,033 acres	5,570 acres
G. Jack Creek Unit	7,823 acres	0 acres	7,823 acres
H. Little Wall Creek Unit	17,816 acres	0 acres	17,816 acres
I. River islands	352 acres	126 acres	226 acres
J. Meeteetse Unit Tract 1	23.4 acres	0 acres	23.4 acres
Tract 2	977 acres	0 acres	977 acres
Tract 3	373 acres	0 acres	373 acres
Tract 4	87 acres	0 acres	87 acres
Tract 5	3,841 acres	0 acres	3,841 acres
Tract 6	356 acres	0 acres	356 acres
Tract 7	0.6 acres	0 acres	0.6 acres
Tract 8	2.9 acres	0 acres	2.9 acres
Tract 9	10,809 acres	0 acres	10,809 acres
Tract 10	2,149 acres	2,149 acres	0 acres
K. Bad Canyon Unit	2,036 acres	2,036 acres	0 acres
L. Lake Mason Unit	10,504 acres	0 acres	10,504 acres
M. Timber Canyon Unit	6,414 acres	0 acres	6,414 acres
TOTAL	113,408.9 acres	27,507 acres	85,901.9 acres

Following management Prescriptions in the BLM Manual 6310, Official Case Files for each of the inventory units have been established. These contain Road/Route determinations, relevant reference documentation, and a detailed analysis of the current resource conditions. These files are available for public review and will be maintained by the Billings Field Office.

Appendix Y:
Screening Criteria Checklist for Ten Year Grazing Permit / Lease Renewal and Transfers

Y. Screening Criteria Checklist for Ten Year Grazing Permit / Lease Renewal and Transfers

To determine if a proposed renewal or transfer is applicable, the following screening criteria should be applied. If the answer to every question here is NO, the proposed renewal or transfer qualifies and NEPA compliance can be achieved by preparing a Documentation of NEPA Adequacy (DNA) that references the Billings/Pompeys Pillar RMP EIS. However, if the answer to any question is Yes, the proposal represents an exception and an individual Environmental Analysis (EA) should be prepared.

1. Do any of the Departmental Categorical Exclusion Exception Criteria apply?

Would the proposed action:

- Have significant adverse effects on public health or safety?
- Have adverse effects on such unique geographic characteristics as historic or cultural resources, park, recreation or refuge lands, wilderness areas, wild or scenic rivers, sole or principal drinking water aquifers, prime farmlands, wetlands, floodplains, or ecologically significant or critical areas, including those listed on the Department's National Register of Natural Landmarks?
- Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources?
- Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks?
- Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects?
- Be directly related to other actions with individually insignificant but cumulatively significant environmental effects?
- Have adverse effects on properties listed or eligible for listing on the National Register of Historic Place?
- Have adverse effects on species listed or proposed to be listed on the List of Endangered or Threatened Species, or have adverse effects on designated Critical Habitat for these species?
- Have a disproportionately high and adverse effect on low income or minority populations (Executive Order 12898).
- Threaten to violate a Federal, State, local or tribal law or requirement imposed for the protection of the environment?
- Limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (Executive Order 13007).

- Contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act and Executive Order 13112)

2. **Is the proposed renewal or transfer on an allotment <u>not</u> meeting Range Health Standards? (This would vary by alternative.)**

3. **Will the proposed renewal or transfer require a change to the mandatory terms and conditions of the expiring or transferring permit / lease?**

4. **Would the proposed renewal or transfer negatively impact crucial/critical wildlife habitat?**

5. **Would the proposed renewal or transfer negatively impact any known Threatened or Endangered (BLM sensitive - special status?) species habitat?**

You must be able to provide documentation or rationale to support all **<u>No</u>** answers, if necessary.

Appendix Z:
PFC – Proper Functioning Condition

Z. PFC – PROPER FUNCTIONING CONDITION

Z.1 WHAT IT IS - WHAT IT ISN'T

PFC is: A methodology for assessing the physical functioning of riparian and wetland areas. The term PFC is used to describe both the **assessment** process, and a defined, on-the-ground **condition** of a riparian-wetland area. In either case, PFC defines a minimum or starting point.

The PFC **assessment** provides a consistent approach for assessing the physical functioning of riparian-wetland areas through consideration of hydrology, vegetation, and soil/landform attributes. The PFC assessment synthesizes information that is foundational to determining the overall health of a riparian-wetland area.

The on-the-ground **condition** termed PFC refers to how well the physical processes are functioning. PFC is a state of resiliency that will allow a riparian wetland system to hold together during a 25 to 30 year flow event, sustaining that system's ability to produce values related to both physical and biological attributes.

PFC isn't: The sole methodology for assessing the health of the aquatic or terrestrial components of a riparian-wetland area.

PFC isn't: A replacement for inventory or monitoring protocols designed to yield information on the "biology" of the plants and animals dependent on the riparian-wetland area.

PFC can: Provide information on whether a riparian-wetland area is physically functioning in a manner which will allow the maintenance or recovery of desired values, e.g., fish habitat, neotropical birds, or forage, over time.

PFC isn't: Desired (future) condition. It is a prerequisite to achieving desired condition.

PFC can't: Provide more than strong clues as to the actual condition of habitat for plants and animals. Generally a riparian-wetland area in a physically nonfunctioning condition will not provide quality habitat conditions. A riparian wetland area that has recovered to a proper functioning condition would either be providing quality habitat conditions, or would be moving in that direction if recovery is allowed to continue. A riparian-wetland area that is functioning-at-risk would likely lose any habitat that exists in a 25 to 30 year flow event.

Therefore: To obtain a complete picture of riparian-wetland area health, including the biological side, one must have information on both physical status, provided through the PFC assessment, and biological habitat quality. Neither will provide a

complete picture when analyzed in isolation. In most cases proper functioning condition will be a prerequisite to achieving and maintaining habitat quality.

PFC is: A useful tool for prioritizing restoration activities. By concentrating on the "at risk" systems, restoration activities can save many riparian-wetland areas from degrading to a non functioning condition. Once a system is non functional the effort, cost, and time required for recovery is dramatically increased. Restoration of non functional systems should be reserved for those situations where the riparian wetland has reached a point where recovery is possible, when efforts are not at the expense of "at risk" systems, or when unique opportunities exist. At the same time, systems that are properly functioning are not the highest priorities for restoration. Management of these systems should be continued to maintain PFC and further recovery towards desired condition.

PFC is: A useful tool for determining appropriate timing and design of riparian-wetland restoration projects (including structural and management changes). It can identify situations where instream structures are either entirely inappropriate or premature.

PFC is: A useful tool that can be used in watershed analysis. While the methodology and resultant data is "reach based", the ratings can be aggregated and analyzed at the watershed scale. PFC, along with other watershed and habitat condition information helps provide a good picture of watershed health and the possible causal factors affecting watershed health. Use of PFC will help to identify watershed scale problems and suggest management remedies and priorities.

PFC isn't: Watershed analysis in and of itself, or a replacement for watershed analysis.

PFC is: A useful tool for designing implementation and effectiveness monitoring plans. By concentrating implementation monitoring efforts on the "no" answers, greater efficiency of resources (people, dollars, time) can be achieved. The limited resources of the local manager in monitoring riparian-wetland parameters can be prioritized to those factors that are currently "out of range" or at risk of going out of range. The role of research may extend to validation monitoring of many of the parameters.

PFC wasn't: Designed to be a long term monitoring tool but it may be an appropriate part of a well designed monitoring program.

PFC isn't: Designed to provide monitoring answers about attainment of desired conditions. However, it can be used to provide a thought process on whether a management strategy is likely to allow attainment of desired conditions.

PFC can: Reduce the frequency and sometimes the extent of more data and labor intensive inventories. PFC can reduce process by concentrating efforts on the most significant problem areas first and thereby increasing efficiency.

PFC can't: Eliminate the need for more intensive inventory and monitoring protocols. These will often be needed to validate that riparian-wetland area recovery is indeed moving toward or has achieved desired conditions, e.g., good quality habitat; or simply establish what the existing habitat quality is.

PFC is: A qualitative assessment based on quantitative science. The PFC assessment is intended for individuals with local, on-the-ground experience in the kind of quantitative sampling techniques that support the checklist. These quantitative techniques are encouraged in conjunction with the PFC assessment for individual calibration, where answers are uncertain, or where experience is limited. PFC is also an appropriate starting point for determining and prioritizing the type and location of quantitative inventory or monitoring necessary.

PFC isn't: A replacement for quantitative inventory or monitoring protocols. PFC is meant to complement more detailed methods by providing a way to synthesize data and communicate results.

Z.2 PFC Checklist

The following section contains the PFC checklist as used by BLM staff and others in the field. Immediately following are the general instructions, and then the two pages of the checklist itself.

Z.3 General Instructions

1) The concept "**Relative to Capability**" applies wherever it may be inferred.
2) This checklist constitutes the **Minimum National Standards** required to determine Proper Functioning Condition of lotic riparian-wetland areas.
3) As a minimum, an **ID Team** will use this checklist to determine the degree of function of a riparian-wetland area.
4) Mark one box for each element. Elements are numbered for the purpose of cataloging comments. The numbers do not declare importance.
5) For any item marked "**No**," the severity of the condition must be explained in the "**Remarks**" section and must be a subject for discussion with the ID Team in determining riparian-wetland functionality. Using the "**Remarks**" section to also explain items marked "**Yes**" is encouraged but not required.
6) Based on the ID Team's discussion, "**functional rating**" will be resolved and the checklist's summary section will be completed.
7) Establish photo points where possible to document the site.

Standard Checklist

Name of Riparian-Wetland Area: _____
Date: _____ Area/Segment ID: _____ Miles: _____
ID Team Observers: _____

HYDROLOGIC (circle one)

Yes /No/ N/A 1) Floodplain inundated in "relatively frequent" events (1-3 years)
Yes/ No /N/A 2) Active/stable beaver dams
Yes/ No /N/A 3) Sinuosity, width/depth ratio, and gradient are in balance with the landscape setting (i.e., landform, geology, and bioclimatic region)
Yes/ No/ N/A 4) Riparian zone is widening or has achieved potential extent
Yes /No /N/A 5) Upland watershed not contributing to riparian degradation

VEGETATIVE (circle one)

Yes /No/ N/A 6) Diverse age-class distribution (recruitment for maintenance/recovery)
Yes/ No/ N/A 7) Diverse composition of vegetation (for maintenance/recovery)
Yes /No/ N/A 8) Species present indicate maintenance of riparian soil moisture characteristics
Yes /No/ N/A 9) Streambank vegetation is comprised of those plants or plant communities that have root masses capable of withstanding high streamflow events
Yes/ No/ N/A 10) Riparian plants exhibit high vigor
Yes /No /N/A 11) Adequate vegetative cover present to protect banks and dissipate energy during high flows
Yes/ No/ N/A 12) Plant communities in the riparian area are an adequate source of coarse and/or large woody debris

SOILS-EROSION DEPOSITION (circle one)

Yes/ No /N/A 13) Floodplain and channel characteristics (i.e., rocks, overflow channels, coarse and/or large woody debris) adequate to dissipate energy

Yes /No /N/A 14) Point bars are revegetating
Yes /No/ N/A 15) Lateral stream movement is associated with natural sinuosity
Yes/ No /N/A 16) System is vertically stable
Yes /No /N/A 17) Stream is in balance with the water and sediment being supplied by the watershed (i.e., no excessive erosion or deposition)

Remarks:

_____
_____
_____
_____
_____
_____
_____

Summary Determination Functional Rating:

Proper Functioning Condition _____
Functional – At Risk _____
Nonfunctional _____
Unknown _____

Trend for Functional – At Risk:

Upward _____
Downward _____
Not Apparent _____

Are factors contributing to unacceptable conditions outside BLM's control or management?

Yes _____
No _____

If yes, what are those factors?

____ Flow regulations
____ Mining activities
____ Upstream channel conditions
____ Channelization
____ Road encroachment
____ Oil Field water discharge
____ Augmented flows
____ Other (specify) _____

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Appendix AA
1975 Memorandum between Montana and Wyoming - Administration of the Pryor Mountain Wild Horse Range

1975 Memorandum between Montana and Wyoming - Administration of the Pryor Mountain Wild Horse Range

APPENDIX 3.5: MEMO ON ADMINISTRATION ON THE PMWHR BETWEEN WYOMING AND MONTANA

OPTIONAL FORM NO. 10
MAY 1962 EDITION
GSA FPMR (41 CFR) 101-11.6

UNITED STATES GOVERNMENT

Memorandum

TO : District Manager, Billings District, Montana
District Manager, Worland District, Wyoming

DATE: MAR 18 1975

FROM : State Director, Montana
State Director, Wyoming

SUBJECT: Administration of the Pryor Mountain Wild Horse Range

This memo supersedes the memo of January 9, 1969, on the same subject. A new memo is deemed necessary for the dual purpose of 1) Shifting jurisdiction of additional national resource lands from the Worland District to the Billings District, and 2) Broadening and clarifying the nature of the responsibilities shifted.

On September 9, 1968, the Secretary of the Interior established the Pryor Mountain Wild Horse Range by so designating a block of approximately 29,700 acres of national resource lands in the State of Montana and 2,300 acres in the State of Wyoming. On September 9, 1969, the Assistant Secretary of the Interior designated an additional 1680 acres in the State of Wyoming as a part of the Pryor Mountain Wild Horse Range. Copies of the Federal Register publications for the two designations are attached.

Since that time, it has been determined and mutually agreed by the State Directors of Wyoming and Montana that an additional 2,360 acres of national resource land in Wyoming and 560 acres of national resource land in Montana be made a part of the Wild Horse Range to facilitate management pursuant to authority contained in Public Law 92-195. A description of this latter 2,360 acres is attached. In total, this will result in approximately 6,340 acres of national resource lands in Wyoming that will be a part of the Pryor Mountain Wild Horse Range.

Subject to valid existing rights, the lands involved in the Pryor Mountain Wild Horse Range are to be primarily administered for the protection and management of wild horses, wildlife, watershed, recreation, archaeological and scenic values.

The administration of the range requires close coordination with several State and Federal agencies and with representatives from a number of interest groups. Proper management of the resources makes it necessary for BLM personnel to spend considerable time on the site and to maintain close surveillance on resource conditions. The conditions and requirements of managing this special purpose area have dictated that one office of the Bureau be the focal point for administration.

Since a fraction of the total area is located in the State of Wyoming, and since the critical wildlife habitat is essential to species originating in Montana and the effect of watershed management accrues principally downstream in the State of Montana, it is only logical that the range in total should be administered by the Montana office of the Bureau.

Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan

A-50

The logic of total administration by the Montana office has been further demonstrated by the successful management of the range by the Billings office.

In view of the foregoing, it is reaffirmed that the Billings District Office will administer resource management in both the Montana and the Wyoming portions of the Pryor Mountain Wild Horse Range, including but not limited to grazing, wildlife, soil and watershed conservation, recreation, lands, minerals, forestry, fire, cadastral survey, access, etc. No action responsibilities beyond those functions of application or offer and maintenance of official records is intended by Wyoming offices.

As an example, all applications or offers filed pursuant to the public land and mineral leasing laws for national resource land in Wyoming within the range will be filed in Cheyenne and referred to the District Manager, Billings, Montana, for report and recommendations including any special stipulations necessary to further the objectives of the range.

For the purpose of coordination and record keeping, the State Director of Wyoming will be advised of all transactions involving lands in Wyoming in order that land office plats, statistical reports and improvement records may be kept current. Since the State of Wyoming is concerned with the enforcement of livestock sanitary measures, game management, recreation and its share of revenues from the public lands located within the borders of the state, all such matters including news releases and public information programs affecting Wyoming will be coordinated with the Worland District and State Director of Wyoming.

The contents of this memorandum are subject to periodic review and may be modified by mutual consent of the State Directors.

State Director
Wyoming

State Director
Montana

Attachments: Federal Register publications 9/12/68 and 9/13/69
Description of additional 2,360 Wyoming acres.

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September 12, 1968 Federal Register Notice – Establishment of Pryor Mountain Wild Horse Range

FEDERAL REGISTER, VOL. 33, NO. 178—THURSDAY, SEPTEMBER 12, 1968

MONTANA AND WYOMING

Establishment of Pryor Mountain Wild Horse Range

1. Pursuant to the Classification and Multiple Use Act of September 19, 1964 (74 Stat. 986, 43 U.S.C. 1411), R.S. 2478 (43 U.S.C. 1201), the Act of October 15, 1966 (80 Stat. 913; 16 U.S.C. 460t), and the provisions of 43 CFR Subpart 1727, I hereby designate the public lands in the following described area as the Pryor Mountain Wild Horse Range and establish the rules for management of said Range.

MONTANA PRINCIPAL MERIDIAN

CARBON COUNTY, MONT.

T. 8 S., R. 28 E.,
Sec. 19, E½E¼;
Sec. 20, all;
Sec. 21, W½, W½E½;
Sec. 28, W½;
Sec. 29, all;
Sec. 30, E½E½;
Sec. 31 E½E½;
Sec. 32 all;
Sec. 33 W½, W½SE¼.

T. 9 S., R. 27 E.,
Sec. 1, all;
Sec. 2, all;
Sec. 11, all;
Sec. 12, all;
Sec. 13, all;
Sec. 14, all;
Sec. 23, NE¼, E½SE¼;
Sec. 24, all;
Sec. 25, W½, NE¼, N½SE¼, SE¼SE¼.
T. 9 S., R. 28 E.,
Sec. 4, W½, W½E½, E½SE¼, SE¼NE¼;
Secs. 5–36, all lying west of the Bighorn River.
T. 9 S., R. 29 E.,
Sec. 18, all lying west of the Bighorn River.
T 10 S., R. 27 E.,
Sec. 1, lots 1 and 2.

SIXTH PRINCIPAL MERIDIAN

BIGHORN COUNTY, WYO.

T. 58 N., R. 95 W.,
Sec. 19, lot 1;
Sec. 20, N½;
Sec. 21, N½, SE¼, northeast diagonal ½ of SW¼;
Sec. 22, all;
Sec. 23, W½W½, E½NW¼, NE¼SW¼, N½SE¼;
Sec. 26, NW¼NW¼;
Sec. 27, N½;
Sec. 28, NE¼NE¼.

The area described aggregates approximately 32,000 acres.

The Pryor Mountain Wild Horse Range is a Class III natural environment area under the Bureau of Outdoor Recreation system of classification.

2. Subject to valid existing rights the area will be primarily administered for the protection and management of wild horses, wildlife, watershed, recreation, archeological, and scenic values.

