

**U.S. Department of the Interior  
Bureau of Land Management**

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March 15, 2016

**NORTH VALLEY ACCESS ROAD EA**

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Location:

Valley County, Montana, PMM

U.S. Department of the Interior  
Bureau of Land Management (BLM)  
HiLine District

Glasgow Field Office  
5 Lasar Drive  
Glasgow, MT 59230



## **CHAPTER 1**

### **INTRODUCTION and PURPOSE/NEED**

#### **Introduction**

The proposed action is to establish a total of approximately four miles of new trail for public motorized vehicle access in North Valley County, MT in order to ensure public access into approximately 50 sections (> 32,000 acres) of public lands. The existing trails are inaccessible through small tracts of private land and connect a 25-mile route through public lands. These trail segments are needed to bypass private property, where trails have been closed in the past, and ensure public access to public land. The new trail segments would be created, without construction and only if the current trail on private land is closed to the public. This would occur by establishing two-track trails in several sections of various lengths as depicted in the drawings below. Over 90% of the existing route is through public lands and will continue to use the currently existing trail. The new sections will bypass deeded land and link up to the existing trail to provide a through route into the area which is continuously on public land (see maps at end of document).

#### **Purpose/Need**

The purpose of the proposed action is to ensure public access for motorized vehicles to approximately 50 sections of public lands in north Valley County where motorized access is currently dependent on trails that intermittently cross private land.

The need for the proposed action is that access to a significant amount of public land, which is popular to recreationists and hunters, may be denied by the owner of the private land through which the current trail passes. The BLM wants to ensure that historical access to the significant amount of potentially blocked public land is maintained.

#### **Decision to be Made**

The Glasgow Field Manager must decide whether to choose the proposed action which would be to authorize the establishment of the proposed trail segments or to choose the No Action alternative and not authorize the establishment of the proposed trail segments.

#### **Scoping**

Internal scoping of the proposed action and no action alternative was completed by e-mailing scoping requests to various resource specialists in the Glasgow Field Office, as well as other resource specialists in the HiLine District, whose expertise was not available locally. Resource issues, problems, conflicts, and suggestions for both alternatives were compiled and resources that would not be affected to a degree that further analysis was warranted, were eliminated from further consideration.

## **Resources/Issues Identified for Potential Analysis**

The following resources/issues are present in Valley County and may be present within an area affected by the proposed action: surface water, wetlands, riparian resources, soils, upland vegetation, noxious and invasive weeds, wildlife (including migratory birds and special status species), cultural resources, Native American Concerns, recreation and access, special designations, wilderness characteristics and visual resources. Below is a list of Resource Impact Indicators of the resources/issues that are being carried forward for analysis:

How would the proposed action and the alternative affect Surface Water, Wetlands, and Riparian Resources?

### Resource Impact Indicator(s):

- Indicator 1 - Surface water quality
- Indicator 2 - Alteration to the natural hydrologic regime
- Indicator 3 - Alteration of natural and man-made wetlands.

How would the proposed action and the alternative affect Soils?

### Resource Impact Indicator(s):

- Indicator 1 - Erosion
- Indicator 2 - Rutting and Compaction
- Indicator 3 - Loss of soil productivity

How would the proposed action and the alternative affect Wildlife and Special Status Species?

### Resource Impact Indicator(s):

- Indicator 1 - Effects to Greater sage-grouse due to the new road within the Priority Habitat Management Area.
- Indicator 2 - Effects to Mule deer winter range
- Indicator 3 - Effects to Pronghorn Antelope winter range

How would the proposed action and the alternative affect Recreation and Access?

### Resource Impact Indicator(s):

- Indicator 1 – Impacts on recreationists and access to public lands

How would the proposed action and the alternative affect Visual Resources?

### Resource Impact Indicator(s):

- Indicator 1 – Effects on viewshed in VRM Class II area

How would the proposed action and the alternative affect current native vegetation?

### Resource Impact Indicator(s):

- Indicator 1 - Localized effect to native vegetation
- Indicator 2 - Potential threat of noxious and invasive weeds due to disturbance of native vegetation.

## **Resources/Issues Considered, but Eliminated from Further Analysis**

The following were identified during pre-planning but were eliminated from further study by the resource specialists (see attached pre-planning worksheets): grazing administration/ livestock grazing, Native American concerns, paleontological and cultural resources, lands with wilderness characteristics and special designations.

### **Cultural Resources:**

A file records search revealed that no previous Class III cultural resource inventories had been performed within the boundaries of the proposed road tracks. Furthermore; the file/records search also indicated the presence of multiple cultural resource locations nearby, due to the proximity of potentially significant sites and lack of inventory it was determined that all locations would require formal Class III inventory prior to construction.

A Class III cultural resource inventory was undertaken August 11<sup>th</sup> and September 22, 2015 (BLM report # 16-MT-064-002). No significant cultural resource locations were recorded w/n the proposed APE. Therefore; a finding of “No Historic Properties affected” is appropriate.

### **Native American Concerns**

Through past and ongoing consultation, the proposed project areas have not been identified as areas of concern for any Native American Tribe.

### **Paleontological Resources**

A field visit and inspection performed by the BLM occurred on August 11, 2015. This field visit established that each trail segment is located in an area or depositional environment that is not conducive to the presence of paleontological resources.

### **Grazing Administration/ Livestock Grazing**

The livestock grazing permit and associated livestock grazing management are not affected by the creation of the new route or trail. The permit does not require changes to make this action possible. The permittee and associated Allotment Management Plans will not be altered due to the creation of a new route.

### **Lands with Wilderness Characteristics**

In 2011, BLM performed a comprehensive inventory update of lands that meet the minimum criteria for wilderness characteristics. The proposed project area was determined to not meet these minimum criteria during that inventory update.

### **Special Designations**

None of the proposed trail segments are located in areas with special designations.

## **CHAPTER 2**

### **THE PROPOSED ACTION AND ALTERNATIVES**

#### **Introduction**

Alternatives were developed based upon National and State BLM direction and policy, existing conditions and resource issues. Resource issues are discussed in Chapter 1. Other factors that influenced alternative development are discussed in Chapter 3.

#### **Alternative A: Proposed Action**

The proposed action is to establish approximately 4 total miles of motorized vehicle trail in several segments. Existing trail on BLM land would be utilized where it is present and new segments of two-track trail would be established to bypass deeded ground and link up to the existing BLM trails. A total of approximately 4.84 acres of land would be disturbed. The new trail would be established by vehicle usage and signs. As with any BLM trail, if erosion or other problems develop with the trail in the future, BLM standard construction stipulations and mitigation measures would apply (see Appendix 1).

#### **Alternative B : No Action**

The “no action” alternative would be to not establish the access trail segments and potentially have a large amount of public land unavailable to the public land users.