3. The Pryor Mountain Wild Horse Range shall be in all respects subordinate to the Bighorn Canyon National Recreation Area established by the Act of October 15, 1966 (80 Stat. 913; 16 U.S.C. 460t), so far as it affects lands comprising any part of the Bighorn Canyon National Recreation Area. Wild horses within the area shall be managed by the Bureau of Land Management, in a manner that is compatible with the purposes for which the Bighorn Canyon National Recreation Area was established.

4. The Bureau of Land Management, for the public lands within the Range, and in cooperation with the National Park Service for the lands within the National Recreation Area, will develop and keep current a management plan for the Range which will provide for the management of the wild horses and their habitat within a balanced program which considers all public values and without impairment of the productivity of the land.

5. For purposes of management of the wild horses within the Range, the boundaries thereof shall conform to natural barriers and feasible fencing routes within the area described in paragraph 1 of this order. The lands are more particularly identified and delineated on plats or maps filed in the respective Land Offices. Lands which lie outside the meandering boundaries will be subject to existing domestic livestock grazing under the Taylor Grazing Act.

STEWART L. UDALL,
Secretary of the Interior.

SEPTEMBER 9, 1968.

[F.R. Doc. 68-11056; Filed, Sept. 11, 1968; 8:49 a.m.]

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Appendix AB: Summary of Eligibility, Suitability, and Tentative Classification Determinations for Rivers in the Billings Field Office

SUMMARY OF ELIGIBILITY, SUITABILITY, AND TENTATIVE CLASSIFICATION DETERMINATIONS FOR RIVERS IN THE BILLINGS FIELD OFFICE

Billings Field Office
5001 Southgate Drive
Billings, Montana

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Executive Summary

As part of the land use planning process for the Billings Resource Management Plan (RMP), a US Department of the Interior, Bureau of Land Management (BLM) interdisciplinary team and a contract team of Ecosystem Inc. staff analyzed all river and stream segments in the Billings Field Office administrative area (Planning Area) that were found to be eligible for inclusion in the National Wild and Scenic Rivers System (NWSRS). This included screening all Planning Area rivers to identify those with BLM surface ownership. These initial screening and identification efforts resulted in a list of rivers or river segments for further consideration in the inventory and study process.

Introduction

Section 5(d)(1) of the Wild and Scenic River (WSR) Act directs Federal agencies to consider potential wild and scenic rivers in their land and water planning processes ("..In all planning for the use and development of water and related land resources, consideration shall be given by all Federal agencies involved to potential national wild, scenic and recreational river areas"). To fulfill this requirement, whenever the BLM undertakes a land use planning effort (e.g., an RMP), it analyzes river and stream segments that might be eligible for inclusion in the NWSRS. The BLM, Billings Field Office, is revising its older land use plan. The revised RMP will provide a single, comprehensive land use plan that will guide management of public land administered by the Billings Field Office.

This report is a record of the wild and scenic river study that is being conducted concurrently with the Billings Field Office RMP revision. This report documents BLM's examination of Billings Field Office river segments as they relate to eligibility, suitability, and classification criteria in the WSR Act.

This report incorporates the Eligibility phase work performed under contract by Ecosystem Management Inc. with BLM staff input and support and uses that data for analysis by BLM staff for the completion of the Suitability phase. The two separate reports, the 2009 Wild and Scenic River Eligibility Report and this Suitability report, comprise the complete Wild and Scenic River evaluations process for the Billings Field Office.

What is a Wild and Scenic River?

Congress enacted the WSR Act to provide a national policy for preserving and protecting selected rivers and river segments in their free-flowing condition for the benefit and enjoyment of present and future generations. The WSR Act provides criteria that must be considered during the analysis. No rivers in the Planning Area are currently managed under the WSR Act.

Steps in the Wild and Scenic Rivers Study Process

The wild and scenic river study process is comprised of two main components: the inventory phase and the study phase. The inventory phase includes identifying eligible river and stream segments, assigning tentative classification (Wild, Scenic, or Recreational), and describing

protective management for the eligible segments. The study phase includes determining the suitability of eligible segments for inclusion in the NWSRS and describing interim management measures. The inventory is conducted during the data-gathering stage of RMP revision, and the study phase is done during formulation of the Draft RMP and Proposed RMP.

The inventory and evaluation process used by BLM to identify and evaluate river segments for potential inclusion into the National Wild and Scenic Rivers system is guided by the provisions of the Wild and Scenic Rivers Act and BLM planning guidance. Section 5(d) (1) of the Act directs federal agencies to consider potential wild and scenic rivers in the land and water planning processes. To fulfill this requirement, the BLM inventories and evaluates rivers when it develops comprehensive resource management plans for public lands in a specified area. A Notice of Intent to prepare the RMPs for the BiFO and Pompeys Pillar National Monument was published in the Federal Register on May 15, 2008. This notice served as the beginning of BLM's formal scoping process.

The notice was followed by a news release announcing scoping. In addition, over 1,200 scoping packages were mailed to potential stakeholders, agencies, organizations and tribes. A website for the Billings and Pompeys Pillar National Monument RMP was launched that provides the public access to planning documents, calendars, information on the planning process, as well as a photo gallery of the planning area. The website will continue to be updated throughout the planning process. Another news release was issued and postcards distributed to the mailing list in July 2008 announcing the dates, locations and times of seven public scoping open house meetings across the planning area. All of these outreach tools conveyed information about the planning process, preliminary planning issues, special designations and an overview of the planning area. The BLM hosted scoping open houses providing the public with opportunities to become involved, learn about the planning process, meet the RMP team members, provide scoping comments, and input on the plan.

In April 2009, BLM released the Final Wild and Scenic River Eligibility Report, Billings Field Office, Montana. Seven river segments were identified as eligible for further study in the land use plan. Additional information describing the inventory and evaluation process can be found in the report, which is also attached in Appendix R.

Eligibility Determination Considerations

The first part of BLM's wild and scenic river review process is to identify rivers that are eligible for NWSRS designation by Congress. To be eligible, a body of water must be a free-flowing river and must possess at least one outstandingly remarkable river-related value.

Is It a Free-Flowing River?

To be considered a free-flowing river, it must be a flowing body of water, or estuary, or section, portion, or tributary thereof, including rivers, streams, creeks, runs, kills, rills, and small lakes. A river can be any size or length, and does not have to be floatable or boat-able. For purposes of eligibility determination, the volume of flow is sufficient if it is enough to maintain any outstandingly remarkable river-related values identified. The body of water must be existing or

flowing in a natural condition without major modification of the waterway such as channelization, impoundment, diversion, straightening, and rip-rapping. However, some minor modifications can be allowed such as low dams, diversion works, and minor structures. The river can lie between impoundments or major dams.

Does It Have at Least One Outstandingly Remarkable Value?

The body of water must have at least one outstandingly remarkable river-related value, i.e., scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, such as biological, botanical, ecological, hydrological, and paleontological. In order to be assessed as "outstandingly remarkable," a river-related value must be a unique, rare, or exemplary feature that is significant at a regional or national level. A list of criteria used to help make this determination is included later in this appendix.

Tentative Classification Considerations

To protect wild and scenic values prior to Congressional designation, eligible river segments are tentatively classified and management measures instituted as necessary to ensure appropriate protection of the values supporting the eligibility and classification determinations.

Section 2(b) of the WSR Act specifies three classification categories: wild, scenic, and recreational. Classification is based on the type and degree of human developments associated with the river and adjacent lands as they exist at the time of the evaluation. Classifications cannot overlap.

- Wild rivers are free of impoundments and are generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted.
- Scenic rivers are generally free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped but accessible in places by roads.
- Recreational rivers are readily accessible by road or railroad, may have some development along their shorelines, and may have small diversions and dams.

Eligibility Determinations for Rivers in the Billings Field Office

Review of Rivers Considered

All water bodies in Billings Field Office were evaluated for possible eligibility. Sources used to identify water bodies included the Nationwide Rivers Inventory (NRI) (National Park Service, 1982, 1986, 1988); any named stream found on a 1:100,000 map; the American Rivers Outstanding Rivers List: Montana (American Rivers, Inc., 1988).

Additional information was gathered from other federal and state agencies from scoping letters, existing documents, and applicable rivers lists on the internet. A Notice of Intent to prepare the RMP for the Billings and Pompeys Pillar National Monument was published in the Federal Register on May 15, 2008. This notice served as the beginning of BLM's formal scoping

process. The notice was followed by a news release announcing scoping. Over 1,200 scoping packages were mailed to stakeholders, agencies, organizations and tribes. News release and postcards were distributed in July 2008 announcing the dates, locations and times of seven public scoping open house meetings across the planning area. All of these outreach tools conveyed information about the planning process, preliminary planning issues, special designations and an overview of the planning area, including requests for information for special designations, including Areas of Critical Environmental Concern (ACECs) and Wild and Scenic River information and nominations.

A total of 129 written submissions and e-mails were received by September 19, 2008. Only one scoping comment was received on wild and scenic rivers. The commenter requested that no rivers be designated.

The Draft Wild and Scenic Eligibility Report was prepared and submitted for review to the RMP cooperating agencies. Comments were received from Montana Fish, Wildlife and Parks (MFWP), the Yellowstone Conservation District and the Eastern Montana Resource Advisory Council (RAC).

MTFWP concurred with BLM's findings regarding fish values. They also suggested that the entire Yellowstone River segment through the planning area met the criteria for outstandingly remarkable recreational values. BLM has no authority to determine eligibility of river segments that adjoin private, state, or other federally administered lands.

The Yellowstone Conservation District requested clarification on whether eligibility findings affect other lands. BLM clarified that the agency only considers values on segments adjacent to BLM-administered lands.

The Eastern Montana Resource Advisory Council (RAC) appointed several members to serve as liaisons to the planning process. The RAC liaison input with regard to the Bear Canyon Creek segment involved additional research and site visits. Through this process, it was determined that the Bear Canyon Creek segment length would be 1.6 miles (instead of ¼ mile in the preliminary findings) to include the furthest extent of the intermittent cottonwood riparian zone.

In addition, the following other sources were used to identify potentially eligible rivers:

- Montana Department of Fish, Wildlife and Parks databases;
- Forest Management Plans and Wild and Scenic Rivers Eligibility Assessments from the Custer and Gallatin National Forests.

From these sources and information, the BiFO developed an inventory list for consideration. The identification of river and stream segments evaluated for potential eligibility included 14 individual river segments within the BiFO decision area. Refer to Billings Field Office Rivers and Streams Analyzed for Eligibility – Appendix D for a list of the results from the identification effort (http://www.blm.gov/mt/st/en/fo/billings_field_office/rmp/docs.html).

Region of Consideration

To be considered outstandingly remarkable, wild and scenic river values must be outstanding in a regional context. Each identified free-flowing river was considered in the context of which of the above regional types it flows within.

Summary of Determinations

The segments above were plotted on BLM 1:100,000 Surface Management Maps and measured. Based on the eight Outstandingly Remarkable Values (ORV) categories, a list of potential values was developed for each segment. For each value of each segment, information was developed then compared with similar values outside the general region and evaluated against the ORV criteria**.** The BLM resource specialists conducted this review for each of their areas of expertise using their knowledge, available inventory information and publications. A team review for all segments was conducted on three separate occasions to assure the information was accurate and met the criteria of the study. Seven of the 14 segments evaluated were determined eligible because they contained one or more ORVs. A complete list of all segments and the resource values that were evaluated is found in Appendix R under "Final Eligibility Report (April, 2009). This appendix displays all the resource values that were evaluated, whether they did or did not meet the ORV criteria and the rationale for the determination.

Documentation of Eligibility: Criteria for Determining Outstandingly Remarkable Values

1. **Scenic.** The landscape elements of landform, vegetation, water, color, and related factors must result in notable or exemplary river-related visual features and/or attractions within the geographic region. The BLM Visual Resource Inventory Handbook, H-8410-1, may be used in assessing visual quality and in evaluating the extent of development upon scenic values. The rating area must be scenic quality "A" as defined in the Handbook. However, scenic quality "A" does not, by itself, constitute an outstandingly remarkable value. When analyzing scenic values, additional factors such as seasonal variations in vegetation, scale of cultural modifications, and length of time negative intrusions are viewed may be considered. Scenery and visual attractions may be highly diverse over the majority of the river segment length and not common to other rivers in the geographic region.

2. **Recreational.** Recreational opportunities are or have the potential to be unusual enough to attract visitors to the geographic region. Visitors are willing to travel long distances to use the river resources for recreational purposes. River-related recreation opportunities could include, but not be limited to: sightseeing, wildlife observation, camping, photography, hiking, fishing, hunting, and boating. Interpretive opportunities may be exceptional and attract or have the potential to attract visitors from outside the geographic area. The river may provide or have the potential to provide settings for national or regional commercial usage or competitive events. In addition, the river may be eligible if it is determined to provide a critically important regional recreation opportunity or be a significant component of a regional recreation opportunity spectrum setting.

3. **Geologic**. The river or the area within the river corridor contains an example(s) of a geologic feature, process, or phenomenon that is rare, unusual, or unique to the geographic region. The feature(s) may be in an unusually active stage of development, represent a textbook example, and/or represent a unique or rare combination of geologic features (erosional, volcanic, glacial, and other geologic structures).

4. **Fish**. Fish values may be judged on the relative merits of either fish populations or habitat, or a combination of these river-related conditions.

    a) Populations. The river is nationally or regionally one of the top producers of resident, indigenous, and/or anadromous fish species. Of particular significance may be the presence of wild or unique stocks, or populations of State, federally listed, or candidate threatened and endangered species.
    b) Habitat. The river provides exceptionally high-quality habitat for fish species indigenous to the region. Of particular significance is habitat for state, federally listed, or candidate threatened and endangered species.

5. **Wildlife.** Wildlife values may be judged on the relative merits of either river-related wildlife populations or habitat, or a combination of these conditions.

    a) Populations. The river or area within the river corridor contains nationally or regionally important populations of resident or indigenous wildlife species dependent on the river environment. Of particular significance may be species considered to be unique or populations of state, federally listed, or candidate threatened and endangered species.
    b) Habitat. The river or area within the river corridor provides exceptionally high-quality habitat for wildlife of national or regional significance, or may provide unique habitat or a critical link in habitat conditions for state, federally listed, or candidate threatened and endangered species. Contiguous habitat conditions are such that the biological needs of the species are met.

6. **Cultural**. The river or area within the river corridor contains a site(s) where there is evidence of river-related occupation or use by Native Americans. Sites must be rare, have unusual characteristics, or exceptional human interest value(s). Sites may have national or regional importance for interpreting prehistory, may represent an area where a culture or cultural period was first identified and described, may have been used concurrently by two or more cultural groups, or may have been used by cultural groups for rare or sacred purposes.

7. **Historic.** The river or area within the river corridor contains a site(s) or feature(s) associated with a significant river-related event, an important person, or a cultural activity of the past that was rare or unusual in the region. A historic site(s) and/or feature(s) in most cases is 50 years old or older. Sites or features listed in, or eligible for inclusion in, the National Register of Historic Places, may be of particular significance.

8. **Other Similar Values**. While no specific evaluation guidelines have been developed for this category, additional values deemed relevant to the eligibility of the river segment include, but are not limited to, hydrologic, ecologic/biologic diversity, paleontological, botanic, and scientific study opportunities. They should be considered in a manner consistent with the foregoing guidance.

Eligibility Findings

The resource specialists identified seven river segments (Figure 1) (for the entire list, see the Final Eligibility Report, section 3.1) that contain one or more ORVs and are determined eligible for study. These were the following:

- Bad Canyon Creek
- Bear Canyon Creek
- Crooked Creek – Above Fish Barrier
- Crooked Creek – Below Fish Barrier
- Gyp Spring
- Piney Creek
- Yellowstone River – Pompeys Pillar

The following provides a brief description of each of the eligible segments that were evaluated for study. For more detailed overview and description of outstandingly remarkable values associated with each of the following seven segments, refer to the **Billings Field Office Rivers and Streams Analyzed for Eligibility** (http://www.blm.gov/mt/st/en/fo/billings_field_office/rmp/docs.html).