#### **Conformance with the Land Use Plan**

The public lands in the project area have been managed according to decisions in the Approved Valley Resource Area Resource Management Plan (JVP RMP) approved in September 1994. In September 2015, the Record of Decision was signed for the HiLine District Office Approved RMP. The proposed action is in conformance with the RMP because it is specifically provided for in the Access section on page 3-20 where the objective states as follows:

*Objective: Acquire or retain and mark access to BLM land in cooperation with private landowners; state, local and tribal governments; and other federal agencies in order to improve efficiency of multiple use management and to facilitate public enjoyment of these lands.*

## **RELATIONSHIP TO STATUTES, REGULATIONS, OR OTHER PLANS**

The BLM has the responsibility and authority to maintain and operate facilities to provide for public use and safety and is authorized by multiple legislation, authorities, and references. They include, but are not limited to:

- Federal Land Policy and Management Act of 1976, as amended
- Executive Order 11988 - Floodplain Management, amended by Executive Order 12148 - Federal Emergency Management
- BLM Manual 9102, Facility Design
- BLM Manual 9103, Facility Construction
- BLM Manual 9104 Facility Maintenance
- Federal Emergency Management Agency (FEMA) 64, FEMA 93, FEMA 94, FEMA 333, FEMA 1448

## **CHAPTER 3**

### **AFFECTED ENVIRONMENT**

#### **Introduction**

The affected environment section describes the existing condition and trend of issue-related elements of the human environment that may be affected by implementing the proposed action or an alternative. This discussion is organized by the resource issues that were identified in Chapter 1 and provides the baseline for comparison of impacts/consequences described in Chapter 4.

All of the proposed developments are located in Valley County in areas of mixed grass prairie. The major uses that occur in this area are livestock grazing, hunting in the fall months, sightseeing and bird watching.

#### **General Setting**

The project area encompasses a portion of north Valley County where the primary resources are vegetation for livestock grazing and wildlife habitat. The area is a popular dispersed recreation area used mostly by hunters and wildlife viewers.

The average annual precipitation range is 10-14 inches. The vegetation on the hills is composed of warm and cool season species such as western wheatgrass, green needlegrass, needle and thread, prairie junegrass, prairie sand reed, sun sedge, blue gramma, creeping juniper, silver sagebrush, rubber rabbit brush, broom snakeweed, and fringed sagewort. The drainage bottoms are composed of species such as wheatgrass ssp., Sandberg's bluegrass, Common Spikerush, alkali sacaton, American licorice, sandbar willow, leafy spurge, cocklebur, inland saltgrass, yellow willow, nuttall saltbush, wood's rose, western snowberry, common spikerush, greasewood, and silver sage.

## **Relevant Past and Ongoing Actions**

Hunting has been a popular activity taking place in the Proposed Project Area in the past and it is an ongoing activity. Most of the public use takes place in the fall during hunting seasons.

Currently, the Glasgow Field Office is conducting Travel Management Planning in this area and these segments will be included in the decision as contingent segments.

## **Resources Brought Forward for Analysis**

### **Surface Water, Wetlands, and Riparian Resources:**

The segments of motorized vehicle trail have been proposed in the Deep Creek, Lone Tree Coulee, Lower Willow Creek, and Middle Willow Creek USGS delineated hydrologic units. These hydrologic unit basins exist within the BLM delineated Willow North and Rock Creek Watersheds. All flowing surface water in the area of the proposed action heads toward Willow Creek, which flows into Rock Creek, and then, roughly 45 stream miles from the proposed action, into the Milk River. MDEQ and the EPA have not identified water quality impairments within Willow Creek or the tributary drainages associated with the proposed road segments.

Of the six proposed road segments, three would include new crossings of ephemeral flow paths:

- Proposed Access Road #1 would cross an Unnamed Tributary to Big Coulee in T. 34 N., R. 36 E., sec 13 W ½NWSE (see Appendix 4, Image 1)
  - This flow path is non-riparian and is dominated by Western Snowberry (*Symphoricarpos occidentalis*), Leafy Spurge (*Euphorbia esula*), Rose (*Rosa woodsii*), Sunflower (*Helianthus ssp.*), Yellow Sweet Clover (*Melilotus officinalis*), Wheatgrass (*Elymus Spp.*), Cudweed Sagewort (*Artemisia ludoviciana*), and Creeping Juniper (*Juniperus horizontalis*). A Green Ash (*Fraxinus pennsylvanica*) is also present.
- Proposed Access Road #4 would cross an Unnamed Tributary to Willow Creek in T. 35 N., R. 37 E., sec 28 S½SWSE (see Appendix 4, Image 2)
  - This flow path is non-riparian and is dominated by Licorice (*Glycyrrhiza*), Fringed Sagebrush (*Artemisia frigida*), Rose (*Rosa woodsii*), Wheatgrass (*Elymus Spp.*), Silver Sagebrush (*Artemisia cana*), Cudweed Sagewort (*Artemisia ludoviciana*), and Little bluestem (*Schizachyrium scoparium*).
- Proposed Access Road #6 would cross an Unnamed Tributary to Deep Creek in T. 36 N., R. 38 E., sec 25 SESENE (see Appendix 4, Image 3)
  - This flow path is non-riparian and is dominated by Wheatgrass (*Elymus Spp.*) and other upland grasses, Silver Sagebrush (*Artemisia cana*), Cudweed Sagewort (*Artemisia ludoviciana*), Licorice (*Glycyrrhiza*), and Rose (*Rosa woodsii*). Traces of Common Spikerush (*Eleocharis palustris*) are present where pool saturation duration enables.

Of the six proposed road segments, three would be in close proximity to existing wetlands:

- Proposed Access Road #3 would cross the embankment of BLM constructed Enos Reservoir in T. 34 N., R. 37 E., sec 5 E½NE on an Unnamed Tributary to Willow Creek. This tributary drainage has been inventoried as Non-Riparian. Enos Reservoir was constructed in 2002 with a capacity of 14.4 ac.ft.. The embankment is 500 ft. in length; roughly 185 ft. of the southeast end of the embankment resides on Private Surface.

Wetland vegetation has established within the inundated footprint behind the embankment of Enos Reservoir. Satellite imagery indicates that the impoundment tends to retain approximately 4 ac.ft. of water throughout the growing season (see Appendix 4, Image 4). The vegetation present within the wetland includes Foxtail Barley (*Hordeum jubatum*), Common Spikerush (*Eleocharis palustris*), Western Wheatgrass (*Elymus smithii*), Curly Dock (*Rumex crispus*), Sandbar Willow (*Salix exigua*), *Potamogeton spp.*, and other submerged aquatic species. A pasture boundary fence of Allotment 04718 runs north-to-south across the embankment and through the intermittent wetland.

- Proposed Access Road #4 would cross the embankment of BLM constructed Hackamore Reservoir in T. 35 N., R. 37 E., sec 33 W½SE. Hackamore Reservoir was constructed in 1971 with a capacity of 18 ac.ft. on an Unnamed Tributary to Willow Creek. The embankment is 470 feet long and about 15 feet wide at the crest (see Appendix 4, Image 5). The initial construction included a 2" galvanized steel pipe installed through the embankment to serve the purpose of watering livestock and wildlife on public land after freeze over, per the 1970-signed AMP. The 2" pipe is still in place but its functionality is unknown. Goose-habitat islands were constructed in 1983.