Figure 1: Maps of River Segments

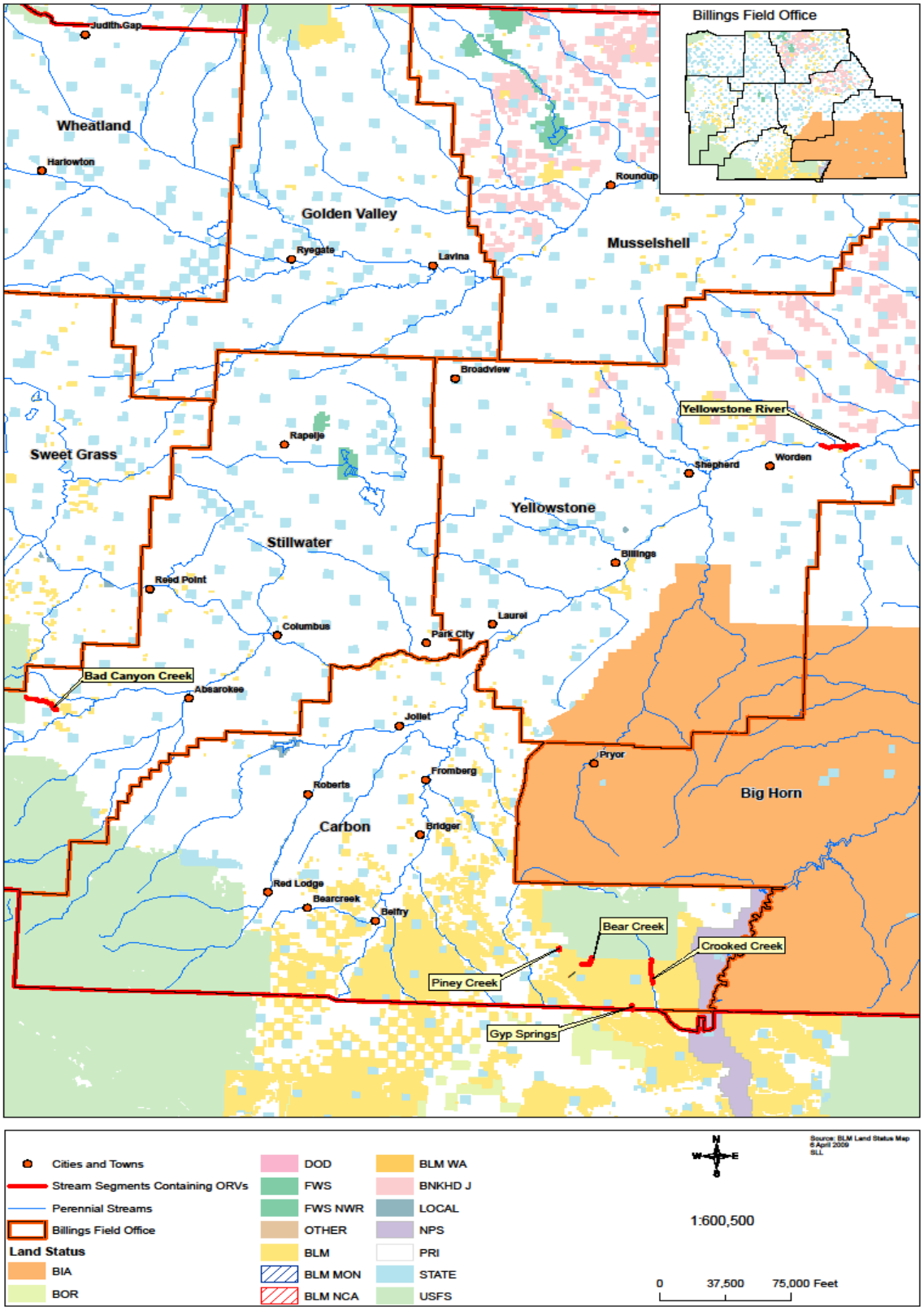


Figure 2: Bad Canyon

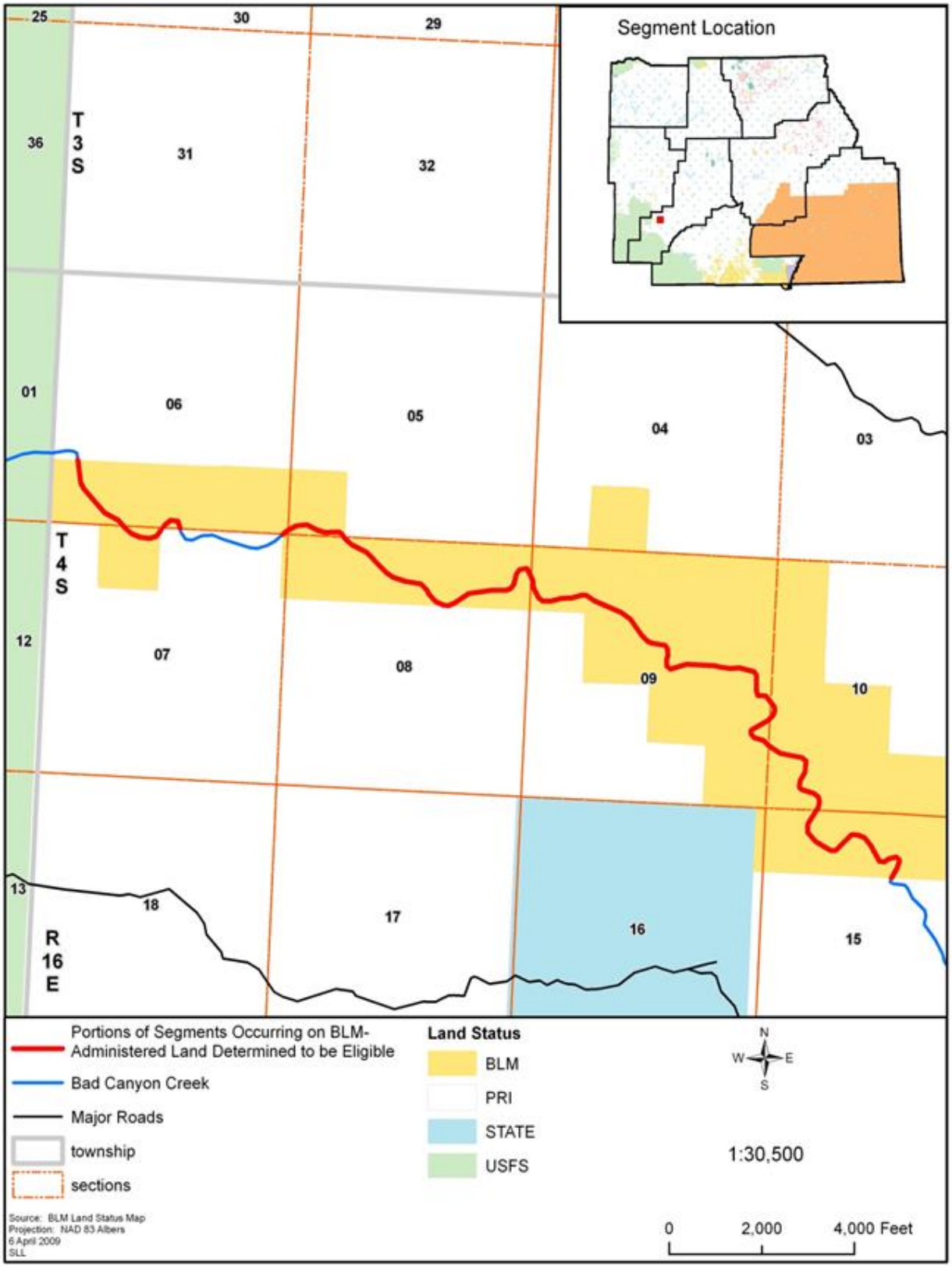


Figure 3: Bear Canyon

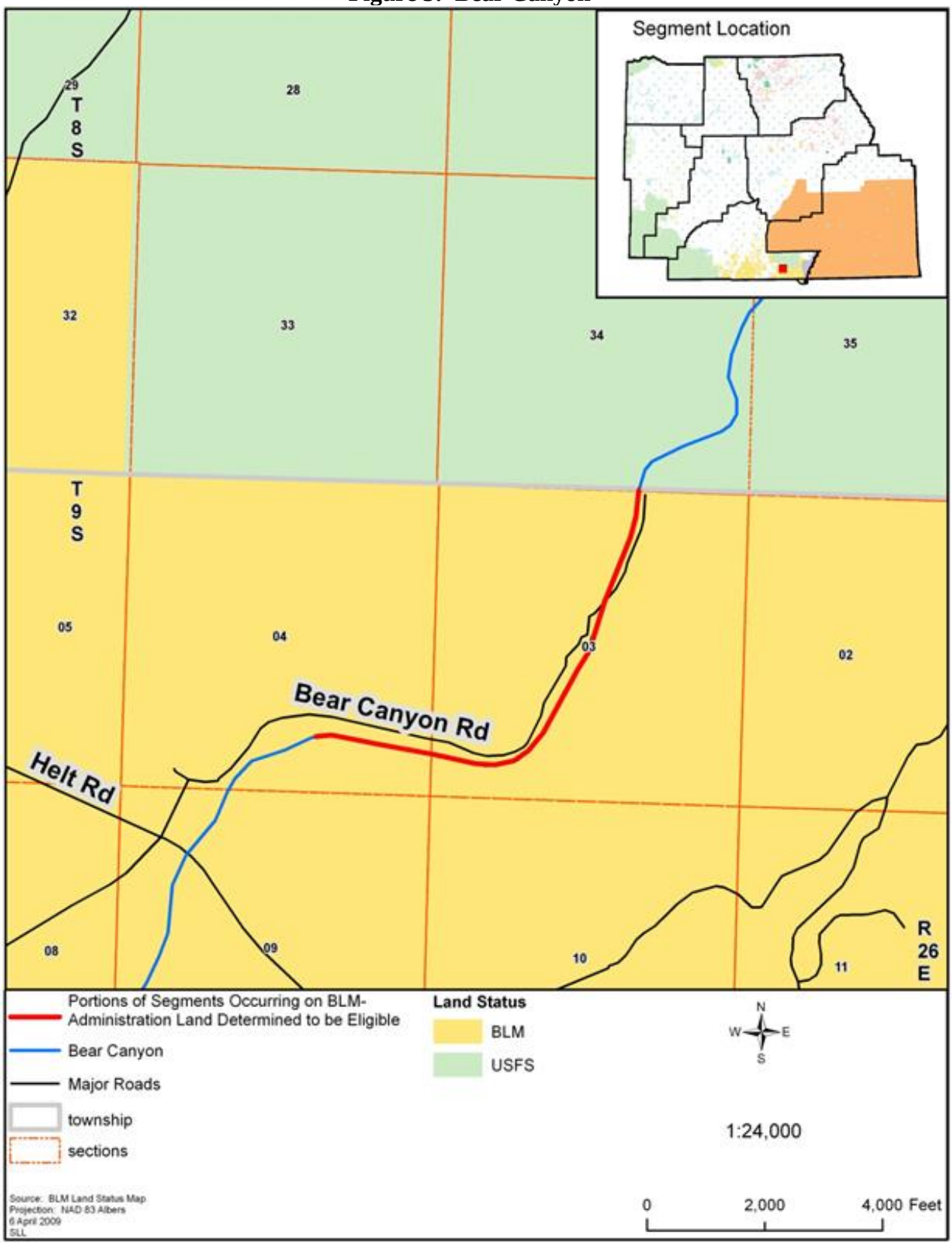


Figure 4: Crooked Creek – Above Fish Barrier

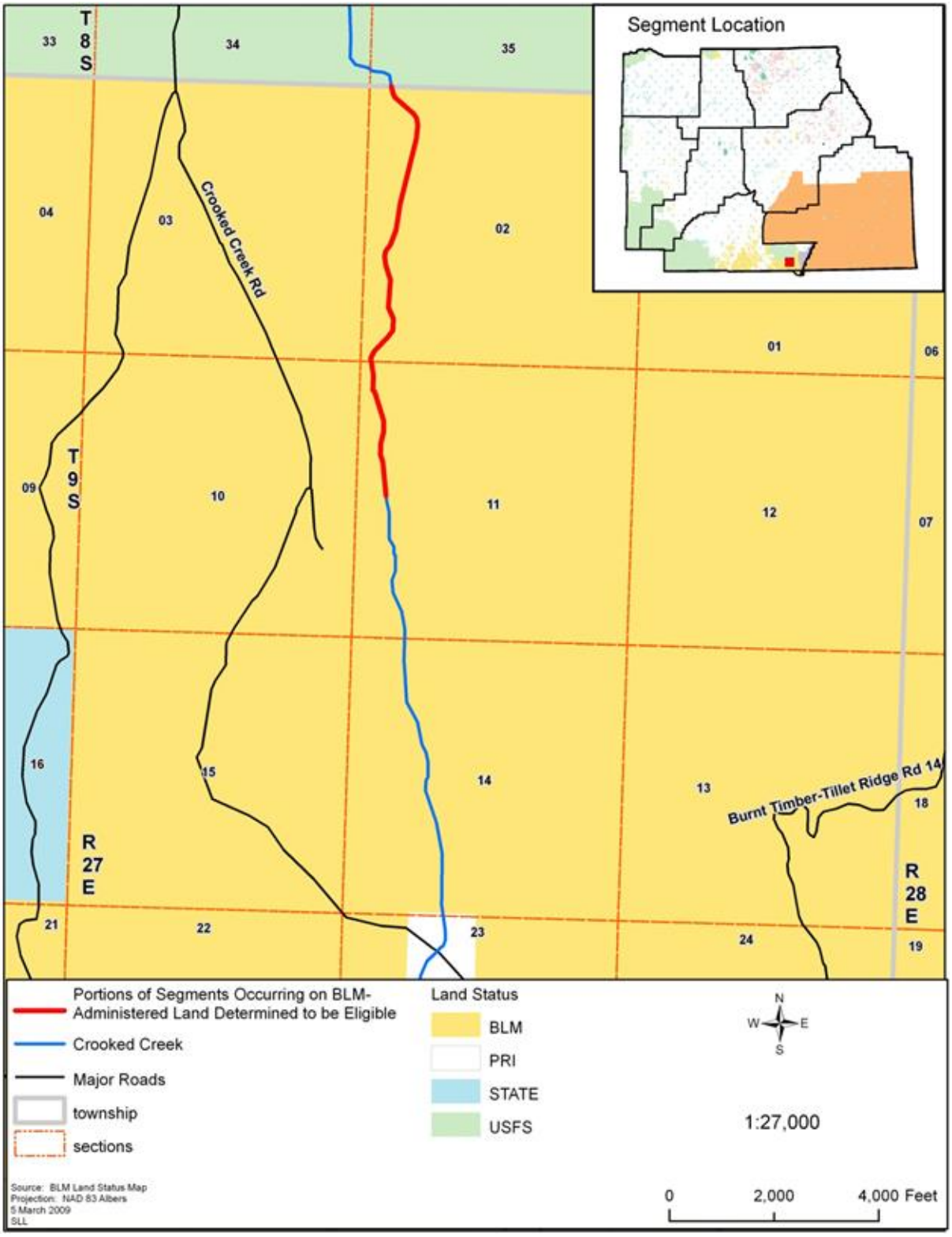


Figure 5: Crooked Creek – Below Fish Barrier

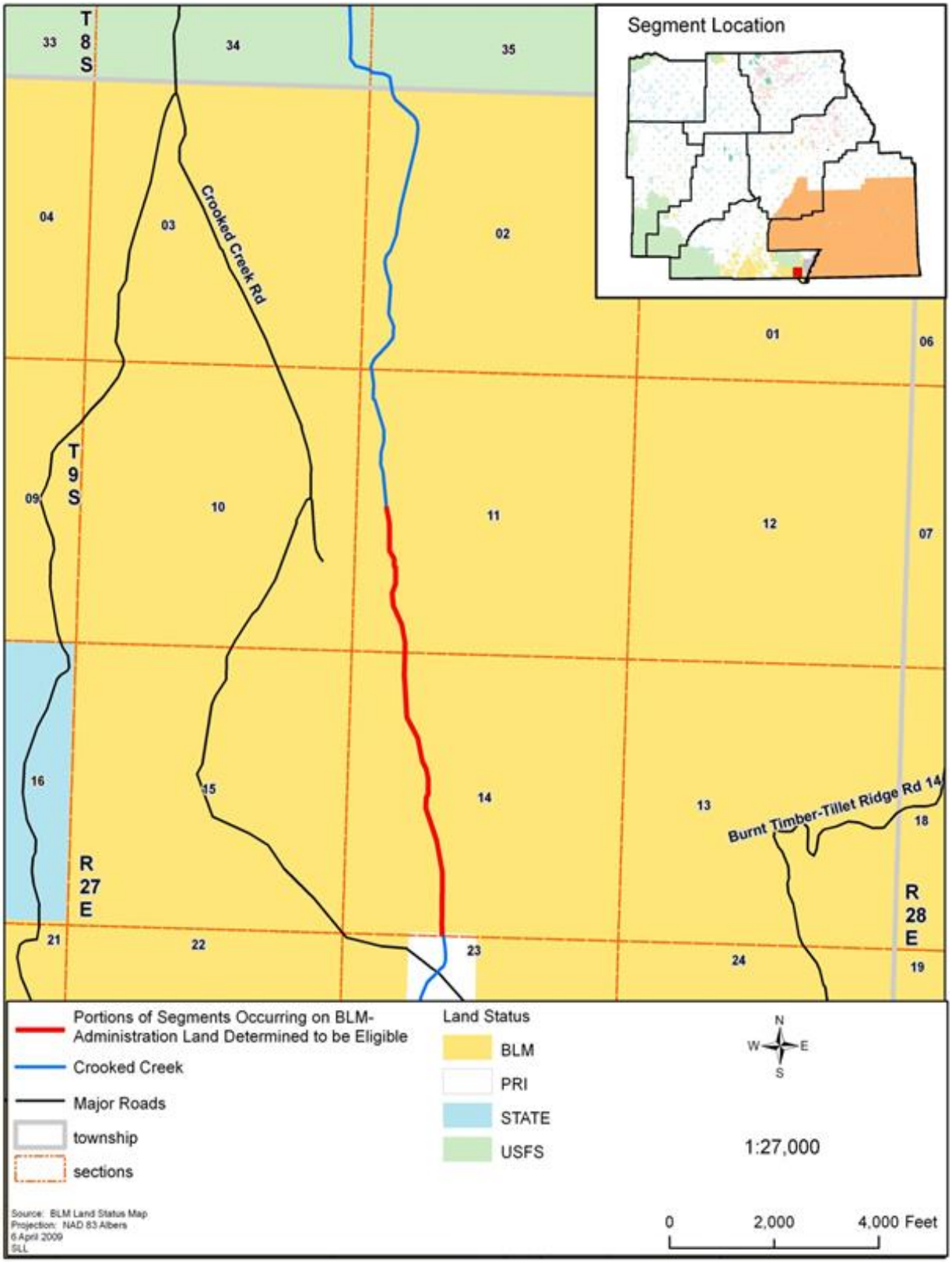


Figure 6: Gyp Springs

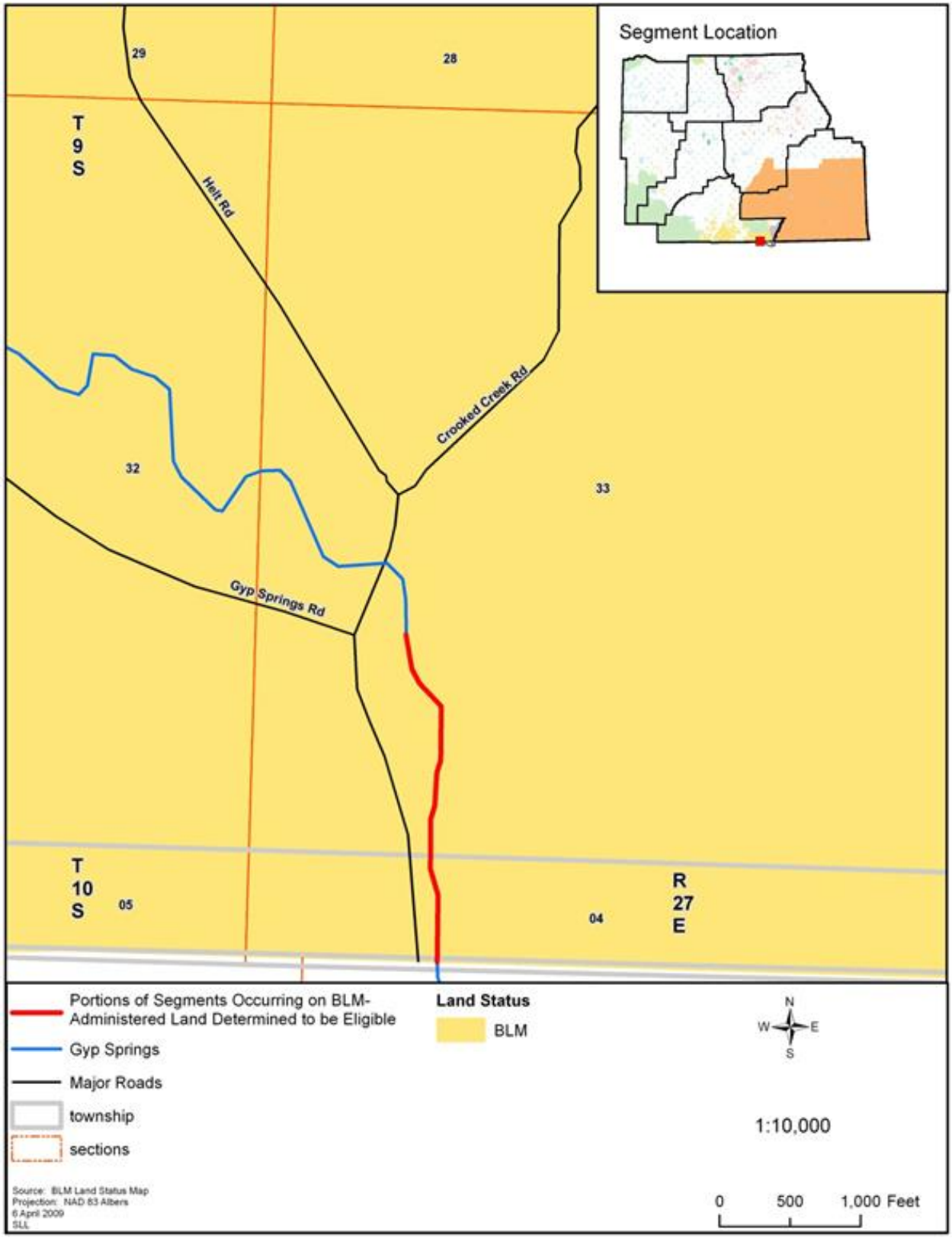


Figure 7: Piney Creek

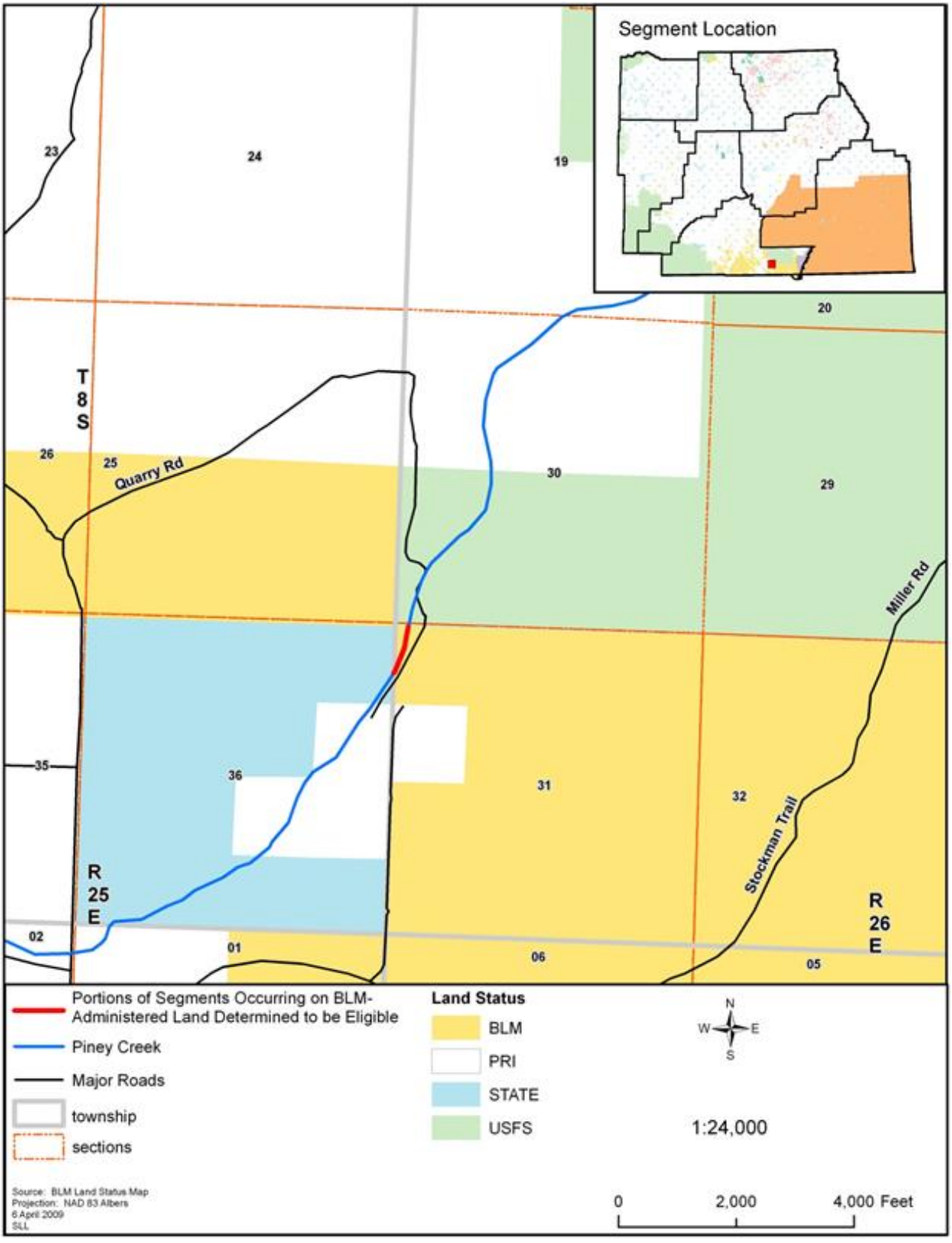
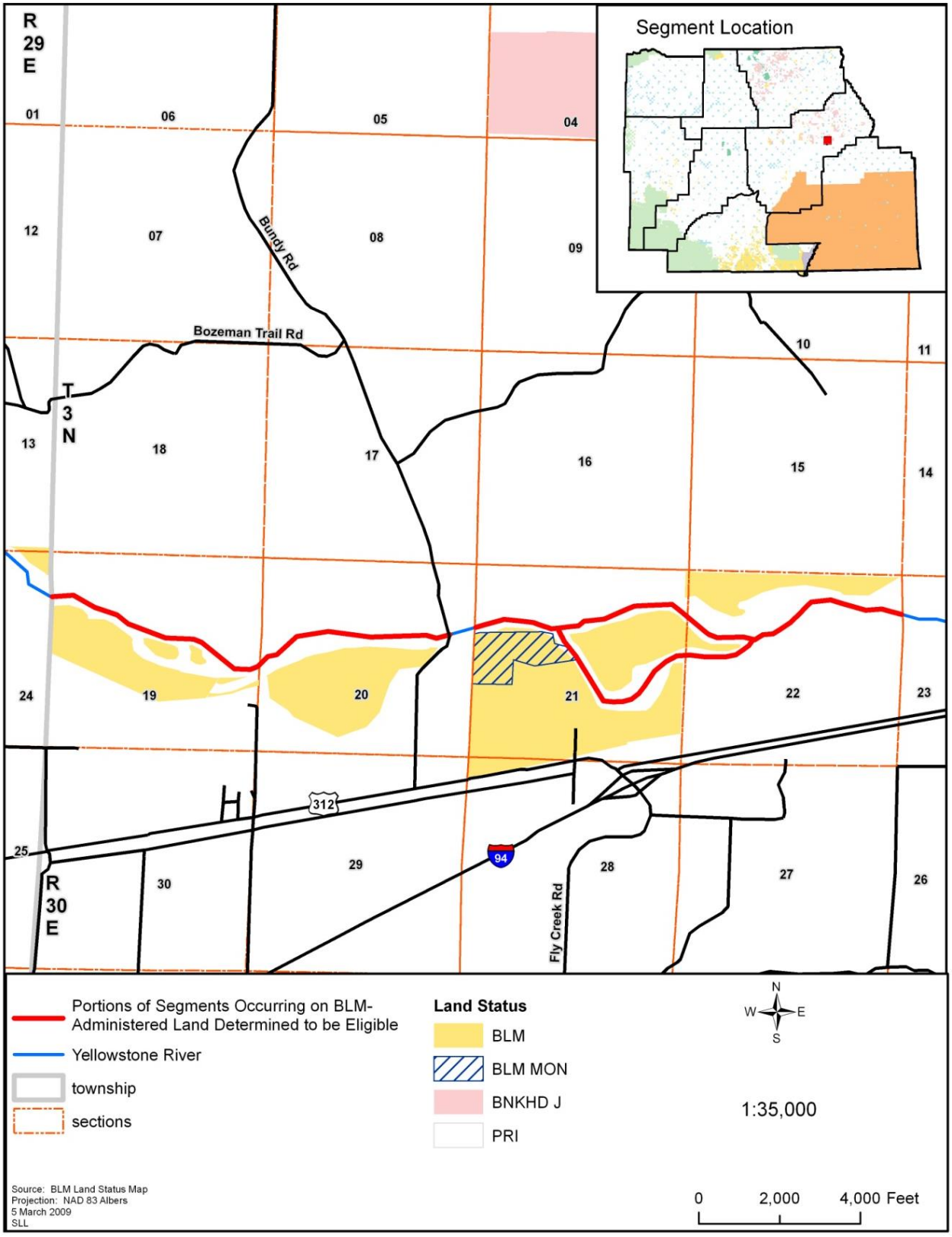


Figure 8: Yellowstone River – Pompeys Pillar



Suitability Determinations for Rivers in the Billings Field Office

Following the Eligibility Determination, the next step in the river assessment process is the determination of suitability. The purpose of the study phase is to determine whether eligible river segments are suitable or unsuitable for inclusion in the NWSRS, per WSR Act criteria. BLM Manual guidance identifies certain factors to be considered when completing the suitability study. The suitability determination is influenced by the unique characteristics and conditions associated with each particular river. Additional factors may be considered as they apply to a specific segment.

The suitability evaluation does not result in actual designation but only a recommendation for those river segments identified as suitable for designation. Only Congress can designate a wild and scenic river. In some instances, the Secretary of the Interior may designate a wild and scenic river when the governor of a state, under certain conditions, petitions for a river to be designated. Congress would ultimately choose the legislative language if any suitable segments are presented to them. Water-protection strategies and measures to meet the purposes of the WSR Act would be the responsibility of Congress in any legislation proposed. Rivers found unsuitable would be dropped from further consideration and would be managed according to the objectives outlined in the RMP.

Suitability is designed to answer these questions:

1. Should the river's free-flowing character, water quality, and ORVs be protected, or are one or more other uses important enough to warrant otherwise?

2. Will the river's free flowing character, water quality, and ORVs be protected through designation? Is it the best method for protecting the river corridor? In answering these questions, the benefits and impacts of WSR designation must be evaluated, and alternative protection measures considered.

3. Is there a demonstrated commitment to protect the river by any nonfederal entities that may be partially responsible for implementing protective management?

As provided by Sections 4(a) and 5(c) of the Wild and Scenic Rivers Act, the following factors were considered and documented as appropriate, as the basis of the study:

1. Characteristics which do or do not make the area a worthy addition to the National System.

2. The current status of land ownership, minerals (surface and subsurface), use in the area, including the amount of private land involved and associated or incompatible uses. Jurisdictional consideration must be taken into account to the extent that management would be affected.

3. The reasonably foreseeable potential uses of the land and water that would be enhanced foreclosed or curtailed if the area were included in the National System and the values which could be foreclosed or diminished if the area is not protected as part of the system.

4. The federal agency that will administer the area should it be added to the National System.

5. Federal, state, local, tribal, or other interests in designation or non-designation of the river, including the extent to which the agency proposes that administration of the river, including the costs thereof, are shared by state and local agencies.

6. The estimated cost to the United States of acquiring necessary lands and interests in lands and of administering the area should it be added to the National System. Section 6 of the WSRA outlines policies and limitations of acquiring lands or interests in land by donation, exchange, consent of owners, easement, transfer, assignment of rights, or condemnation within and outside established river boundaries.

7. A determination of the degree to which the state or its political subdivisions might participate in the preservation and administration of the river should it be proposed for inclusion in the National System.

8. The federal agency's ability or other mechanisms (existing or potential) to protect and manage the identified river related values other than WSR designation and the state/local government's ability to manage and protect the ORVs on nonfederal lands. Such mechanisms may include, for example, statewide programs related to population growth management, vegetation management, water quantity or quality, or protection of river-related values such as open space and historic areas.

9. An evaluation of the adequacy of local zoning and other land use controls in protecting the river's ORVs by preventing incompatible development. This evaluation may result in a formal finding that the local zoning fulfills Section 6(c)'s requirements, which in turn preempts the federal government's ability to acquire land through eminent domain if the river is designated.

10. Support or opposition to designation. Assessment of this factor will define the political context. The interest in designation or non-designation by federal, state, local and tribal governments and national and local publics should be considered, as well as the state's political delegation.

11. Historical or existing rights which could be adversely affected. In determining suitability, consideration of any valid existing rights must be afforded under applicable laws (including the WSRA), regulations, and/or policies.

12. The consistency of designation with other agency plans, programs or policies and in meeting regional objectives. Designation may help or impede the "goals" of other tribal, federal, state or local agencies. For example, designation of a river may contribute to state or regional protection objectives for fish and wildlife resources. Similarly, adding a river which includes a limited recreation activity or setting to the National System may

help meet statewide recreation goals. Designation might, however, limit irrigation and/or flood control measures in a manner inconsistent with regional socioeconomic goals.

13. The contribution to river system or basin integrity. This factor reflects the benefits of a "systems" approach, i.e., expanding the designated portion of a river in the National System or developing a legislative proposal for an entire river system (headwaters to mouth) or watershed. Numerous benefits are likely to result from managing an entire river or watershed, including the ability to design a holistic protection strategy in partnership with other agencies and the public.

River Segment Suitability Discussion and Findings

River Name: Bad Canyon Creek

Location, ORV description, and classification:
The Bad Canyon Creek segment is located on the east side of the Beartooth Mountains in Stillwater County, approximately 34 miles northwest of Red Lodge, Montana (Figure 2). Most of the immediate surrounding lands are public lands managed by BLM.

Bad Canyon Creek supports a population of Yellowstone Cutthroat Trout (YCT) (*Oncorhynchus clarkii bouvieri*) that has been designated a "core population" by the Interstate YCT Coordination Team. A core population is one that exhibits no hybridization and is essentially a genetically pure strain. This pure strain of YCT is very valuable in that they can be used to enhance other YCT populations or establish new populations in suitable waters.

These fish values are recognized nationally by the fisheries community. The ecological and sociological impact of losing a pure strain species is significant in itself. YCT are also listed as a Species of Concern by the MFWP and a federally sensitive species by the BLM and U.S. Forest Service (USFS). The BLM, MFWP, and USFS reinforced a significant natural barrier to upstream migration of non-native species in 2003. This barrier is located approximately five miles upstream from the lower BLM boundary; therefore most of the segment is not safe from the potential for non-native hybridization.

Access to the canyon is difficult resulting in little impact from adjacent land uses. High canyon walls, rock armoring, and limited access combine to provide excellent fish habitat and a setting that is primitive in nature. The presence of the core population of YCT in Bad Canyon Creek combined with the isolated, primitive setting of the canyon meets the criteria of an outstandingly remarkable value.

The proposed boundary is approximately 0.25 mile on from river bank on either side of the river. This river segment has been tentatively classified as scenic through the eligibility phase.

The current status of land ownership, minerals (surface and subsurface), use in the area, including the amount of private land involved and associated or incompatible uses. (Jurisdictional consideration must be taken into account to the extent that management would be affected.):
BLM Segment Length: 4.5 miles
Total Segment Length: 5.0 miles

This stream originates in the USFS Custer National Forest and flows easterly to its confluence with the Stillwater River. The stream is too narrow and shallow for navigation by watercraft of any size. Access to the segment is limited by private land. Although there is a primitive road to the segment, the private landowner does not grant motorized access to public lands. Public access to Bad Canyon Creek on public lands is limited to walk-in access, requiring a strenuous hike on an unmarked and unmaintained 2½ mile trail with 1,300 feet of elevation change.

The BLM lands along this segment are available for livestock grazing. Private lands in the area are primarily used for livestock grazing.

It is free of impoundments although in the upper portion of the segment there is the small natural barrier noted above that was reinforced to serve as a fish barrier. The shoreline is mostly undeveloped and mostly primitive in nature. There are a few visible livestock fences that cross the segment and an ATV trail used by the local rancher for livestock management on his lands.

There is one access road that that follows the creek a short distance near the upper end of the segment.

The lands were burned extensively during the Derby fire in 2006. This transformed much the lands from an extensively timbered landscape to a grassland complex. The fire burned the riparian zone as well as most infrastructures (range developments, an illegal cabin, etc.). Most of the large cottonwoods survived and there has been substantial natural rehabilitation all along the fire path**.**

There are no active oil and gas leases present.

The reasonably foreseeable potential uses of the land and water which would be enhanced, foreclosed or curtailed if the area were included in the NWSRS, and the values which could be foreclosed or diminished if the area is not protected as part of the NWSRS:

The YCT core population could be further enhanced and protected. Existing cooperative efforts between BLM, Custer NF and MFWP have been managing the YCT core population in this segment. Efforts to further protect core populations could occur with or without inclusion in the NWSRS.

Potential opportunities exist to acquire additional lands or easements around this segment, with or without inclusion in the NWSRS. Possible, but not anticipated, increased visitation due to the inclusion in the NWSRS of this segment could jeopardize public access opportunities and/or create user/private landowner conflicts.

Existing water rights could potentially impact management of this segment if included in the NWSRS

Grazing on the BLM land could be subject to increased restrictions if the segment were included in the NWSRS. The BLM would monitor the effects of cattle access to the river to ensure that grazing use is not adversely affecting the outstandingly remarkable values. If restrictions are necessary to protect river values, the BLM would work with the grazing allotment permittee to establish adequate restrictions.

The federal agency or state agency that will administer the river and/or area should it be added to the NWSRS:
The Bureau of Land Management would have sole responsibility for this segment; if the National Forest finds its segment suitable, the management may be shared.