Depending on weather and antecedent conditions, Hackamore Reservoir retains roughly 9 ac.ft. of water during the warm season. The drainage flowpath has been inventoried by the BLM as Non-Riparian but the U.S. Fish and Wildlife Service has inventoried the reservoir as 1.33 acres PABFh Wetland (*Palustrine, Aquatic Bed, Semipermanently Flooded, Diked/Impounded*) and 0.56 acres of PEMCh Wetland (*Palustrine, Emergent, Seasonally Flooded, Diked/Impounded*).

- Proposed Access Road #5 (as depicted in the Bitter Creek Proposed Access Road #5 map within this document) would cross a PEMA Wetland (*Palustrine, Emergent, Temporarily Flooded*) located in T. 35 N., R. 38 E., section 18 S½Lot 4 and section 19 N½Lot 1. This wetland is a highly ephemeral Great Plains Closed Depressional Wetland that is roughly 4 acres in size. The existing two-track trail, on private surface, passes through the wetland in Section 19 for a length of 310 feet (see Appendix 4, Image 6 and Image 7).

### **Soils:**

Soils were identified from the Natural Resources Conservation Service's (NRCS) Web Soil Survey (WSS) website (<http://websoilsurvey.nrcs.usda.gov/app/>) and confirmed at the time of an onsite visit (8/21/2015). Soil surveys were performed by the NRCS according to National Cooperative Soil Survey (NCSS) standards.

Soils in the project area formed in continental glacial till, alluvium, and residuum weathered from clayey shale. Rounded and sub-angular surface and subsurface gravels, cobbles and stones are common. Soluble salts and sodium are present. The primary soil map units (SMU) the proposed action would occur on are: Map Unit: 1—Absher-Vaeda complex, 1 to 5 percent slopes; Map Unit: 7—Elloam clay loam, 1 to 5 percent slopes; Map Unit: 8—Elloam gravelly clay, 2 to 9 percent slopes; Map Unit: 46—Phillips loam, 0 to 5 percent slopes; Map Unit: 47—Phillips-Elloam complex, 1 to 9 percent slopes; Map Unit: 48—Phillips-Nobe-Absher complex, 1 to 5 percent slopes; Map Unit: 59—Scobey-Sunburst clay loams, 5 to 25 percent slopes; Map Unit: 75—Ustic Torrifluvents, gently sloping; and, Map Unit: 61—Sunburst-Lisam complex, 9 to 35 percent slopes. Table 1 lists each SMU the proposed trail segments would be on. Table 2 lists the Erosion Hazard and Suitability for Roads (Natural Surface) ratings for each SMU.

Appendix 2 provides a description of the major soils that occur in a SMU. Descriptions of non-soil (miscellaneous areas) and minor SMU components are not included.

Table 1. Soil Map Units for each Trail Segment (NRCS 2015).

Trail Segment	Soil Map Unit
1	47, 61
2	1
3	75
4	46, 59, 61
5	47
6	7, 8, 47, 48

Table 2. Erosion Hazard and Suitability for Roads (Natural Surface) rating for each SMU (NRCS, 2015).

Soil Map Unit	Erosion Hazard (Road/Trail) <sup>1</sup>	Suitability For Roads (Natural Surface) <sup>2</sup>	
		Rating Class	Limiting Feature(s)
1	Moderate	Moderately Suited	Low Strength Dusty Stickiness
7	Moderate	Moderately Suited	Low Strength Dusty Stickiness
8	Moderate	Moderately Suited	Low Strength Dusty Slope Stickiness
46	Moderate	Moderately Suited	Low Strength Dusty
47	Moderate	Moderately Suited	Low Strength Dusty
48	Moderate	Moderately Suited	Low Strength Dusty Stickiness

59	Severe	Moderately Suited	Low Strength Slope Dusty
61	Severe	Poorly Suited	Low Strength Dusty Slope Stickiness
75	Slight	Moderately Suited	Low Strength Dusty Flooding

<sup>1</sup> The hazard is described as "slight," "moderate," or "severe." A rating of "slight" indicates that little or no erosion is likely; "moderate" indicates that some erosion is likely, that the roads or trails may require occasional maintenance, and that simple erosion-control measures are needed; and "severe" indicates that significant erosion is expected, that the roads or trails require frequent maintenance, and that costly erosion-control measures are needed (NRCS, 2015).

<sup>2</sup> The soils are described as "well suited," "moderately suited," or "poorly suited" to this use. "Well suited" indicates that the soil has features that are favorable for the specified kind of roads and has no limitations. Good performance can be expected, and little or no maintenance is needed. "Moderately suited" indicates that the soil has features that are moderately favorable for the specified kind of roads. One or more soil properties are less than desirable, and fair performance can be expected. Some maintenance is needed. "Poorly suited" indicates that the soil has one or more properties that are unfavorable for the specified kind of roads. Overcoming the unfavorable properties requires special design, extra maintenance, and costly alteration (NRCS, 2015).

### **Wildlife:**

The habitat within the proposed project area is primarily located in a grassland community type. For big game, this area is used year-round by both mule deer and pronghorn antelope.

Upland gamebirds that can be found in within the proposed project areas include sharp-tailed grouse Hungarian Partridge and Greater-Sage Grouse. The proposed project area is within a BLM designated Greater Sage Grouse Priority Habitat Management Area (PHMA). Several species of Neotropical Migratory birds have been observed within the proposed project areas.

### Migratory Birds

Raptors that may occur along the proposed route include bald eagle (*Haliaeetus leucocephalus*); golden eagle (*Aquila chrysaetos*); prairie falcon (*Falco mexicanus*); northern harrier (*Circus cyaneus*); Swainson's hawk (*Buteo swainsoni*); ferruginous hawk (*Buteo regalis*); red-tailed hawk (*Buteo jamaicensis*); American kestrel (*Falco sparverius*); merlin (*Falco columbarius*); turkey vulture (*Cathartes aura*); rough-legged hawk (*Buteo lagopus*) and numerous owl species.

Important grassland birds occurring in the upland areas of the proposed route include the Baird's sparrow (*Ammodramus bairdii*); grasshopper sparrow (*Ammodramus savannarum*); Sprague's pipit (*Anthus spragueii*); long-billed curlew (*Numenius americanus*); marbled godwit (*Limosa fedora*) and chestnut-collared longspur (*Calcarius ornatus*). Many of these grassland bird species have experienced declines across much of their range in recent years, and large blocks on intact native grasslands remain important in maintaining healthy breeding populations.

## T&E Species

According to the U.S. Fish and Wildlife Service's Montana Ecological Services Field Office (accessed January 2016), there are six wildlife species that occur or may occur in Valley County that are protected under section 7(c) of the Endangered Species Act (ESA) as amended in 1973 including: Pallid Sturgeon (*Scaphirhynchus albus*); Interior Least Tern (*Sterna antillarum*); Piping Plover (*Charadrius melodus*); Whooping Crane (*Grus americana*); Black-footed Ferret (*Mustela nigripes*) and Red Knot (*Calidris canutus rufa*). The proposed route will have no effect on endangered species that occur or may occur within Valley County which encompasses the Glasgow Field Office.