Federal, state, local, tribal, or other interests in the designation or non-designation of the river, including the extent to which the agency proposes that administration of the river, including the costs thereof, be shared by state, local, or other agencies and individuals:
Local and State Government have not indicated whether they support or oppose designation of Bad Canyon Creek as a WSR segment.

The USDA-Forest Service Gallatin/Custer NF may be interested in participating in joint management if their adjacent river segment is also designated. The BLM, MFWP and USFS already cooperate jointly in management actions for the protection of the YCT and this would continue.

The estimated cost to the United States of acquiring necessary lands and interest in lands and of administering the area should it be added to the NWSRS:
Any land acquisition would only be accomplished with willing sellers and it is unlikely that private land holders would be willing to sell the land. The BLM would be capable of managing for the protection and enhancement of the outstandingly remarkable values without acquiring any lands. However, if BLM seeks acquisition of this small parcel of private land in order to have a continuous 0.25-mile corridor, land prices would be set at current prices. Costs of administration would be minimal.

A determination of the degree to which the state or its political subdivisions might participate in the preservation and administration of the river should it be proposed for inclusion in the NWSRS:
It is not anticipated that the state or local governments would participate beyond what is currently being done for the protection of the YCT and the elimination of invasive weeds. MFWP would likely want to continue to manage for the recreational fisheries in this segment. This would be complimentary to the recreational outstandingly remarkable value that is linked to fishing opportunities.

The federal agency's ability or other mechanisms (existing or potential) to protect and manage the identified river-related values other than WSR designation and/or the state/local government's ability to manage and protect the ORVs on non-federal lands:
BLM is a cooperating agency in the YCT Conservation Strategy and existing agreements with MWFP and the Custer NF are in place to protect the species in this river segment.

The BLM is able to manage its lands along the west bank of the segment for the protection of identified river-related values through its RMP. In this RMP a Class II VRM classification would protect the scenic and geologic values along the segment. This classification would not limit development but would provide protection through project design mitigation. Other methods of managing to protect values would be with-drawing the corridor from all mineral entry and proposing a No Surface Occupancy for Oil and Gas.

The agency might also assist in placement of conservation easements on adjacent private lands.

An evaluation of the adequacy of local zoning and other land use controls in protecting the river's ORVs by preventing incompatible development:
No local zoning for the private lands.

Support or opposition to designation:
During the scoping period for the RMP, no support or opposition to designation of this segment was submitted. The public review of the draft RMP provided an opportunity for other agencies and the public to review the preliminary findings and voice opposition or support. There was no opposition. The lands were also evaluated for their wilderness characteristics (Naturalness, Primitive Recreation, Outstanding Solitude and its unique resources – archeological, geological, wildlife, etc.), and there was support for management for these attributes.

Historical or existing rights which could be adversely affected:
There are water claims on Bad Canyon Creek for various uses along its entire length. It does not appear that there is a reserve water right on the creek to maintain a minimum flow. There are active grazing permits (Allotments 5492, 5585, 55548, 5562, and 5558) for the BLM land and grazing is the historic use of the private land along Bad Canyon Creek and these would be affected if there is a management decision to restrict this activity. There is a newly proposed (FY 2014) 100 KV power line which is being prepared by Northwest Energy, the path of which would cross the canyon in T 4 S., R 16 E., Sections 9 and 10, and there is an existing 15 KV power-line owned by Beartooth Electric in T. 4 S., R. 16 E., section 14.

The consistency of designation with other agency plans, programs or policies and in meeting regional objectives:
Designation of this segment would be consistent with the objectives of the BLM's Billings Field Office RMP. Designation of this segment would complement the fisheries and recreational goals of the MFWP.

The USFS has not completed a study for this river unit. Designation would be consistent with the USFS eligibility determination, but successful management in part would depend on a similar suitability determination from USFS.

The contribution to river system or basin integrity:
From a practical standpoint it is likely in this case that a total system management strategy can be pursued with a focus on the total watershed in conjunction with the National Forest. Some benefits are likely to result from managing the entire river, including the ability to design and then implement a holistic protection strategy in partnership with other agencies and the public.

The potential for water resources development:
It is unlikely that further water impoundments would be installed on Bad Canyon Creek. It is unlikely flood control, hydropower facilities, dredging or diversions or channelization of Bad Canyon Creek will occur.

Finding: Suitable □ Non-suitable X
Rationale: Management policies, goals and objectives are already in place to protect the values of this segment. Existing agreements between local, state, and federal agencies are in place to specifically protect and further enhance the YCT core population.

River Name: Bear Canyon Creek

Location, ORV description, and classification:
The Bear Canyon Creek segment is located at the south end of the Pryor Mountains in Carbon County approximately seven miles east of Warren, Montana (Figure 3). Water for this segment originates from a spring at the BLM-National Forest boundary. The length of flowing water in the canyon varies from ¼ mile to over a mile depending upon moisture conditions and time of year. The stream is too narrow and shallow for navigation by watercraft of any size. Originally, the segment length was ¼ mile; however, public comments during review of the draft report suggested the segment should be longer. After an on-site evaluation, the segment was lengthened to include the lower extent of the cottonwood intermittent riparian zone.

Visitors to Montana who want to see Blue-gray Gnatcatchers (*Polioptila caerulea*) and Black-throated Gray Warblers (*Dendroica nigrescens*) visit Bear Canyon because this is only place in Montana where these birds can be seen. This opportunity receives international attention through the National Audubon Society via their website (http://mtaudubon.org/birds/areas.html).

Listed by the National Audubon Society as an IBA (important bird area), Bear Canyon supports breeding populations of more than a dozen species on the Montana Priority Bird Species List. In particular, Bear Canyon has the highest known number of nesting Blue-gray gnatcatcher in Montana. Bear Canyon and a few nearby foothill canyons at the base of the Pryor Mountains constitute the entire range in Montana of this bird species. The State of Montana ranks this species as "S1" or at high risk due to extremely limited and potentially declining numbers. Both the BLM and the Forest Service also consider the Blue-gray Gnatcatcher a sensitive species. The riparian area and adjacent uplands of Bear Canyon also support other State Sensitive bird species such as the Loggerhead Shrike (*Lanius ludovicianus*), Sage Thrasher (*Oreoscoptes montanus*), Common Poorwill (*Phalaenoptilos nuttallii*) and Pinyon Jay (*Gymnorhinus cyanocephalus*).

Cultural elements in the landscape include a vision quest site, a buffalo kill site, tipi rings, petroglyphs, and habitation sites. The vision quest site was noted at the time of recording to

have a vision quest structure on top of a rock formation. The evidence of occupation and use, especially for sacred purposes, meets the criteria for being an outstandingly remarkable value.

This segment has been tentatively classified as recreational through the eligibility phase process. The proposed boundary is approximately 0.25-mile on from river bank on either side of the river.

The current status of land ownership, minerals (surface and subsurface), use in the area, including the amount of private land involved and associated or incompatible uses. (Jurisdictional consideration must be taken into account to the extent that management would be affected.):
BLM Segment Length: 1.62 miles
Total Segment Length: 1.62 miles

All BLM lands in the proposed WSR segment are in public ownership and Custer NF forms the northern boundary of this segment. There are some possible valid existing rights (mining claims).

There are no active oil and gas leases present.

A variety of opportunities currently exist in this area, including wildlife viewing, hunting, and dispersed recreation. It is free of impoundments. Livestock grazing is readily evident throughout the entire corridor. Public access is through a two-track road that parallels a portion of the lower segment, often within several hundred feet of the segment. There is a non-motorized trail which follows the upper segment.

The reasonably foreseeable potential uses of the land and water which would be enhanced, foreclosed or curtailed if the area were included in the NWSRS, and the values which could be foreclosed or diminished if the area is not protected as part of the NWSRS:
Inclusion in the NWSRS could further protect the bird species (Audubon IBA); however, this may negatively impact hunting, if restricted. Dispersed recreation and primitive camping could be enhanced, while motorized recreation may be adversely affected if restricted.

The federal agency or state agency that will administer the river and/or area should it be added to the NWSRS:
Bureau of Land Management

Federal, state, local, tribal, or other interests in the designation or non-designation of the river, including the extent to which the agency proposes that administration of the river, including the costs thereof, be shared by state, local, or other agencies and individuals:
Local and State Government have not indicated whether they support or oppose designation of Bad Canyon Creek as a WSR segment. No comments have been received through the planning process in either support or opposition to designation.

The USDA-Forest Service Gallatin/Custer NF may be interested in participating in joint management if their adjacent river segment upstream is also designated.

The estimated cost to the United States of acquiring necessary lands and interest in lands and of administering the area should it be added to the NWSRS:
No lands would need to be acquired since all lands are public and costs of administration would be minimal.

A determination of the degree to which the state or its political subdivisions might participate in the preservation and administration of the river should it be proposed for inclusion in the NWSRS:
It is not anticipated that the state or local governments would participate beyond what is currently being done for the elimination of invasive weeds.

The federal agency's ability or other mechanisms (existing or potential) to protect and manage the identified river-related values other than WSR designation and/or the state/local government's ability to manage and protect the ORVs on non-federal lands:
The Billings RMP has identified some management measures which would protect the resources. These include closure of the existing vehicle route on the top end of the canyon and its designation as a non-motorized trail, an ongoing effort with the local county for invasive weed management, etc.

An evaluation of the adequacy of local zoning and other land use controls in protecting the river's ORVs by preventing incompatible development: Local zoning and other land use controls do not pertain to this segment because it is entirely located on Federal lands.

Support or opposition to designation:
There is support from certain non-governmental organizations (ex: Wilderness society, National Audubon Society, American Rivers, Pryor Coalition, etc.) to further acknowledge the important values associated with this segment. A finding of suitability may further their goals/objectives particularly for the bird species in this area. It is unknown whether the Native American tribes with affinity to this area would support or oppose a WSR designation. OHV users may object to designation due to the proximity of a major travel access in the lower reaches of the canyon and fear that its use may be restricted or lost.

Local and State Government support or opposition is unknown. Neither viewpoint has been expressed in the planning responses.

Historical or existing rights which could be adversely affected:
There is an active grazing permit (Allotment 4115) for the BLM land and grazing is the historic use of the private land along Bear Canyon Creek and this would be affected if there is a management decision to restrict this activity.

There are no ROWs present.

The consistency of designation with other agency plans, programs or policies and in meeting regional objectives:
BLM management policies address protection for cultural, wildlife and special status species. Current recreational use is compatible with the bird population. Motorized recreation is

currently limited to designated routes and the trail within the upper canyon is only open for non-motorized use with a major motorized route in proximity to the lower portion. Current BLM policies provide protection for the sensitive bird species and cultural resources. The designation would be consistent with the Billings RMP.

The contribution to river system or basin integrity:
A limited contribution based on the size of the watershed and the size of the river segment.

The potential for water resources development:
Not enough year-round flow to lead to water development. Direct recreational use of water (fishing, floating, etc.) is not a feature of the area or Bear Creek and is unlikely in the future.

Values foreclosed/diminished:
Inclusion of this segment in the NWSRS could increase visitation and possibly this could impact the bird species in the IBA. Currently, visitation levels to the entire Pryor Mountain area are increasing as its resources are being actively marketed and are becoming better known. An additional designation may possibly attract additional users.

An increase in visitation to the area could adversely impact the integrity of the archeological sites.

Finding: **Suitable □ Non-suitable X**
Rationale: Current BLM policies provide protection for the sensitive bird species and cultural resources, while providing for the recreational opportunities and experiences. The motorized route along the lower portion of the river segment is a major access route into the Pryor Mountain and the type of activity is in conflict with the type of recreational activity expected for a suitable river segment. The upper portion which is a non-motorized trail along the river segment is the only portion appropriate to designation for the recreation ORV.

River Name: Crooked Creek above the Fish Barrier

Location, ORV description, and classification:
Located in Carbon County, Crooked Creek originates in the southern portion of the Pryor Mountains within the Custer National Forest and flows south onto public lands and towards Wyoming (Figure 4). The stream is too narrow and shallow for navigation by watercraft of any size and is inaccessible except with extreme difficulty by foot. See map 3 in the Eligibility Section.

This segment flows through the Burnt Timber Canyon Wilderness Study Area (WSA) and is rated as Class I for visual resource management. The current management objective is to maintain the existing character of the landscape. The deeply incised Crooked Creek Canyon cuts through several hundred feet of the Pryor Mountain limestone strata. The combination of the dense riparian vegetation along Crooked Creek and the steep talus slopes of the canyon walls offer unique and outstandingly remarkable scenery.

The Pryor Mountains offer a unique combination of resource values that attract local, regional, and national visitors. This segment offers access to opportunities including fishing for a

genetically pure strain of Yellowstone Cutthroat Trout, bushwhacking in a pristine riparian canyon, viewing Pryor Mountain wild horses at one of their limited watering sources and exploring for caves and bats in the canyon's limestone walls.

The Crooked Creek – Above Fish Barrier segment supports a population of Yellowstone Cutthroat Trout (YCT) (*Oncorhynchus clarkii bouvieri*) that has been designated a "core population" by the Interstate YCT Coordination Team. A core population is one that exhibits no hybridization and is essentially a genetically pure strain. This pure strain YCT is very valuable in that fish can be used to enhance other YCT populations or establish new populations in suitable waters. These fish values are recognized nationally by the fisheries community. The ecological and sociological impact of losing a pure strain species is significant in itself. YCT are listed as a Species of Concern by the MFWP and a federally sensitive species by the BLM and U.S. Forest Service. A fish barrier at the downstream end of the segment will maintain the genetic purity of this YCT population. Adjacent land uses have had little effect on this segment because the segment is within the WSA. The fish habitat is in good condition. High canyon walls, rock armoring, and limited access combine to provide a setting that is primitive in nature.

Although there is public motorized to within ¼ mile of the canyon bottom, visitors must hike through dense brush with no trails to reach the canyon bottom. The presence of the core population of YCT in Crooked Creek combined with the isolated, primitive setting of the canyon meets the criteria of an outstandingly remarkable value.

The Crooked Creek – Above Fish Barrier segment has a landscape with significant archaeological properties. The Demijohn Flat Archaeological District was listed on the National Register of Historic Places (NRHP) in 1974 as District # 74001092 (24CB478).

The Demijohn Flat Archaeological District retains archaeologically intact remnants of proto-historic period Crow tipi habitation. The size and relatively pristine nature of the site warrants protection. Beyond the registered archaeological district other sites include the petroglyphs (24CB205) and other nearby sites (additional tipi rings) possibly could be considered elements in a broad landscape associated with the archaeological district. This segment of the Crooked Creek Demijohn Flat Archaeological District retains unique qualities of outstanding scientific value on at least a regional level.

The tentative Classification is wild.
The proposed boundary is approximately 0.25-mile from river bank on either side of the river segment.

The current status of land ownership, minerals (surface and subsurface), use in the area, including the amount of private land involved and associated or incompatible uses. (Jurisdictional consideration must be taken into account to the extent that management would be affected.):
BLM Segment Length: 1.59 miles
Total Segment Length: 1.59 miles

In a 1992 Forest Plan amendment, the Custer National Forest determined Crooked Creek as being eligible for WSR study with cultural, fisheries, geologic and scenic values being outstandingly remarkable. At the forest boundary Crooked Creek flows onto BLM-administered lands for three miles before entering private lands. This three-mile reach on BLM was segmented at a fish barrier which is located close to the middle of the reach.

The area is currently used predominantly for recreational purposes such as hiking, camping, and providing access to climbing and caving areas.

There are no private lands along the river segment.

The BLM constructed the fish barrier for the protection of the native trout species.

The BLM and partners have monitored the canyon for the presence and condition of several bat species.

Extraction of minerals in the area does not currently occur in accordance with the WSA designation.

There are no active oil and gas leases present.

The reasonably foreseeable potential uses of the land and water which would be enhanced, foreclosed or curtailed if the area were included in the NWSRS, and the values which could be foreclosed or diminished if the area is not protected as part of the NWSRS:
If the lands continue to be a WSA or becomes a designated Wilderness, reasonably foreseeable potential land uses would be compatible with the protection and enhancement of the segment's outstandingly remarkable values. If the WSA designation is removed by Congress without designating it as Wilderness, then the area could be opened to an array of potential land uses.

Inclusion in the NWSRS may attract additional visitation which could impair the values associated with the segment by potential introduction of aquatic nuisance and/or undesirable species.

If the WSA designation was removed and the segment was designated in the NWSRS, mineral leasing and extraction would continue to be restricted under the RMP.

The federal agency or state agency that will administer the river and/or area should it be added to the NWSRS:
The Bureau of Land Management for the public lands and the Custer/Gallatin National Forest for the river segment on their lands.

Federal, state, local, tribal, or other interests in the designation or non-designation of the river, including the extent to which the agency proposes that administration of the river, including the costs thereof, be shared by state, local, or other agencies and individuals:
This segment is entirely within BLM-administered lands and adjacent to Custer NF lands in which Crooked Creek was determined to be eligible for further WSR study. Cost could be

shared with the Custer National Forest if the entire stream length is acted upon and designated. It is not anticipated that State or Local Agencies would assume management responsibility.

The estimated cost to the United States of acquiring necessary lands and interest in lands and of administering the area should it be added to the NWSRS:
All lands are public lands, so there are no acquisition costs. Costs of administration would be minimal.

A determination of the degree to which the state or its political subdivisions might participate in the preservation and administration of the river should it be proposed for inclusion in the NWSRS:
It is not anticipated that the state or local governments would participate in the preservation and administration of the river segment beyond the current management efforts (control of invasive species, management of sensitive species, etc.).

The federal agency's ability or other mechanisms (existing or potential) to protect and manage the identified river-related values other than WSR designation and/or the state/local government's ability to manage and protect the ORVs on non-federal lands:
BLM does not have the authority to regulate land uses upstream of the eligible segment, however, the Custer NF determined the Crooked Creek segment (on forest lands) to be eligible for further study. There are no non-federal lands present.

The area is recognized as containing wilderness characteristics through the WSA designation and additional Lands with Wilderness Characteristics (LWC) inventory. With or without inclusion in the NWSRS, certain management policies are in place through the WSA and the Resource Management Plan decisions to protect the values associated with this segment.

Protection and enhancement of the recreational and scenic outstandingly remarkable values are currently provided by the areas designation as a WSA. The management goals and objectives within the WSA are compatible with management as an eligible segment. WSA designation is temporary. Congress has the ability to either designate the area as Wilderness under the Wilderness Act, or remove the WSA designation entirely. If WSA designation is removed, the area would be managed in accordance with the RMP. Removal of WSA designation, without making it a designated Wilderness area, could open the area to land uses such as timber harvest and mineral activity. Introduction of these land uses in the area could degrade the riparian corridor and result in impacts on the recreational and scenic outstandingly remarkable values that make the segment a worthy addition to the NWSRS.

An evaluation of the adequacy of local zoning and other land use controls in protecting the river's ORVs by preventing incompatible development:
Local zoning and other land use controls do not pertain to this segment because it is entirely located on Federal lands.

Support or opposition to designation:
There is support from a range of non-governmental entities for the potential designation of this segment of the rivers as a WSR. It is recognized as possessing significant resources and

warranting protection. Local and State Governments have not made their position known, however they have been generally opposed to special designations of most kinds due to the perception of additional restrictions. Native American tribes with affinity to the area generally favor additional restrictions for cultural resources, however it is unknown whether they support or oppose designation.

Historical or existing rights which could be adversely affected:
There are no known historical or existing rights that could be adversely affected with designation. There are no Rights of Ways (ROWs) present.

The consistency of designation with other agency plans, programs or policies and in meeting regional objectives:
These uses are compatible with the protection and enhancement of the segment's outstandingly remarkable values. The Wilderness Study Area (WSA) protects the ORVs associated with this segment. WSA management policies protect the WSA values from impairment. Inclusion in the NWSRS could further enhance the ORVs, could be compatible with the Custer NF eligibility determination and would be compatible with the Billings FO RMP.

Existing cooperative efforts between BLM, Custer NF and MFWP have been managing the Yellowstone Cutthroat Trout core population in this segment. Efforts to further protect core populations could occur with or without inclusion in the NWSRS. The WSA Management Protection prescriptions found in the BLM Manual currently protects the ORVs associated with this segment. Lands within the PMWHR are also managed for the benefit of the wild horses and there are secondary values that the PMWHR are also managed for, including cultural, paleontological and wildlife values.

The contribution to river system or basin integrity:
Some benefits are likely to result from managing the entire river, including the ability to design and then implement a holistic protection strategy in partnership with other agencies and the public.

The potential for water resources development:
The flows in the river segment are generally low except for the spring runoff. The potential for water resource development is low. It is unlikely flood control, hydropower facilities, dredging or diversions or channelization of will occur.

Finding: Suitable X Non-suitable □
Rationale: existing management, WSA, PMWHR, YCT Conservation strategy, etc.) currently protects wilderness characteristics and ORVs, should Congress release the WSA from further study, the area would be managed as an ACEC. Inclusion in the NWSRS has the potential to attract regional/national visitation to the area and may negatively impact the ORVs but BLM management measures are in place to control the use. Additional visitation could also be positive in terms of marketing the resources and acquiring funding. The river segment should be designated as "wild" due to its inclusion in the existing WSA, the quantity, diversity, and quality of the resources present. Existing agreements between local, state, and federal agencies are in place to specifically protect and further enhance the YCT core population.

River Name: Crooked Creek below the Fish Barrier

Location, ORV description, and classification:
Located in Carbon County, Montana, Crooked Creek originates in the southern portion of the Pryor Mountains within the Custer National Forest (Figure 5). The creek flows out of the national forest onto BLM-administered lands for approximately three miles before entering private lands. The stream is too narrow and shallow for navigation by watercraft of any size, and is inaccessible except by foot with extreme difficulty. This three-mile reach on BLM was segmented above and below an existing fish barrier. This segment is below the fish barrier and is shown on Map 3.

This segment flows through the Burnt Timber Canyon Wilderness Study Area (WSA) and is rated as Class I for visual resource management. The current management objective is to maintain the existing character of the landscape. The deeply incised Crooked Creek Canyon cuts through several hundred feet of the Pryor Mountain limestone strata. The combination of the dense riparian vegetation along Crooked Creek and the steep talus slopes of the canyon walls offer unique and outstandingly remarkable scenery.

The Pryor Mountains offer a unique combination of resource values that attract local, regional and national visitors. This segment offers access to opportunities including bushwhacking in a pristine riparian canyon, viewing Pryor Mountain wild horses at one of their limited watering sources and exploring for caves and bats in canyon's limestone canyon walls.

The Crooked Creek – Below Fish Barrier segment has a landscape with significant archaeological properties. The Demijohn Flat Archaeological District was listed on the NRHP in 1974 as District # 74001092 (24CB478). The Demijohn Flat Archaeological District retains archaeologically intact remnants of proto-historic period Crow tipi habitation. The size and relatively pristine nature of the site warrants protection. Beyond the registered district other sites include the petroglyphs (24CB205) and other nearby sites (additional tipi rings) possibly could be considered elements in a broad landscape associated with the district area. This segment of the Crooked Creek Demijohn Flat Archaeological District retains unique qualities of outstanding scientific value on at least a regional level.

This segment has been tentatively classified as scenic through the eligibility phase of the process.

The proposed boundary is approximately 0.25-mile on from river bank on either side of the river.

The current status of land ownership, minerals (surface and subsurface), use in the area, including the amount of private land involved and associated or incompatible uses. (Jurisdictional consideration must be taken into account to the extent that management would be affected.):
BLM Segment Length: 1.56 miles
Total Segment Length: 1.56 miles

This segment is entirely within the Burnt Timber Canyon WSA and has motorized public access to within less than ¼ mile of the canyon rim. It is free of impoundments, although there is a man-made fish barrier at the beginning of the segment. The shoreline is undeveloped and primitive. There is little evidence of livestock grazing. There are no improvements or evidence of man (except for the old road which has been designated as a non-motorized trail).

This segment is currently managed as a WSA and part of the Pryor Mountain Wild Horse Range PMWHR).

There are no active oil and gas leases present.

The reasonably foreseeable potential uses of the land and water which would be enhanced, foreclosed or curtailed if the area were included in the NWSRS, and the values which could be foreclosed or diminished if the area is not protected as part of the NWSRS:
The Wilderness Study Area (WSA) generally protects the ORVs associated with this segment. Management policies protect the WSA values from impairment and restrict actions which could have adverse effects on WSR values. Inclusion in the NWSRS could further enhance the ORVs, similarity, enhance and protect the WSA values, and could be compatible with the Custer NF eligibility determination.

No additional restrictions would likely occur (the WSA designation provides management to protect the values of the area).

Potential exists to create user conflicts if or not included in the NWSRS with the private landowners on the southern boundary of this segment. (Note: Members of the public expressed concern regarding the tentative management classification of this segment (scenic) and felt it qualified to be classified as "wild", considering it is already within a WSA).

The federal agency or state agency that will administer the river and/or area should it be added to the NWSRS:
The Bureau of Land Management for the public lands and the US Forest Service for the river segment on adjacent FS lands managed by them.

Federal, state, local, tribal, or other interests in the designation or non-designation of the river, including the extent to which the agency proposes that administration of the river, including the costs thereof, be shared by state, local, or other agencies and individuals:
This segment is entirely within BLM administered public lands. This segment terminates on the southern boundary at private property.

The estimated cost to the United States of acquiring necessary lands and interest in lands and of administering the area should it be added to the NWSRS:
Acquisition of lands or interest in lands (willing buyer/willing seller) is possible but not likely and would not be necessary.

A determination of the degree to which the state or its political subdivisions might participate in the preservation and administration of the river should it be proposed for inclusion in the NWSRS:
MFWP is actively involved in a cutthroat trout restoration and protection program with the BLM and USFS in this river segment. It is expected that their involvement in the protection and enhancement of the fisheries outstandingly remarkable values would continue.

The federal agency's ability or other mechanisms (existing or potential) to protect and manage the identified river-related values other than WSR designation and/or the state/local government's ability to manage and protect the ORVs on non-federal lands:
The WSA Management Protection policies currently protect the ORVs associated with this segment. Lands within the PMWHR are managed for the benefit of the wild horses as well as other resources. There are secondary values that the PMWHR are managed for, including cultural, paleontological and wildlife.

The Custer NF determined the Crooked Creek segment (on forest lands) to be eligible for further study. The area is recognized as containing wilderness characteristics through the WSA designation. With or without inclusion in the NWSRS, management policies are in place through the WSA and PMWHR management prescriptions to protect the values associated with this segment. Other methods of managing to protect values would be with-drawing the corridor from all mineral entry and proposing a No Surface Occupancy for Oil and Gas.

An evaluation of the adequacy of local zoning and other land use controls in protecting the river's ORVs by preventing incompatible development:
Local zoning and other land use controls do not pertain to this segment because it is entirely located on Federal lands.

Support or opposition to designation:
There is both support and opposition to the potential designation of this segment as a WSR. It is recognized as having significant resources and warranting some level of protection, including the adjacent landowner, but there are also individuals and organizations opposed for a variety of reasons, chiefly for the perceived consequences of designation. It is unknown whether the Native American tribes with affinity to this area would support or oppose a WSR designation.

Historical or existing rights which could be adversely affected:
There are no known historical or existing rights that would be adversely affected by designation. There are no Rights of Ways (ROWs) present.

The consistency of designation with other agency plans, programs or policies and in meeting regional objectives:
Designation would be consistent with the Billings BLM RMP and the work being done with other agencies regarding management of this segment.

The contribution to river system or basin integrity:
Some benefits are likely to result from managing the entire river, including the ability to design and then implement a holistic protection strategy in partnership with other agencies and the public.

The potential for water resources development:
The flows in the river segment are generally low except for the spring runoff. The potential for water resource development is low. It is unlikely flood control, hydropower facilities, dredging or diversions or channelization of will occur.

Finding: Suitable X Non-suitable □
Rationale: Although current management prescriptions (WSA, PMWHR, LWC, etc.) currently protects wilderness characteristics and ORVs, should Congress release the WSA from further study, the area would be managed as an ACEC, but not necessarily protect other values. Inclusion in the NWSRS has the potential to attract regional/national visitation to the area and may negatively impact the ORVs but management prescriptions are in place to protect the resources. The inclusion of the river segment as suitable would be consistent with WSA, PMWHR, and LWC prescriptions. Existing agreements between local, state, and federal agencies are in place to specifically protect and further enhance the YCT core population.

River Name: Gyp Spring

Location, ORV description, and classification:
The Gyp Springs segment is located in Carbon County, approximately 12 miles southeast of Warren, Montana (Figure 6). This segment originates from Gyp Springs, an important source of livestock and wildlife water. The stream is too narrow and shallow for any navigation by watercraft of any size. Access to segment is through well maintained county and BLM graveled roads. .

In 1864, Jim Bridger, famed early trapper and mountain man, and later guide for the Captain William Reynolds Exploration military and emigrant parties, blazed what would become known as Bridger Cutoff, an alternative route for a section of the Bozeman Trail emigrant route. The present day Gyp Springs Road (still in-use) follows generally along the Bridger Cutoff through the Gyp Springs area. The trail passes directly through and continues west of Gyp Springs. The spring was likely used historically as a watering and camp site and was an integral part of Bridger Cutoff of the Bozeman Trail. The trail was designated as site number 24CB1242 within the Montana portion in 1991 (Taylor 1991) beginning below Gyp Springs, following Gyp Springs Creek north from the border with Wyoming and continuing along the creek, through the springs, and then continuing to the northwest. The Bridger Cutoff was determined eligible for inclusion to the NRHP on a state level. The trail has at least regional significance because it is associated with events that have made a significant contribution to the broad pattern of European settlement and it is associated with the lives of persons significant in the past.

Gyp Springs and the immediate vicinity retain archaeological evidence of both historic and prehistoric use and it is documented as site 24CB604. Confirmed substantial surface and subsurface cultural remains indicate possible long, intensive and continued use of the springs in

prehistoric through historic periods. The prehistoric component is comprised of artifact scatter and intact subsurface deposits indicative of a habitation site. Diagnostic materials indicate an occupation or occupations as early as late Paleolithic/archaic period up to late prehistoric period.

A Recreation Site Inventory and Evaluation Form completed by BLM before 1969 indicates a consideration of Gyp Springs and "Tipi Rings Area nearby" as contributing to the recreational attraction for the Crooked Creek Program Area. The "Tipi Rings Area" was recorded as 24CB604 in 1967. The combination of the historic and prehistoric values makes the cultural values outstandingly remarkable.

This segment has been tentatively classified as recreational through the eligibility phase.

The current status of land ownership, minerals (surface and subsurface), use in the area, including the amount of private land involved and associated or incompatible uses. (Jurisdictional consideration must be taken into account to the extent that management would be affected.):
BLM Segment Length: 0.46 miles,
Total Segment Length: 0.46 miles

It is free of impoundments. Livestock grazing, livestock fences, and the adjacent access road are readily evident along much of this short segment.

The segment is heavily infested with exotic invasive Russian olive trees. The most common concern expressed regarding this segment was the need to preserve the character of the corridor and that the current weed infestation was the largest threat. Weed infestation is apparent throughout the river corridor. Weeds are threatening scenic values, adjacent land and watersheds, and ecological functions within the river area.

Valid existing rights (mining claims) may be present. There are no active oil and gas leases present.

The amount and timing of stream flow is dependent on the climate and fluctuates yearly and seasonally.

The entire Gyp Springs site is eligible for the National Register of Historic Places for cultural and historic values. This area is being considered in the DRMP/DEIS as an RNA/ACEC and management actions would protect the cultural and historic values identified.

This segment is entirely within BLM-administered lands. The area below the segment is private and used for grazing.

The reasonably foreseeable potential uses of the land and water which would be enhanced, foreclosed or curtailed if the area were included in the NWSRS, and the values which could be foreclosed or diminished if the area is not protected as part of the NWSRS:
Valid existing rights (mining claims) may be present. Inclusion of this segment into the NWSRS would not enhance any of the uses (livestock grazing, dispersed recreation). Direct recreational

use of water (fishing, floating, etc.) is not a feature of the area or this river segment and is unlikely to be so in the future. The historical and cultural values could potentially be diminished by inclusion in the NWSRS by increased visitation and potential vandalism.

The federal agency or state agency that will administer the river and/or area should it be added to the NWSRS:
Bureau of land Management

Federal, state, local, tribal, or other interests in the designation or non-designation of the river, including the extent to which the agency proposes that administration of the river, including the costs thereof, be shared by state, local, or other agencies and individuals:
Interest in designation or non-designation of this particular segment appears to be very low. No comments have been received. It is unknown whether the Native American tribes with affinity to this area would support or oppose a WSR designation

The estimated cost to the United States of acquiring necessary lands and interest in lands and of administering the area should it be added to the NWSRS:
No costs relating to acquiring lands since none are proposed for acquisition. Recurring activities such as patrols and monitoring would continue with or without designation. There would be no change in annual costs from current administration.

A determination of the degree to which the state or its political subdivisions might participate in the preservation and administration of the river should it be proposed for inclusion in the NWSRS:
Any costs associated with the administration of this segment would be the sole responsibility of the BLM.

The federal agency's ability or other mechanisms (existing or potential) to protect and manage the identified river-related values other than WSR designation and/or the state/local government's ability to manage and protect the ORVs on non-federal lands:
This area will be considered as an ACEC (Pryor Mountain Foothills RNA /ACEC) and has identified management actions to protect historical and cultural values.

An evaluation of the adequacy of local zoning and other land use controls in protecting the river's ORVs by preventing incompatible development:
Local zoning and other land use controls do not pertain to this segment because it is entirely located on Federal lands.

Support or opposition to designation:
Public comment showed little interest or support either for or against designation.

Historical or existing rights which could be adversely affected:
There are no Rights of Ways (ROWs) present.

There is an active grazing permit (Allotment 4105) for the BLM land and grazing is the historic use of the private land along and south of the Gyp Springs segment and these would be affected if there is a management decision to restrict this activity.

The consistency of designation with other agency plans, programs or policies and in meeting regional objectives:
Existing agreements and management policies are in place to protect and enhance the ORVs of this segment, particularly the portion located on the PPNM, which overlaps the Lewis and Clark NHT (which cover the entire segment).

The contribution to river system or basin integrity:
A limited contribution based on the size of the watershed and the size of the river segment as well as its physical location.

The potential for water resources development:
It is unlikely that water impoundments would be installed on the river segment. It is unlikely flood control, hydropower facilities, dredging or diversions or channelization will occur.

Finding: Suitable □ Non-suitable X
Rationale: The entire Gyp Springs site is eligible for the National Register for cultural and historic values. This area is being considered in the DRMP/DEIS as an RNA/ACEC, and management actions would protect the cultural and historic values identified. Non designation would be more consistent with current management efforts and the long term goals found in the RMP, while management prescriptions in the RMP are in place to protect the river segment. The human impacts from the major travel routes all along the west boundary of the river segment substantially detract from the wild and scenic river values.

River Name: Piney Creek

Location, ORV description, and classification:
The Piney Creek segment is located in the southern Pryor Mountains in Carbon County approximately four miles northeast of Warren, Montana (Figure 7). Piney Creek flows for about ¼ mile on the Custer National Forest before entering BLM-administered land at the upper end of the segment. The stream is too narrow and shallow for any navigation by watercraft of any size, and heavy brush prevents even foot access along most of the segment.

The Piney Creek segment supports a population of Yellowstone Cutthroat Trout (YCT) (*Oncorhynchus clarkii bouvieri*) that has been designated a "core population" by the Interstate YCT Coordination Team. A core population is one that exhibits no hybridization and is essentially a genetically pure strain. YCT are listed as a Species of Concern by the MFWP and a federally sensitive species by the BLM and U.S. Forest Service. This pure strain YCT is very valuable in that they can be used to enhance other YCT populations or establish new populations in suitable waters. These fish values are recognized nationally by the fisheries community. The ecological and sociological impact of losing a pure strain species is significant in itself. These unique fish are recognized nationally within the fisheries community. The creek is accessible by road and the habitat is in fair condition. The threats to this population are the small size of the

population, the irrigation diversion immediately downstream of the segment and the fact that it is an isolated stream. The presence of the core population of YCT meets the criteria of an outstandingly remarkable value.

This segment has been tentatively classified as recreational.

The current status of land ownership, minerals (surface and subsurface), use in the area, including the amount of private land involved and associated or incompatible uses.
BLM Segment Length: 0.16 miles
Total Segment Length: 0.16 miles

There is vehicle access to and along (within ¼ mile) the segment; there is no legal public access although current access across private property is currently unrestricted. An improved dirt road parallels the entire segment within ¼ mile.

The river segment is free of impoundments.

Livestock grazing is readily evident along the entire river segment.

There is a scattered land ownership pattern along Piney Creek which includes: BLM, Custer NF, state lands and private.