## BLM Special Status Species

BLM-listed Sensitive Species that could be on or near the proposed project areas include the northern leopard frog (*Rana pipiens*); plains spadefoot (*Spea bombifrons*); western hog-nosed snake (*Heterodeon nasicus*); Merriam's shrew (*Sorex marriami*); Preble's shrew (*Sorex preblei*); golden eagle (*Aquila chrysaetos*); bald eagle (*Haliaeetus leucocephalus*); ferruginous hawk (*Buteo regalis*); burrowing owl (*Athene cunicularia*); Baird's sparrow (*Ammodramus bairdii*); Sprague's pipit (*Anthus spragueii*); chestnut collared longspur (*Calcarius ornatus*); bobolink (*Dolichonyx oryzivorus*); loggerhead shrike (*Lanius ludovicianus*); long-billed curlew (*Numenius americanus*); McCown's longspur (*Rhynchophanes mccownii*) and the Brewer's sparrow (*Spizella breweri*).

## Greater Sage-Grouse

On September 22, 2015, the U.S. Fish & Wildlife Service determined that the Greater sage-grouse does not warrant protection under the Endangered Species Act. The proposed routes are within the Grassland Bird/Greater Sage-Grouse Priority Habitat Management Area (Hiline RMP pp 3-85). There are 4 active Greater Sage-Grouse leks within 1.5 to 5 miles of the proposed route. Lek 20-059 is 3 miles south of the proposed route. Lek SG20-062 is 5 miles north of the starting point of the proposed route. Lek SG20-063 is 1.5 miles southwest of the starting point of the proposed route; Lek SG20-102 is 3.5 miles north of a portion of the proposed route.

## Greater Sage-Grouse Disturbance Cap

In accordance with Appendix E of the Hiline RMP, habitat degradation will be evaluated under a Disturbance Cap. The Hiline RMP has incorporated this cap with the following language: "If the 3% anthropogenic disturbance cap is exceeded on lands (regardless of land ownership) within Greater Sage-Grouse PHMAs in any biologically significant unit, then no further anthropogenic disturbances would be permitted by the BLM within Greater Sage-Grouse PHMAs in any given Biologically Significant Unit until the disturbance has been reduced to less than the cap." The Project Analysis Area Method for Permitting Surface Disturbance Activities was utilized to determine potentially affected occupied leks. A radius was placed around each proposed route in order to identify all occupied leks located within the four miles.

Proposed Route 1 was analyzed and it was determined that one occupied lek was located within this distance. A four mile radius was then placed around that lek. Once the outer boundaries were connected, this created the project analysis area totaling 69,805 acres. All existing anthropogenic disturbances and 7 site scale threats (Hiline RMP Appendix E) were identified within the project analysis area. The only qualifying disturbance identified was roads which totaled 81 miles. A buffer totaling 20.35 feet was placed on either side of the road and the resulting calculation was 432 acres of disturbance. The disturbance within the project analysis area is less than the 3% anthropogenic disturbance cap within Greater Sage-Grouse PHMA, disturbing only 0.62% of the project analysis area. The project is below the 3% disturbance cap at the project scale.

Proposed Route 2 was analyzed and it was determined that one occupied lek was located within this distance. The project analysis area for Proposed Route 2 totaled 65,009 acres. The only qualifying disturbance identified was roads which totaled 74 miles or 412 acres of disturbance. The disturbance within the project analysis area is less than the 3% anthropogenic disturbance cap within Greater Sage-Grouse PHMA, disturbing only 0.63% of the project analysis area. The project is below the 3% disturbance cap at the project scale.

Proposed Route 3 was analyzed and it was determined that one occupied lek was located within this distance. The project analysis area for Proposed Route totaled 65,718 acres. The only qualifying disturbance identified was roads which totaled 74 miles or 398 acres of disturbance. The disturbance within the project analysis area is less than the 3% anthropogenic disturbance cap within Greater Sage-Grouse PHMA, disturbing only 0.61% of the project analysis area. The project is below the 3% disturbance cap at the project scale.

Proposed Route 4 was analyzed and it was determined that one occupied lek was located within this distance. The project analysis area for Proposed Route totaled 69,345 acres. The only qualifying disturbance identified was roads which totaled 77 miles or 411 acres of disturbance. The disturbance within the project analysis area is less than the 3% anthropogenic disturbance cap within Greater Sage-Grouse PHMA, disturbing only 0.59% of the project analysis area. The project is below the 3% disturbance cap at the project scale.

Proposed Route 5 was analyzed and it was determined that two occupied leks were located within this distance. The project analysis area for Proposed Route totaled 97,761 acres. The only qualifying disturbance identified was roads which totaled 72 miles or 390 acres of disturbance. The disturbance within the project analysis area is less than the 3% anthropogenic disturbance cap within Greater Sage-Grouse PHMA, disturbing only 0.40% of the project analysis area. The project is below the 3% disturbance cap at the project scale.

Proposed Route 6 was analyzed and it was determined that there were no leks within the four mile radius.

In summary all proposed routes are less than the 3% anthropogenic disturbance cap outlined by the HiLine RMP in terms of the Greater Sage-Grouse Priority Habitat Management Areas.

## Vegetation and Noxious Weeds:

All of the allotments in which the proposed trails are located are currently meeting the Upland Standard and the Biodiversity Standard of the Standards for Rangeland Health or if not meeting a Standard, the cause is not livestock related. Those determinations were made in the Ten Year Monitoring and Standards and Guidelines Reports specific to the watershed in which the proposed project is located as shown below.

Table 3

Allotment	Watershed	Report Name	Date Report Signed
#4025 – Southfork Rock Creek	Rock Creek	Rock Creek Watershed Report	April 2004
#4041 – Anderson-O’Juel	North Willow Creek	Willow North Watershed Ten Year Monitoring and Standards and Guidelines Report	March 2011
#4718 – Upper Willow Creek	North Willow Creek	Willow North Watershed Ten Year Monitoring and Standards and Guidelines Report	March 2011

These documents are hereby incorporated by reference and are available at the Glasgow Field Office upon request.

## Vegetation:

The majority of the vegetation within the analysis area is characteristic of the Brown Glaciated Plains of Montana in the 10 to 14-inch precipitation zone, which lies within the Northern Great Plains. The Northern Great Plains is known for its diverse vegetation types, soil types, and topography. Vegetation is comprised of mostly mid- and short-stature grasses and some tall-stature grasses with species that are both warm (C<sub>4</sub>) and cool season (C<sub>3</sub>). A variety of grass-like plants, forbs, and shrubs also add to the vegetation diversity of this rangeland type. Plant species diversity typically increases in hardwood draws and riparian areas.

The vegetation data shows that 96% of the surveyed area is dominated by native species, (85% grass, 12% shrubs) while 4% is dominated by crested wheatgrass, an introduced species. Western wheatgrass, blue grama, needle-and-thread, green needle, prairie junegrass, and plains reedgrass dominate these glacial till soils. Silver sagebrush is the most common shrub type. Bearpaw shale soils found on the steeper slopes are dominated by prairie sandreed, little bluestem, western wheatgrass, and silver sagebrush. Shrub species dominating the landscape include silver sagebrush, western snowberry, rubber rabbit brush, and shrubby cinquefoil.

Existing influences on local distribution of plant communities include soils, topography, surface disturbance, water availability, livestock management, fire frequency, noxious weed infestations and soil salinity. Vegetation communities have been affected by human activities for over a century. Some of these activities include: infrastructure developments (roads, power lines, pipelines, etc.), chemical applications, logging, livestock grazing, farming, and wildfire

rehabilitation, prevention, manipulation and suppression.

The BLM Standards for Rangeland Health address upland health, riparian health, air quality, water quality, and habitat for native plants and animals. Meeting these Standards ensures healthy, productive, and diverse vegetative resources on public lands. The BLM's policy for implementing the Standards for Rangeland Health (43 CFR §4180.2) provides that all uses of public lands are to complement the established rangeland standards. Application of 43 CFR §4180.2 provides the mechanism to adjust livestock grazing to meet or progress towards meeting Standards for Rangeland Health.

There is one main Major Land Resource Area (MLRA) identified within the analysis area, MLRA 52XC. There are numerous ecological sites associated with the MLRA identified, with the primary ones being; Clayey (Cy), Claypan (CP), Dense Clay (DC), Shallow Clay (SwC), Sandy (Sy), Sandy-Steep (SyStp), Silty (Si), Silty- Steep (SiStp) and Shallow (Sw). The total dry-weight production expected to be found on these sites during a normal growing season varies from approximately 800 to 1,500 lbs. /acre.

The dominant vegetation communities that have been identified within the analysis area are; native mixed grass prairie, sagebrush/mixed grasslands, riparian and hardwood draws, improved or restored pastures, and cultivated plant communities.

#### Native Mixed Grassland

The native mixed grassland community is dominated by perennial grasses. Perennial grasses can be both warm season and cool season grasses. These perennial grasses can also be both tall, mid and short stature grasses. Some of the more common grasses include; western wheatgrass (*Pascopyrum smithii*), needle-and-thread (*Hesperostipa comata*), green needlegrass (*Nassella viridula*), blue grama (*Bouteloua gracilis*) and prairie junegrass (*Koeleria macrantha*). Various forbs and shrubs are present but occur as a minor species composition component throughout the community. Shrubs and half shrubs very common to grassland community are silver sagebrush, rubber rabbit brush, brom snake weed, and fringed sagewort. This community type is one of the most prevalent found within the analysis area.

#### Sagebrush-Mixed Grassland

This community can include a combination of silver sagebrush (*Artemisia cana*) and Wyoming big sagebrush (*Artemisia tridentata ssp. wyomingensis*). Wyoming big sagebrush is not found in the project area and rare north of Milk River near the project area. The sagebrush/grassland vegetation community has a perennial grass and forb understory, similar to the species found in a mixed native grassland community. The expected species composition on this community consists of 70-75% native grass species, 10-15% forbs and 5-10% shrubs and half-shrubs.

#### Riparian and Hardwood Draws

Riparian and hardwood draws both provide habitat diversity for livestock and wildlife. Some of the more common vegetative species that occur in riparian and hardwood draws include prairie cordgrass (*Spartina pectinata*), switchgrass (*Panicum virgatum*), Canada wildrye (*Elymus canadensis*), sedges (*Carex spp.*), rushes (*Juncus spp.*), willow (*Salix spp.*), chokecherry (*Prunus virginiana*), wild rose (*Rosa spp.*), currant (*Ribes spp.*) snowberry

(*Symphoricarpos spp.*), buffaloberry (*Shepherdia argentea*), cottonwood (*Populus spp.*), boxelder (*Acer negundo*) and green ash (*Fraxinus pennsylvanica*).

Improved or restored pastures consists of cultivated areas planted with introduced grasses (crested wheatgrass, smooth brome (*Bromus inermis*), intermediate wheatgrass (*Thinopyrum intermedium*), and alfalfa (*Medicago sativa*), specifically for the improved vegetation production for livestock consumption. This setting is limited in the analysis area.

The cultivated plant community is comprised of monocultures of crops which may include small grains, alfalfa, or other crops grown primarily as supplemental feed sources for livestock production operations. These areas have been completely disturbed from the native vegetation potentials.. Public lands are not included in this plant community. This community is common in the analysis area and used in conjunction with public land allotments.

All allotments were assessed for Standards and Guidelines in 2004. All allotments met and passed the upland health standards. The allotments are currently in the process of being reassessed for Standards and Guidelines. Monitoring photos, actual use, and 17 indicators of upland rangeland health (NRCS) have been collected on the allotments. Documentation supports that vegetative resources are remaining healthy with no concerns. A complete report of findings will be finalized in late 2015.

Many areas have been identified to be dominated by crested wheatgrass, a non-native grass. These are historic farm fields that were planted to crested wheatgrass during the depression. Often these sites fail to meet the biodiversity standard due to lack of vegetative diversity. The Glasgow Field Office recognizes that those crested wheatgrass fields do provide for other resources and only comprise approximately 5% of the watershed. The Crested Pasture in Lower Tomato Creek Allotment #4012 was identified as one of those areas that did not meet the biological diversity standards. The Glasgow Field Office has started a project to convert the crested wheatgrass to a native stand of vegetation though the use of fire and herbicide.

### **Noxious and Invasive Weeds:**

Leafy spurge infestations are scattered along many of the drainages in the Rock Creek and North Willow Creek watersheds, For the immediate project area, spurge has been seen along Willow Creek, Burnett Creek and in Big Coulee that drains into Willow Creek. Since 1984, BLM has been involved in cooperative control efforts with Valley County and the Cooperative State Grazing Districts. Throughout this period the goal has been to eradicate both weed species in the Rock Creek Watershed using Integrated Pest Management (IPM). This area is in the total control area where all available resources are used to help eradicate the weeds. Herbicide treatments are applied by both air and ground methods. Biological controls (i.e. flea beetles) are used in sensitive areas, such as riparian areas with woody species.

The presence of Canada thistle can be expected in high disturbance areas such as around livestock water sources and around edges of fields.

### Special Status Plant Species:

No known populations of Special Status Plants occur on BLM lands within the area. There are a few plant species of concern located in Valley County according to the Montana Natural Heritage Program's (MTNHP) website (<http://mtnhp.org/SpeciesOfConcern/?AorP=p>). (Accessed July 29, 2015)

According to the MTNHP field guide, these plants are typically found in very specific habitats and do not occur predictably across the landscape. Not much is known of the status of these species in the analysis area, although the general condition and trend of these habitats could be used to estimate the specific conditions until the sites can be revisited and site-specific data collected.