There are no active oil and gas leases present.

The reasonably foreseeable potential uses of the land and water which would be enhanced, foreclosed or curtailed if the area were included in the NWSRS, and the values which could be foreclosed or diminished if the area is not protected as part of the NWSRS:
No foreseeable changes or values diminished.

The federal agency or state agency that will administer the river and/or area should it be added to the NWSRS:
Bureau of Land Management

Federal, state, local, tribal, or other interests in the designation or non-designation of the river, including the extent to which the agency proposes that administration of the river, including the costs thereof, be shared by state, local, or other agencies and individuals:
The BLM manages only 0.16 miles of Piney Creek. Management of this segment, if included in the NWSRS would be difficult.

The estimated cost to the United States of acquiring necessary lands and interest in lands and of administering the area should it be added to the NWSRS:
Potential opportunities to acquire lands or interest in lands (willing buyer/willing seller) exist but are unlikely to occur.

A determination of the degree to which the state or its political subdivisions might participate in the preservation and administration of the river should it be proposed for inclusion in the NWSRS:
It is anticipated that costs associated with the administration of this segment would be the sole responsibility of the BLM.

The federal agency's ability or other mechanisms (existing or potential) to protect and manage the identified river-related values other than WSR designation and/or the state/local government's ability to manage and protect the ORVs on non-federal lands:
Due to the limited BLM public land ownership and length of this segment, the YCT core population would not necessarily be enhanced by inclusion in the NWSRS. Recurring activities such as patrols and monitoring would continue with or without designation.

An evaluation of the adequacy of local zoning and other land use controls in protecting the river's ORVs by preventing incompatible development:
Local zoning and other land use controls do not pertain to this segment because it is entirely located on Federal lands.

Support or opposition to designation:
Interest in designation or non-designation of this particular segment appears to be very low.

Historical or existing rights which could be adversely affected:
Historical or valid existing rights may be impacted through inclusion in the NWSRS. There is an active grazing permit (Allotment 4115) for the BLM land and grazing is one of the historic uses of the State, Forest and public lands along or on this segment and these would be affected if there is a management decision to restrict this activity. There is a telephone line Right of Way (Quest ROW Case File 57657 and a Big Horn Electrical 7.2 KV overhead line (Case File 74878).

The consistency of designation with other agency plans, programs or policies and in meeting regional objectives:
Current partnerships and management is working to protect the YCT core population of this segment. Existing agreements and management policies are in place to protect and enhance the ORV (YCT core population) of this segment.

The contribution to river system or basin integrity:
A limited contribution based on the size of the watershed and the size of the river segment as well as its physical location.

The potential for water resources development:
It is unlikely that water impoundments would be installed on the river segment. It is unlikely flood control, hydropower facilities, dredging or diversions or channelization will occur.

Finding: Suitable □ Non-suitable X
Rationale: Due to the limited BLM public land ownership and length of this segment, the YCT core population would not necessarily be enhanced by inclusion in the NWSRS. Existing agreements between local, state, and federal agencies are also in place to specifically protect and

further enhance the YCT core population. The road along the river segment and the travel on it would detract from the recreational opportunity and experience since the types of activities on the river segment and on the roadway are very different.

River Name: Yellowstone River, Pompeys Pillar

Location, ORV description, and classification:
The Yellowstone River – Pompeys Pillar is located in Yellowstone County approximated 25 miles northeast of Billings, Montana (Figure 8). The Yellowstone River flows over 500 miles through Montana from the Montana-Wyoming border near Gardiner, northeasterly to the Montana-North Dakota boundary northeast of Sidney. About 180 miles of the river flows through the BiFO planning area. Within this 180-mile river reach BLM administers approximately 30 miles of shoreline and islands, most of which are small, scattered parcels.

Recreational opportunities attract local, regional, national and international visitors. In addition to being part of the Lewis and Clark National Historic Trail (NHT), this segment includes the Pompeys Pillar National Monument which provides visitors the unique and rare opportunity to view one of the most important landmarks along the entire Lewis and Clark NHT - Captain William Clark's signature and date of passage carved in the soft sandstone. Wildlife viewing, especially birding, is exceptional and attracts local and regional visitors.

The Pillar is a prominent sandstone outcrop separated by erosion from the bluffs on the north side of the Yellowstone River. No other similar geologic features are found along Yellowstone River between Livingston, Montana and the confluence with the Missouri River.

Pompeys Pillar National Historic Landmark was designated in 1996, and the National Monument was designated in 2001. Pompeys Pillar itself is a massive sandstone outcrop with tall vertical cliffs, and is marked with over 5,000 inscriptions including petroglyphs, pictographs and historic names and dates. Native Americans of prehistoric and historic periods considered Pompeys Pillar a notable place on the river. It served as a viewpoint and a camping area, as well as ritual location. The location is known to have been a Crow encampment according to the diaries and memoirs and stories of both the Crow people and the Euro-Americans. Euro-American explorers, trappers and the military used the area as a convenient stopping place on the river. Described in diaries by Francois Antoine Larocque, followed by Lewis and Clark and members of their expedition, James P. Beckwourth and others, the rock becomes the focus of a variety of historic events. Pompeys Pillar is recorded as archaeological site 24YL0176. A rock shelter at the pillar may have been a burial area. The Lewis and Clark National Historic Trail is documented here with Clarks name and date of July 25, 1806 carved on the pillar during his return trip from the west. Clark's name and date carved on the pillar represents the only remaining on-site physical evidence of one of this nation's most important historical events.

Cultural Values: Pompeys Pillar has been a natural landmark for the native people of the northern plains through the region's more than 11,000 years of occupation. Most recently it was acknowledged as within the homeland of the Crow people. There is archaeological evidence the Pillar was used for religious and burial purposes.

The proposed Boundary is approximately 0.25-mile on from river bank on the south side of the river. The tentative classification is Recreational.

The current status of land ownership, minerals (surface and subsurface), use in the area, including the amount of private land involved and associated or incompatible uses. (Jurisdictional consideration must be taken into account to the extent that management would be affected.):
BLM Segment Length: 4.19 miles
Total Segment Lengths: 4.46 miles

The Pompeys Pillar segment is accessible by road and the river. Development along the segment is confined to the area near the Pillar, which includes a large visitor center and associated administrative facilities and two bridges. Public land on Bundy Island has been developed by MFWP into a Fishing Access Site with a gravel parking area, unpaved boat ramp and vault toilet.

The river is free of impoundments. Although most of the shoreline is undeveloped, the facilities associated with the Pompeys Pillar National Monument constitute substantial evidence of human activity. There is active farming on some of the public lands within the corridor. There are two bridge crossings. One provides northbound motorized travel and the other is an abandoned highway bridge converted to foot traffic.

BLM-administered lands are primarily located along south bank of this segment with one parcel of private lands. Pompeys Pillar is currently managed within various zones, including an ACEC and a separate National Monument, which already affords protective management. Bundy Island is a proposed Special Recreation Management Area, and would be considered no surface occupancy (oil and gas) to protect the values of the area. MFWP currently holds a right-of-way to maintain a Fishing Access Site. The north bank of this segment is privately owned except for a small stretch east of the Pillar; current primary uses include grazing, and residential development.

Ownership of the mineral estate has not been established due to the complexities arising from the multiple ownerships previous to BLM acquisition. To the extent that the federal government owns the minerals at Pompeys Pillar National Monument and ACEC, they are withdrawn through a Secretarial Withdrawal which was put in place when the BLM acquired the National Monument and ACEC.

There are no active oil and gas leases present.

There are two major bridges which cross the river at this location. One is an abandoned highway structure and the other is newer bridge which replaced it. It is the major access portal in the area north of the river.

The reasonably foreseeable potential uses of the land and water which would be enhanced, foreclosed or curtailed if the area were included in the NWSRS, and the values which could be foreclosed or diminished if the area is not protected as part of the NWSRS:
There are multiple local, state and federal agency jurisdictional authorities that partner to address impacts to the Yellowstone River. This segment of the Yellowstone River is a part of the Huntley Project Irrigation District (which was established in the early 1900s) and there are valid existing rights associated with municipal water supplies and irrigation (diversions, distribution and return flows) and there are likely incompatible uses already in place. Many of these agencies have differing goals and objectives for management and inclusion of this segment in the NWSRS could potentially conflict with those mandates and policies.

The existing multi-agency task force sponsored by the United States Army Corps of Engineers (USCOE) is addressing management and development along the entire Yellowstone River corridor. The goals of this task force are to enhance river values and protect the river environment. There could be some partnership opportunities to provide additional river management with MFWP, Yellowstone County, Crow Tribe, USCOE, Bureau of Reclamation and local communities or organizations. Concern has been expressed (through Yellowstone County Conservation District) about impacts to water rights from any designation. Yellowstone County Growth Plan addresses river-related values through their management goals and objectives. There are existing regulations in place for floodplain management.

If this segment is included in the NWSRS it could potentially attract more visitors to Pompeys Pillar and Bundy Island and could provide economic benefits to the local communities. The facilities are such that the area could accommodate increased visitation at Pompeys Pillar without impacting the resource values, as well as increase access opportunities to the Yellowstone River in this segment. The overall visitation to the area that may be generated as a result of a NWSRS designation is likely to be slight, but could diminish the current recreation experience, displace wildlife and create user conflicts. Peak visitation to the area occurred in 2006 during the Lewis and Clark Bicentennial celebration with visitation nearly 200% of typical levels. Since the bicentennial visitation has returned to pre-event levels and is increasing at less than 1% per year.

The federal agency or state agency that will administer the river and/or area should it be added to the NWSRS:
Bureau of Land Management

Federal, state, local, tribal, or other interests in the designation or non-designation of the river, including the extent to which the agency proposes that administration of the river, including the costs thereof, be shared by state, local, or other agencies and individuals:
The interest in designation or no designation by federal, state, local and tribal governments and national and local publics, as well as the State's political delegation, is beyond the scope of this RMP to consider. It is unknown whether the Native American tribes with affinity to this area would support or oppose a WSR designation

The estimated cost to the United States of acquiring necessary lands and interest in lands and of administering the area should it be added to the NWSRS:
The BLM has expressed interest in acquiring lands or interest in lands (willing buyer/willing seller basis) in the vicinity of Pompeys Pillar. This would enhance the opportunity to manage river-related values.

Several small scattered tracts located south of Interstate 94 have been identified for sale of exchange if the opportunity arises to consolidate land tenure patterns.

The interest in designation or no designation by federal, state, local and tribal governments and national and local publics, as well as the State's political delegation, is beyond the scope of this RMP to consider.
The interest in designation or no designation by federal, state, local and tribal governments and national and local publics, as well as the State's political delegation, is beyond the scope of this RMP to consider.

The federal agency's ability or other mechanisms (existing or potential) to protect and manage the identified river-related values other than WSR designation and/or the state/local government's ability to manage and protect the ORVs on non-federal lands:
Other methods of managing to protect values would be withdrawing the corridor from all mineral entry and proposing a No Surface Occupancy for Oil and Gas. All lands along the corridor could be placed in a retention zone or the agency could assist in placing conservation easements on adjacent private lands. Establishing all lands as VRM class II would help in preserving all values along the segment. This classification would not limit development but would provide protection through project design mitigation. Historic values could be protected through current historic preservation law. Historic and cultural properties could be better protected by providing additional educational and interpretive materials for the public. An evaluation of the adequacy of local zoning and other land use controls in protecting the river's ORVs by preventing incompatible development:

Support or opposition to designation:
The interest in designation or no designation by federal, state, local and tribal governments and national and local publics, as well as the State's political delegation, is beyond the scope of this RMP to consider.

Historical or existing rights which could be adversely affected:
There are number of existing Rights of Ways (ROWs) which cross the Yellowstone River at this location. These rights may be impacted through inclusion in the NWSRS. These include the following:

- Case File 27180, a 50' wide ROW for a 69 KV Power-line owned by Yellowstone Valley Electric Co., located in Section 22.
- Case File 94051, an underground ROW owned by Yellowstone Valley Electric Co., located in Section 21.
- Case File 90329, a 4.5 'wide ROW in Section 21 for the PPNM Visitor Center and associated facilities.

- A 7.2 KV Power-line for Yellowstone Valley Electric Co. in Section 20.
- Case File 82286 for the Sikes Act Habitat Agreement in Section 21.

The consistency of designation with other agency plans, programs or policies and in meeting regional objectives:
Designation may help or impede the goals of other tribal, federal, State, or Local agencies. Designation may contribute to some resource management actions, such as federal, state, or regional protection objectives for fish, wildlife, or cultural and historical resources. Similarly, the river or a segment portion such as this segment may have a limited recreation activity or setting that might better meet statewide, local, or regional goals. In this case as well however, designation might limit irrigation and/or flood control measures inconsistent with some regional socioeconomic goals. The designation for the public lands described in this river segment would be consistent and complementary with the BLM Billings RMP, as well as the Lewis and Clark National Historic Trail and the Pompeys Pillar National Monument designations by Congress.

The PPNM Proclamation is number 7396, with a date of 1/17/2001 and is Case File 91363.

The contribution to river system or basin integrity:
Many benefits are likely to result from managing the entire river, including the ability to design and then implement a holistic protection strategy in partnership with other agencies and the public. The Yellowstone River is the longest undammed river in the lower 48 states of the USA and has significant resources and activities occurring all along its entire course. BLM management responsibilities in the Billings Field Office are very limited and in most cases limited only to the public lands it directly manages (with exceptions such as the Lewis and Clark National Historic Trail).

The potential for water resources development:
The intent of the Act is to preserve selected waters from what would be considered harmful effects of water development projects. A designation could limit development of water resource projects as diverse as irrigation and flood control measures, hydropower facilities, dredging, diversion and channelization. None of these types of projects are being considered on the public lands in this segment since the lands have already been reserved as a National Monument and an ACEC to protect resource values. However, these projects could be proposed elsewhere on the Yellowstone River.

Finding: **Suitable □ Non-suitable X**
Rationale: All relevant ORVs are provided protection through existing BLM designations and other agency management policies. Recreational opportunities could continue to be enhanced with or without inclusion in the NWSRS. The human improvements which cross the river (ROWs and the two bridges) substantially affect the suitability factor for the tentative recreational classification. The existence of large agricultural fields and private residences on private lands within the corridor on both sides of the river also affects the determination.

Wild and Scenic River Management Guidelines

Interim Management of Suitable Segments

The WSR Act requires that interim management measures be developed to protect the free flowing nature, outstandingly remarkable values, and recommended classification of suitable segments until Congressional action regarding designation is taken.

The Billings RMP ID Team met in the summer of 2009 to study the seven (7) river segments in consideration of the suitability criteria. Discussions from this meeting, as well as other public comment form the basis of this suitability assessment. For maps of the river segments, refer to the maps at the end of the Eligibility section of this Appendix (above).

Wild and scenic rivers shall be managed with plans prepared in accordance with the requirements of the Act, other applicable laws, and the following general management principles. Management plans will state: General principles for any land acquisition which may be necessary; the kinds and amounts of public use which the river area can sustain without impact to the values for which it was designated; and specific management measures which will be used to implement the management objectives for each of the various river segments and protect esthetic, scenic, historic, archaeological and scientific features.

If the classification or classifications determined in the management plan differ from those stated in the study report, the management plan will describe the changes in the existing condition of the river area or other considerations which required the change in classification.
General Management Principles Section 10(a) states:

> "*…Each component of the nation's wild and scenic rivers systems shall be administered in such a manner as to protect and enhance the values which caused it to be included in said system without, insofar as is consistent therewith, limiting other uses that do not substantially interfere with public use and enjoyment of these values. In such administration primary emphasis shall be given to protecting its esthetic, scenic, historic, archaeologic and scientific features. Management plans for any such component may establish varying degrees of intensity for its protection and development on the special attributes of the area."*

This section is interpreted as stating a non-degradation and enhancement policy for all designated river areas, regardless of classification. Each component will be managed to protect and enhance the values for which the river was designated, while providing for public recreation and resource uses which do not adversely impact or degrade those values. Specific management strategies will vary according to classification but will always be designed to protect and enhance the values of the river area. Land uses and developments on private lands within the river area which were in existence when the river was designated may be permitted to continue. New land uses must be evaluated for their compatibility with the purposes of the Act.

The management principles which follow stem from section 10(a). Managing principles will be implemented to the fullest extent possible under their general statutory authorities and existing Federal, State and local laws. Because of these limitations, however, implementation of the

principles may differ among and within components of the system depending on whether the land areas involved are federally, State, locally or privately owned.

Carrying Capacity: Studies will be made during preparation of the management plan and periodically thereafter to determine the quantity and mixture of recreation and other public use which can be permitted without adverse impact on the resource values of the river area. Management of the river area can then be planned accordingly.

Public Use and Access: Public use will be regulated and distributed where necessary to protect and enhance (by allowing natural recovery where resources have been damaged) the resource values of the river area. Public use may be controlled by limiting access to the river, by issuing permits, or by other means available to the managing agency through its general statutory authorities.

Basic Facilities: The managing agency may provide basic facilities to absorb user impacts on the resource. Wild river areas will contain only the basic minimum facilities in keeping with the "essentially primitive" nature of the area. If facilities such as toilets and refuse containers are necessary, they will generally be located at access points or at a sufficient distance from the river bank to minimize their intrusive impact. In scenic and recreational river areas, simple comfort and convenience facilities such as toilets, shelters, fireplaces, picnic tables and refuse containers are appropriate. These, when placed within the river area, will be judiciously located to protect the values of the popular areas from the impacts of public use.

Major Facilities: Major public use facilities such as developed campgrounds, major visitor centers and administrative headquarters will, where feasible, be located outside the river area. If such facilities are necessary to provide for public use and/or to protect the river resource, and location outside the river area is infeasible, such facilities may be located within the river area provided they do not have an adverse effect on the values for which the river area was designated.

Motorized Travel: Motorized travel on land or water is generally permitted in wild, scenic and recreational river areas, but will be restricted or prohibited where necessary to protect the values for which the river area was designated.

Agricultural and Forestry Practices: Agricultural and forestry practices should be similar in nature and intensity to those present in the area at the time of designation. Generally, uses more intensive then grazing and hay production are incompatible with river classification. Row crop production and timber harvest may be practiced in recreational and scenic river areas. Recreational river areas may contain an even larger range of agricultural and forestry uses. Timber harvest in any river area will be conducted so as to avoid adverse impacts on the river area values.