Table 4. Montana Species of Concern and BLM Sensitive Plants with potential in the area.

<b>Plant Name</b>	<b>Counties it occurs in</b>	<b>Habitat description</b>
Scarlet Ammannia	Phillips, <b>Valley</b> , Yellowstone	Wetland/Riparian
Chaffweed	Lake, Missoula, Phillips, Powell, Ravalli, Sheridan, <b>Valley</b>	Wetland/Riparian
Hot Spring Phacelia*	Fergus, Garfield, Phillips, <b>Valley</b>	Barren clay slopes
Bractless blazingstar*	Custer, Powder River, Roosevelt, Rosebud, <b>Valley</b>	Open areas (sandy or gravelly soils)
Platte Cinquefoil*	Beaverhead, Judith Basin, <b>Valley</b>	Grasslands/sagebrush (Mesic)

\*denotes BLM sensitive species

### Visual Resources:

A portion of the proposed project area is within VRM Class II. The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. The remaining proposed project area is within VRM Class IV. The objective of this class is 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. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance and repeating the basic elements of form, line, color and texture in the natural characteristic landscape.

### Recreation and Access:

The proposed project area is within the Valley Extensive Resource Management Area. There are no developed recreation sites in the area and public use is dispersed, mainly consisting of hunting and wildlife viewing activities.

## **CHAPTER 4**

### **ENVIRONMENTAL EFFECTS**

#### **Introduction**

Potential effects include direct, indirect and cumulative effects. Direct effects are those which are caused by the action and occur at the same time and place. Indirect effects are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Cumulative effects result from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions.

#### **Methodology and Analytical Assumptions**

The effects analysis is based on scientific literature, professional judgment, experience, and field measurements. This analysis is organized by resource issues. Under each resource issue, the analysis of effects focuses on the predicted or anticipated change to the resource impact indicator(s) identified for each resource issue.

#### **How would the Proposed Action and the Alternative affect Surface Water, Wetlands, and Riparian Resources?**

##### **Alternative A: Proposed Action**

Establishment of up to four miles of motorized vehicle trails within the Rock Creek Watershed will not lead to water quality impairments within the intermittent and perennial flow paths. This land access proposal includes water quality considerations and BMPs consistent with the Federal Clean Water Act (CWA) and State water quality programs.

Soil that is disturbed and loses stability due to compaction and tire-track alteration would be subject to erosion following snowmelt and large storm events. The quality of surface water at close proximity to the proposed vehicle trail areas could be affected by heightened volumes of suspended and dissolved solids. Mitigation that prevents or corrects the degradation of soil integrity would be enacted along the motorized vehicle trail. The existing hydrologic regime would be upheld by ensuring that sheet flow runoff is not diverted or accumulated and is allowed to continue on its normal flow path.

Flow path crossings would be developed. The proposed action areas do not include streams that have been inventoried as Riparian Zones due to there being an absence of hydrophytic vegetative species within the channels. The flow paths that would be crossed include an Unnamed Tributary to Big Coulee (1 crossing), an Unnamed Tributary to Willow Creek (3 crossings), and an Unnamed Tributary to Deep Creek (1 crossing).

Mitigation and management considerations would ensure that there are no modifications of the hydrologic regimes within the tributaries: None of the tributary flow paths would be diverted and stream capture or pooling would not occur upstream of tire-tracks that cross the channels. Where needed, mitigation could include enhancing the stability of the bed of the flow path(s) and/or enhancing the stability of the natural slopes along and out of drainages. Enhancement in

an around flow paths crossings could include cobbles, stone, gravel, appropriately sized HDPE pipe, waddles, and/or geotextile.

The proposed access routes include utilization of the constructed embankments at Enos and Hackamore Retention Reservoirs. Since 185 ft. of the southeast end of the embankment at Enos Reservoir exists on Private Surface, excavation, dirt hauling, and road construction would be required to build a ramp from the existing embankment down to the natural upland terrain along the proposed motorized vehicle trail on BLM Public Surface. At the embankments of both reservoirs, additional construction activity may be required over time to ensure that the reservoir embankments are stable, safe, and wide enough to tolerate vehicular traffic. The spillways of both reservoirs are in good condition and would not be negatively impacted if crossed by vehicle trails or construction equipment. The 2" pipe that passes through Hackamore Reservoir, if not already inoperable, could be degraded or require removal or replacement due to the proposed action. The proposed action would not lead to a loss of wetland surface acreage and would not change the wetland types present along the proposed route.

The PEMA wetland in T. 35 N., R. 38 E., section 18 S½Lot 4 and section 19 N½Lot 1 would not be disturbed by the proposed action if the alternate route indicated in the PEMA Wetland Map within Appendix 5 were selected. The PEMA wetland is highly ephemeral and is currently crossed by an existing trail on Private Surface. The naturalness of the wetland would benefit by a decrease in vegetative disturbances that have historically been caused by motorized vehicles within the perimeter of the wetland.

Invasive upland plant species could be introduced and/or spread due to the proposed action. This could impact wetland and riparian zones within any of the hydrologic unit basins listed under the Affected Environment section for Surface Water, Wetlands, and Riparian Areas. Control measures for invasive species are listed under the Vegetation section of this EA.

### **Alternative B: No Action**

The trail would not be constructed; therefore, the direct effects to surface water and mitigation discussed in Alternative A would not occur.

### **Cumulative Impact Analysis**

In addition to the four miles of new proposed trail, there are approximately 21 miles of existing trail that would be utilized by motorized vehicles. The existing trail includes:

- A crossing of a non-riparian section of Big Coulee (T. 34 N., R. 36 E., section 12 E½SWSWSE)
- A crossing of a non-riparian Unnamed Tributary to Willow Creek, roughly 130 ft. below the embankment of Hamite Pit-Retention Reservoir (T. 34 N., R. 37 E., section 7 SENWSWNE)
  - Hamite Reservoir was constructed in 1971 and maintained in 1981
  - Hamite Reservoir impounds water over 1.27 surface acres.

- A crossing of the riparian zone at Deep Creek (T. 34 N., R. 37 E., section 5 SENESENW)
- A crossing of a non-riparian Unnamed Tributary to Willow Creek (T. 35 N., R. 37 E., section 27 SWSWSWSW)
- Eight crossings of non-riparian sections at Unnamed Tributaries to Cow Coulee ([1.] T. 35 N., R. 37 E., section 27 SWSWSE / [2.] T. 35 N., R. 38 E., section 18 S<sup>1</sup>/<sub>2</sub>SESWSESE / [3.] T. 35 N., R. 38 E., section 17 W<sup>1</sup>/<sub>2</sub>SWSWNW / [4.] T. 35 N., R. 38 E., section 8 W<sup>1</sup>/<sub>2</sub>SWSWSW / [5.] T. 35 N., R. 38 E., section 8 NWNWSENW / [6.] T. 35 N., R. 38 E., section 5 SWSWSWSE / [7.] T. 35 N., R. 38 E., section 5 SENWNESE / [8.] T. 36 N., R. 38 E., section 33 E<sup>1</sup>/<sub>2</sub>SWNWSW)
- A crossing of the embankment at VR-40 Retention Reservoir (T. 35 N., R. 37 E., section 23 NESESESW)
  - VR-40 was constructed on an Unnamed Tributary to Cow Coulee in 1938
  - VR-40 received BLM maintenance in 1974, 1983, and 1987
  - This reservoir covers 5.9 surface acres.
- Two crossings of riparian sections at Cow Coulee ([1.] T. 35 N., R. 38 E., section 18 SESESWSESW / [2.] T. 35 N., R. 37 E., section 24 SWSWNWNE)
- A crossing of the embankment at Zeke Retention Reservoir (T. 35 N., R. 38 E., section 19 N<sup>1</sup>/<sub>2</sub>NENWNE)
  - Zeke Reservoir was constructed on an Unnamed Tributary to Cow Coulee in 1971
  - Zeke Reservoir received BLM maintenance in 1981 and 1983
  - This reservoir covers 2.4 surface acres.
- A crossing of a non-riparian Unnamed Tributary to South Creek (T. 36 N., R. 39 E., section 21 N<sup>1</sup>/<sub>2</sub>NWSWSE)
  - This crossing is a developed embankment with a 12" HDPE Pipe; the embankment is in need of stabilization.

Public access on two-track trails through prairie landscape can lead to: trail braiding, fuel and oil spills, tread surface erosion, modification of water flow, erosion and sedimentation where water runoff rates and volumes are altered away from the trail, and the other items listed under the Proposed Action.

Signage may be necessary to keep the public on designated routes and trails. Inventories of route conditions would have to be conducted by BLM staff and corrective action (i.e., utilization of construction equipment and stabilization materials) would be required where erosion and rutting issues exist. Reservoir embankments and some reservoir spillways on the existing and proposed routes would require re-work over time to:

- (1) Ensure functionality following compaction and settling
- (2) Ensure that the terrain is stable and safe for vehicles to cross.

It is not expected that the proposed action and, past, present and reasonably foreseeable actions would have consequential cumulative impacts on water quality, riparian areas, or wetlands due to the implementation of specific design standards, stipulations, mitigation measures, reclamation, best management practices (BMPs), and adherence to Federal Land Management standards and guidelines.

### **How would the Proposed Action and the Alternative affect Soils?**

#### **Alternative A: Proposed Action**

Construction of the trail would alter natural soil functions (i.e. water storage/release, nutrient cycling, energy flow) and stability. It is anticipated there would be 4.8 acres of new disturbance. Soils would be compacted and productivity would be severely restricted within the traveled-way for the life of the trail. Continual vehicle disturbance would alter soil physical characteristics (aggregates) along the traveled-way, subjecting soils to erosion.

Soils would be susceptible to water erosion especially on the slopes over 15% (segments 1 and 4); however, it would be minimized by the high amounts of coarse fragments and short slope lengths as observed on the existing trail (see Photo 1). Travel during wet soil conditions would result in rutting, due to low soil strength, and the potential for braiding around areas where water ponds. Mitigation triggers would be implemented to minimize effects.

Photo 1. Existing trail on 18% slope grade.



## **Alternative B: No Action**

The trail would not be constructed; therefore, the direct effects to soils, as described above in Alternative A, would not occur.

## **Cumulative Impact Analysis**

It is not expected that the proposed action and, past, present and reasonably foreseeable actions would have consequential cumulative impacts due to the implementation of specific design standards, stipulations, mitigation measures, reclamation, best management practices (BMPs), and adherence to standards and guidelines for livestock grazing. In addition to the four miles of new proposed trail there is approximately 21 miles of existing trail that would be utilized. Soils within the traveled-way are compacted and productivity is limited. There are areas where the trail is rutted and erosion has occurred.

## **How would the Proposed Action and the Alternative affect Wildlife and Special Status Species?**

### **Alternative A: Proposed Action**

Appendix I of the Hiline RMP, contains mitigation measures and conservations actions when designing projects within Greater sage-grouse Priority Habitat Management Areas. The proposed routes are in accordance with the mitigation measures and conservation actions will have minimal impact to Greater Sage-Grouse. The proposed routes are not within Greater sage-grouse winter range and connect to existing roads to allow public access, where access was not granted before. The proposed routes will be utilized more during mule deer and pronghorn antelope hunting season.

The proposed routes are within pronghorn antelope and mule deer winter range. The construction of the new routes will allow public access to public land that was previously not accessible. Hunting pressure may increase but not significantly to alter pronghorn antelope and mule deer movements or populations.

### **Alternative B: No Action**

Under this alternative the proposed route will not be constructed.

### **Cumulative Impact Analysis**

Cumulative effects of the proposed route should have minimal impacts to wildlife. The road will be utilized more during hunting season and heavy snowfall will most like prevent utilization until spring. Disturbance with the construction of the new route should be minimal and should not add to the acres of degraded habitat within the Greater Sage-grouse PHMA.

## **How would the Proposed Action and the Alternative affect Visual Resources?**

### **Alternative A: Proposed Action**

Road segments 1 through 5 are located in a VRM Class II viewshed. The objective of this class is to retain the existing character of the landscape. The level of change should be low. Since new road segments will not be constructed, rather the new trail segments will be formed by vehicle travel, the impacts to the landscape will be low.

Road segment 6 is in a VRM Class IV viewshed and this type of road establishment conforms to the goals and objectives of this classification.

### **Alternative B: No Action**

There would be no impact to visual resources.

### **Cumulative Impact Analysis**

Creating easier access into the area served by the Proposed Action could result in increased vehicular traffic and use. In the short term the impacts would be minimal since the public has historically had access to this area. In the long term public use could increase as the route becomes better known.

## **How would the Proposed Action and the Alternative affect Recreation and Access?**

### **Alternative A: Proposed Action**

The proposed route would provide legal public access to large portions of BLM-administered lands including the west side of the 60,701-acre Bitter Creek Wilderness Study Area (WSA). Currently, there is public access to this portion of the WSA from the south but these access routes are often impassable to even high-clearance four-wheel drive passenger vehicles, making the area only accessible by foot, horseback, or OHV.

### **Alternative B: No Action**

There would be no impact to recreation and access.

### **Cumulative Impact Analysis**

The proposed action would have a positive impact on the ability of the general public to access a large amount of public lands and provide an increase in guaranteed recreational opportunities. The existing route has been closed through private land in the past. The proposed action could result in increased resource damage caused by vehicular traffic such as erosion and the introduction of noxious weeds.

## **How would the Proposed Action and the Alternative affect Vegetation?**

### **Alternative A: Proposed Action**

The proposed route itself will be traversing primarily native grasses. Silver sagebrush is being avoided as much as possible. A localized void of vegetation is expected in the tracks to be created. It is approximated that 4.84 acres will be disturbed by the proposed action. According to tabulation records on file in the Glasgow Field Office the average Animal Unit Month per acre is .15 AUM/ac for the project area. That equates to less than one AUM of vegetation affected by the new route to be created. On a landscape scale, the lack of vegetation as a result of the proposed route will not cause the associated allotment to not meet Standards and Guidelines of Rangeland Health.