Other Resource Management Practices: Resource management practices will be limited to those which are necessary for protection, conservation, rehabilitation or enhancement or the river area resources. Such features as trail bridges, fences, water bars and drainage ditches, flow measurement devices and other minor structures or management practices are permitted when

compatible with the classification of the river area and provided that the area remains natural in appearance and the practices or structures harmonize with the surrounding environment.

Water Quality: Consistent with the Clean Water Act, water quality in wild, scenic and recreational river areas will be maintained or, where necessary, improved to levels which meet Federal criteria or federally approved State standards for aesthetics and fish and wildlife propagation. River managers will work with local authorities to abate activities with the river area which are degrading or would degrade existing water quality.

Additional management principles stem from other sections of the Act as follows:

- Land Acquisition: Section 6
- Water Resource Development: Section 7
- Mining: Section 9
- Management of Adjacent Federal Lands: Section 12(a)
- Hunting and Fishing: Section 13(a)
- Water Rights: Section 13(b)-(f)
- Rights-of-Way: Section 13(a)

The following policies are consistent with and supplement the management principles stated in the Act:

Land Use Controls: Existing patterns of land use and ownership should be maintained, provided they remain consistent with the purposes of the Act. Where land use controls are necessary to protect river area values, the managing agency will utilize a full range of land-use control measures including zoning, easements and fee acquisition.

Rights-of Way: In the absence of reasonable alternative routes, new public utility rights-of-way on Federal lands affecting a Wild and Scenic River area or study area will be permitted. Where new rights-of-ways are unavoidable, locations and construction techniques will be selected to minimize adverse effects on scenic, recreational, fish and wildlife and other values of the river area.

Other legislation applicable to the various managing agencies may also apply to wild and scenic river areas. Where conflicts exist between the provisions of the Wild and Scenic Rivers Act and acts applicable within the system, the more restrictive provisions providing for protection of the river values shall apply.

An interdisciplinary team of BLM resource specialists prepared this Suitability Study.

List of Preparers	
Name	**Role/Responsibility**
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American Whitewater 2006. Internet Website:
http://www.americanwhitewater.org/content/River/state-summary/state/MT

BLM Master Title Plats (MTPs):

T. 9 S., R. 27 E.
T. 9 S., R. 26 E.
T. 4 S., R. 16 E.
T. 8 S., R. 26 E.
T. 3 N., R. 30 E.

BLM Range Allotment Files

BLM Right of Way (ROW) Case Files

Appendix AC:
Land Health Standards

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I. Land Health Standards

(derived from: Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands Administered by the Bureau of Land Management for Montana and the Dakotas)

I.1 Preamble

Rangeland health can be defined as the degree to which the integrity of the physical and ecological processes of the rangeland ecosystems are sustained.

The capacity of rangelands to produce commodities and satisfy values on a sustained basis depends upon the internal, self-sustaining ecological processes such as soil development, nutrient cycling, energy flow, and the structure and dynamics of plant and animal communities.

Rangeland health is the minimum ecological standard, independent of the rangeland's use and how it is managed. If rangeland health is protected, a variety of uses could be appropriate for any particular rangeland.

Standards apply to rangeland health and not to the important by-products of healthy rangelands such as more fish, higher livestock weaning weights, regional social and cultural values, increased timber production, economic viability of livestock operations or higher numbers of game animals. It is sustainability of the processes, of rangeland health, that produces these social values and commodities.

The Bureau of Land Management is committed to grazing as an appropriate use of public rangelands and to maintaining healthy and productive rangelands that support stable western communities. This is a commitment that began with the Taylor Grazing Act, which reversed the decline in the health of the range, is reiterated in the Federal Land Policy Management Act that ensures public lands are managed for multiple use and guarantees grazing as an activity on the public lands.

Standards for Rangeland Health and Guidelines for Livestock Grazing Management are intended to maintain healthy and productive public rangelands that are essential to support long-term grazing and stable communities that rely on the land.

Standards apply to the health of the land. All uses of public rangeland need to be conducted in such a manner that standards are achieved. Standards are measurable levels of resource quality, condition, or function upon which management decisions are based. It is BLM's policy to achieve rangeland health standards through management of existing uses when feasible.
Standards provide the technical and scientific basis for measuring progress towards healthy productive rangelands.

Disturbance regimes such as fire, climatic events, geology, the natural and historic range of variability and the potential of the area are considered when assessing rangeland health.
Standards are not expected to recreate theoretical "pristine" rangeland conditions that may have existed before livestock grazing began. It is assumed that most areas will be grazed unless there is no way to graze them and still achieve standards or the area is dedicated to other uses such as campgrounds, mining, and cultural or historical sites, like Pompeys Pillar.

At a minimum, State or regional standards must address:

- watershed function; - nutrient cycling and energy flow; - water quality; - habitat for endangered, threatened, proposed, Candidate 1 or 2 or special status species; and - habitat quality for native plant and animal populations and communities.

Guidelines for grazing management are the types of grazing management methods and practices determined to be appropriate to ensure that standards can be met or that significant progress can be made toward meeting standards.

Guidelines are best management practices (BMP), treatments, and techniques and implementation of range improvements that will help achieve rangeland health standards. Guidelines are flexible and are applied on site specific situations.

Field managers must determine if standards are being met, consider what factors are causing standards not to be met, and take appropriate action to deal with those factors. If livestock grazing is preventing achievement of standards, then guidelines would be applied through terms and conditions. If an area is not meeting standards due to conditions that are not related to livestock grazing then the grazing management may not need to be adjusted.

Guidelines may be adapted or changed when monitoring or other information indicates the guidelines are not effective or a better means of meeting applicable standards exist.

The new grazing regulations under 43 CFR 4180.2(e) require that minimum, state or regional guidelines developed must address a list of attributes:

- maintain or promote adequate amounts of vegetative ground cover;
- maintain or promote subsurface soil conditions;
- maintain, improve or restore riparian-wetland functions;
- maintain or promote stream channel morphology;
- maintain or promote appropriate kinds and amounts of soil organisms, plants and animals;
- promote the opportunity for seedling establishment;
- maintain, restore, enhance water quality;
- restore, maintain or enhance T&E habitat;
- restore, maintain, enhance T&E candidate and special status species habitat;
- maintain or promote native populations and their communities;
- emphasize native species in the support of ecological function; and
- only incorporate the use non-native plant species when native species are not available or are incapable of achieving proper functioning condition.

Terms and conditions of permits and leases are specific actions in the permit or lease that implement the spirit and intent of the standards and guidelines.

Terms and conditions are site specific. They are determined by an interdisciplinary team in consultation with permittees and interested parties for each individual allotment. Terms and conditions are a tool to achieve resource conditions in the standard. They are meant to be modified if monitoring data shows those terms and conditions currently being applied are not achieving desired results.

I.2 Standards for Rangeland Health

Standards are statements of physical and biological condition or degree of function required for healthy sustainable rangelands. Achieving or making significant progress towards these functions and conditions is required of all uses of public rangelands. Historical data, when available, should be utilized when assessing standards.

MILES CITY STANDARD #1: Uplands are in proper functioning condition.

This means that soils are stable and provide for the capture, storage and safe release of water appropriate to soil type, climate and landform. The amount and distribution of ground cover (i.e., litter, live and standing dead vegetation, microbiotic crusts, and rocks/gravel) for identified ecological site(s) or soil plant associations is appropriate for soil stability. Evidence of accelerated erosion in the form of rills and/or gullies, erosional pedestals, flow patterns, physical soil crusts/surface sealing and compaction layers below the soil surface is minimal. Ecological processes including hydrologic cycle, nutrient cycle and energy flow are maintained and support healthy biotic populations. Plants are vigorous, biomass production is near potential and there is a diversity of species characteristic of and appropriate to the site.

As indicated by:

- Physical Environment
  - erosional flow patterns; - surface litter; - soil movement by water and wind; - infiltration; - soil crusting and surface sealing; - compaction layer; - rills; - gullies; - cover amount; and - cover distribution.
- Biotic Environment
  - community diversity; - community structure; - exotic plants; - photosynthesis activity; - plant status; - seed production; - recruitment; and - nutrient cycle.

MILES CITY STANDARD #2: Riparian areas and wetlands are in proper functioning condition.

This means that the functioning condition of riparian-wetland areas is a result of the interaction among geology, soil, water, and vegetation. Riparian-wetland areas are functioning properly when adequate vegetation, landform, or large woody debris is present to dissipate stream energy associated with high waterflows, thereby reducing erosion and improving water quality; filter sediment, capture bedload, and aid flood plain development; improve flood water retention and ground water recharge; develop root masses that stabilize streambanks against cutting action; develop diverse ponding and channel characteristics to provide the habitat and the water depth, duration, and temperature necessary for fish production, waterfowl breeding, and other uses; and support greater biodiversity.

The riparian/wetland vegetation is controlling erosion, stabilizing streambanks, shading water to reduce stream temperature in the summer and provide thermal protection in the winter, stabilizing shorelines, filtering sediment, aiding flood plain development, dissipating energy, delaying floodwater, and increasing recharge of ground water where appropriate to landform.

The stream channels and flood plain dissipate the energy of high water flows and transport sediment appropriate for the geomorphology (e.g., gradient, size, shape, roughness, confinement, and sinuosity), climate, and landform. Soils support appropriate riparian-wetland vegetation, allowing water movement, filtering sediment, and storing water for later release. Stream channels are not entrenching and water levels maintain appropriate riparian/wetland species.

Riparian Areas are defined as an area of land directly influenced by permanent water. It has visible vegetation or physical characteristics reflective of permanent water influence. Lake shores and streambanks are typical riparian areas. Excluded are such sites as ephemeral streams or washes that do not exhibit the presence of vegetation dependent upon free water in the soil.

Proper functioning condition of riparian areas are Indicated by:

- Hydrologic
  - floodplain inundated in relatively frequent events;
  - amount of altered streambanks;
  - sinuosity, width/depth ratio, and gradient are in-balance with the landscape setting (i.e., landform, geology, and bioclimatic region);
  - riparian zone width; and
  - upland watershed not contributing to riparian degradation.
- Erosion Deposition
  - floodplain and channel characteristics, i.e., rocks, coarse and/or woody debris adequate to dissipate energy;
  - point bars are vegetating;
  - lateral stream movement is associated with natural sinuosity;
  - system is vertically stable;
  - stream is in-balance with water and sediment being supplied by the watershed (i.e., no excessive erosion or deposition); and
  - bare ground.
- Vegetation
  - reproduction and diverse age structure of vegetation;
  - diverse composition of vegetation;

- species present indicate maintenance of riparian soil moisture characteristics;
- streambank vegetation is comprised of those plants or plant communities that have deep binding root masses capable of withstanding high streamflow events;
- utilization of trees and shrubs;
- healthy riparian plants; and
- adequate vegetative cover present to protect banks and dissipate energy during high flows.

MILES CITY STANDARD #3: Water quality meets Montana State standards.

This means that surface and ground water on public lands fully support designated beneficial uses described in the Montana Water Quality Standards.
As indicated by:

- dissolved oxygen concentration;
- pH;
- turbidity;
- temperature;
- fecal coliform;
- sediment;
- color;
- toxins; and
- others: ammonia, barium, boron, chlorides, chromium, cyanide, endosulfan, lindane, nitrates, phenols, phosphorus, sodium, sulfates, etc.

MILES CITY STANDARD #4: Air quality meets Montana State standards.

This means that air quality on public lands helps meet the goals set out in the State of Montana Air Quality Control Implementation Plan. Efforts will be made to limit unnecessary emissions from existing and new point or non-point sources.

Bureau of Land Management management actions or use authorizations do not contribute to air pollution that violates the quantitative or narrative Montana Air Quality Standards or contributes to deterioration of air quality in selected class areas.

As indicated by:

Section 176(c) Clean Air Act which states that activities of all Federal agencies must conform to the intent of the appropriate State Air Quality Implementation Plan and not:

- cause or contribute to any violations of ambient air quality standards;
- increase the frequency of any existing violations; and
- impede the State's progress in meeting their air quality goals.

MILES CITY STANDARD #5: Habitats are provided for healthy, productive, and diverse native plant and animal populations and communities. Habitats are improved or maintained for special status species (federally threatened, endangered, candidate or Montana species of special concern).

This means that native plant communities will be maintained or improved to ensure the proper functioning of ecological processes and continued productivity and diversity of native plant lifeforms. Where native communities exist, the conversion to exotic communities after disturbance will be minimized. Management for native vegetation is a management priority.

Ecological processes including hydrologic cycle and energy flow are maintained and support healthy biotic populations. Plants are vigorous, biomass production is near potential and there is a diversity of species characteristic of and appropriate to the site. The environment contains all the necessary components to support

viable populations of a sensitive/threatened and endangered species in a given area relative to site potential. Viable populations are wildlife or plant populations that contain an adequate number of reproductive individuals distributed on the landscape to ensure the long-term existence of the species.

As indicated by:

- plants and animals are diverse, vigorous and reproducing satisfactorily, noxious weeds are absent or insignificant in the overall plant community;
- an effective weed management program is in place;
- spatial distribution of species is suitable to ensure reproductive capability and recovery; - a variety of age classes are present (at least two age classes);
- connectivity of habitat or presence of corridors prevents habitat fragmentation
- diversity of species (including plants, animals, insects and microbes) are represented; and
- plant communities in a variety of successional stages are represented across the landscape.
-

This will be accomplished by allowing progression of succession in conjunction with livestock grazing.

The following table lists the number of allotments assessed to date and the number of acres by category in the planning area:

Table AC-1: Rangeland Conditions

Rangelands meeting all Standards		Rangelands making significant progress toward meeting Standards		Rangelands not meeting Standards, but changes have been made		Rangelands not meeting Standards and no changes have been made		Rangelands not meeting Standards due to causes other than livestock grazing		No Assessment Completed	
Allotments	Acres*	Allotments	Acres*	Allotments	Acres	Allotment	Acres*	Allotments	Acres*	Allotments	Acres*
309	309,658	34	41,153	8	3,675	1	80	2	80	16	6,835
Figures listed below represent Land Health Standards for lands/allotments located within Priority Sage-Grouse habitat											
85	194,762	12	33,251	2	1,501	0	0	0	0	3	1,135

Note:
Source: 2012 year end rangeland monitoring report.
* Due to acreage accounting differences in the PMWHR, the administrative pastures are double counted as an allotment and as part of the HMA.

I.3 Guidelines

Guidelines for grazing management are preferred or advisable approaches to grazing management practices determined to be appropriate to ensure that standards can be met or that significant progress can be made toward meeting the standard(s).

Guidelines are provided to maintain or improve resource conditions in upland and riparian habitats available to livestock grazing. In both riparian and upland habitats, these guidelines focus on establishing proper functioning conditions. The application of these guidelines is dependent on individual management objectives. Desired future conditions in plant communities and streambank characteristics will be determined on a case-by-case basis.

MILES CITY GUIDELINE #1:

Grazing will be managed in a manner that will maintain the proper balance between soils, water, and vegetation over time. This balance varies with location and management objectives, but acceptable levels of use can be developed that are compatible with resource objectives.

MILES CITY GUIDELINE #2:

Manage grazing to maintain watershed vegetation, biodiversity, and flood plain function. Maintain riparian vegetative cover and structure to trap and hold sediments during run-off events to rebuild streambanks, restore/recharge aquifers, and dissipate flood energy. Promote deep-rooted herbaceous vegetation to enhance

streambank stability. Where potential for woody shrub species (willows, dogwood, etc.) exists, promote their growth and expansion to aid in controlling animal access to streambanks, and to provide wildlife cover.

MILES CITY GUIDELINE #3:

Pastures and allotments will be identified based on their sensitivity and suitability for livestock grazing. Unsuitable or potentially unsuitable areas may be fenced into separate management areas, or managed more intensively.

MILES CITY GUIDELINE #4:

Based on long-term monitoring, management strategies for livestock grazing will ensure that long-term resource capabilities can be sustained over time. Natural and management induced streambank alteration, end of season stubble heights, 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.

Where appropriate, acceptable levels of streambank alteration and herbaceous/woody utilization should be identified on a site-specific basis, and used as terms and conditions. Compatible seasons and duration of use, rest periods, stocking rates, structural facilities, and management activities can then be designed to ensure that standards are achieved.

MILES CITY GUIDELINE #5:

Frequency of grazing and extent of defoliations will be managed to promote desired plants and plant communities, based on the rate and physiological conditions of plant growth. To meet these plant growth considerations, the following could be applied: No grazing unit should be grazed for more than half the growing season of key plant species. Periods of use throughout the growing season (early, mid, late) should be alternated from year to year. Defer each field from grazing until seeds set at least once every 3 years. The season of use should be alternated from year to year to allow for regeneration of woody and herbaceous species. Stages of plant growth, length of grazing period, target utilization levels, and frequency of grazing should be used to determine when livestock are ready to be moved to another grazing unit, instead of calendar dates. Caution should be used with 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 can result in excessive utilization.

MILES CITY GUIDELINE #6:

Monitoring is essential to determine if management guidelines and terms and conditions are meeting standards or making significant progress towards achieving standards. Monitoring data over time shall be used to make adjustments to grazing management as needed. In monitoring standards, Bureau of Land Management will consider the impacts of all multiple uses on public rangelands.

MILES CITY GUIDELINE #7:

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.

MILES CITY GUIDELINE #8:

Locate new facilities (e.g., corrals, water developments) away from riparian-wetland areas.

MILES CITY GUIDELINE #9:

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. Generally, 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.

MILES CITY GUIDELINE #10:

For guidelines for noxious weed management refer to "Guidelines for Coordinated Management of Noxious Weeds in the Greater Yellowstone Area." These guidelines provide a unified effort in developing a public awareness program; a prevention program; and a common inventory, mapping, monitoring, and reporting procedure. An overall management plan and specific action plans can be developed for logical units of land called weed management areas.

MILES CITY GUIDELINE #11:

Grazing management practices should maintain or promote the interaction of the hydrologic cycle, nutrient cycle and energy flow that will support the appropriate types and amounts of soil organisms, plants, and animals appropriate to soil type, climate and landform.

MILES CITY GUIDELINE #12:

Livestock management should utilize management practices for livestock grazing that meet or exceed those best management practices approved by the State of Montana in order to maintain, restore or enhance water quality.

MILES CITY GUIDELINE #13:

Grazing management practices should maintain or improve habitat for federally listed threatened, endangered, and special status plants and animals.

MILES CITY GUIDELINE #14:

Grazing management practices should maintain or promote physical, ecological and biological functions and conditions to sustain native plant and animal communities.

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