Leafy Spurge is the most prevalent noxious weed in the project area. Increasing exposed soil surface, and increasing traffic through infested areas is always a concern. The current monitoring and control efforts that are in place for the project area should minimize the concerns of leafy spurge spreading beyond its current infestations. Spurge has potential to spread through the current allowed traffic, wildlife migration, and livestock grazing, which would make it difficult to link new infestations directly to the proposed action.

### **Alternative B: No Action**

The no action alternative would allow for current vegetation to remain intact and unaffected. There would be no surface disturbing activities to eliminate vegetation production from the landscape. The spread of noxious weeds would still be a threat with the current allowed traffic on existing routes, wildlife migration and livestock management practices.

### **Cumulative Effects:**

Disturbance to the native vegetation is an ongoing action across the landscape on private and public land at different scales. Many actions are small scale at no more than 5 acres per disturbance project. Construction, repair and maintenance of range improvement projects are ongoing and necessary actions in order to maintain or improve the vegetative resources located in the area of the proposed projects. While construction activities are usually a one-time action, maintenance and repair activities require repeated trips by BLM personnel and/or permittees to inspect and if necessary to repair or maintain the developments. It is reasonable to assume additional projects will be built within the Glasgow Field Office dependent on RI budget funds and permittee contributions. Maintenance and repair of range improvement projects are actions generally provided by the permittees.

Vegetation is a renewable resource often with minimal effort required to resume the natural state. A current disturbance now, such as a route, will be able to replace the current void of vegetation within 2 -3 growing seasons and be essentially unnoticeable within 5 – 10 years.

### **Cumulative Impacts (All Resources)**

#### **Geographic Scope**

The Cumulative Impacts Analysis Area (CIAA) for environmental effects consists of two watersheds affected by this proposal in north Valley County. These watersheds total 461,885 acres of which 327,943 acres or 71% are federal.

## **Temporal Scope**

The life expectancy of this proposed project is indefinite as the public lands that the trail would access are expected to remain public and it is reasonable to assume that the activities that the project area provides are most likely to continue. Access to public lands is an issue that will remain as long as there are intermingled land patterns.

## **Past Actions**

Livestock grazing, water development maintenance and construction, fence construction and maintenance and public recreation (mostly hunting) are the primary activities that have taken place in the past.

## **Present Actions**

Livestock grazing within the CIAA is the dominant activity. Other activities include hunting, wildlife viewing and sightseeing. There is a limited amount of fishing on BLM and private reservoirs in the CIAA.

## **Reasonably Foreseeable Actions**

There are other areas in Valley County in which access could potentially be legally blocked by private land owners. If this happens the BLM may investigate the potential of providing access in a similar manner as that proposed in this EA. Any new proposal would require a new site specific environmental analysis and decision.

There are no foreseeable cumulative impacts to any cultural resources as a result of this project.

## CHAPTER 5

### CONSULTATION AND COORDINATION

#### Persons, Groups, and Agencies Consulted

Because the project was located in a Greater Sage-grouse Priority Habitat Management Area, Montana Fish, Wildlife and Parks (FWP) was consulted concerning the impacts of the project. In addition, Montana Department of Natural Resources and Conservation were consulted. The current permittee, the private landowner in this area, as well as, an adjacent private landowner was consulted. The Montana Wilderness Association was made aware of this proposal through verbal communication. *No other outside persons, groups or agencies were consulted.*

#### **List of Preparers**

<b>Name</b>	<b>Title</b>	<b>Resource Responsibility</b>	<b>Staff Narrative into Document</b>
Ray Neumiller	Rangeland Management Specialist	Project Lead	10/1/2015 RNN
Jody Mason	Range Management Specialist	Vegetation/ Noxious and Invasive Weeds	10/1/2015 JM
Kathy Tribby	Outdoor Recreation Planner	Recreation, Wilderness, Visual Resource Management	10/1/2015 KT
Abel Guevara	Wildlife Biologist	Fish & Wildlife, Special Status Species, Migratory Birds	9/23/2015 AG
Josh Sorlie	Soil Scientist	Soils	9/24/2015 JS
Josh Chase	Archaeologist	Cultural Resources, Native American Concerns, Paleontology	9/28/2015
Dean Jensen	Civil Engineering Technician	Construction Alternatives	10/1/2015 DJ
Thomas Probert	Hydrologist	Water, Wetlands, Riparian Areas	10/1/2015 TGP

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## Appendix 1

Although nearly all of the proposed routes will not include construction, minor construction activities at two sites would need to take place. The following design criteria would be included with this action:

1. If cultural or paleontological resources are discovered during construction, work shall immediately cease and the BLM HFO Archaeologist shall be notified. Work will not be allowed to proceed until the area has been formally cleared.
2. Construction activities shall not be performed during periods when the soil is too wet to adequately support equipment/vehicles. If equipment/vehicles create ruts in excess of 3 inches deep, operations must cease as the soil will be deemed too wet to adequately support equipment/vehicles.
3. All equipment and vehicles used in the construction process shall be power washed prior to entering public lands to help prevent the introduction of invasive species seed.
4. Off-road travel shall be kept to a minimum to avoid creating new trails that may increase off-road vehicle travel by the public.
5. Contouring and reclamation of the construction site should repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.
6. The BLM will review all construction contracts to assure that they contain a specification that requires the handling, containment, and disposal of any hazardous material in conformance with typical construction safety practices and applicable State Regulations.
7. To protect nesting migratory birds, no surface disturbing or disruptive activity is allowed from April 15 to July 15, unless excepted due to negative findings in a nest search by the BLM Wildlife Biologist. This timing limit would protect most, but not all, migratory bird nests from impacts due to construction activities.
8. To protect Greater Sage-Grouse breeding and nesting, no surface disturbing or disruptive activity is allowed from March 1 to June 30.
9. To protect wintering big game (mule deer and pronghorn) and Greater Sage-Grouse and their winter range, no surface disturbing or disruptive activity is allowed from December 1 to May 15 unless an exemption is granted.

If safety, disrepair, erosion and/or rutting problems are discovered along the roadway, the BLM would be responsible to repair, improve and/or maintain the roadway to assure safety, stability and to minimize soil erosion and/or rutting.

Repair, improvement, and maintenance of the roadway would occur when:

- 1) Rills greater than 3 inches develop;
- 2) Water is ponded within the roadway, and/or;
- 3) Erosion within and/or adjacent to the roadway occurs, as a result of the road.

## Appendix 2

### Soils

**Map Unit:** 1—Absher-Vaeda complex, 1 to 5 percent slopes

The Absher component makes up 50 percent of the map unit. Slopes are 1 to 5 percent. The parent material consists of alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches is low. Shrink-swell potential is high. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is in the R058AE014MT Dense Clay (dc) Rru 58a-e 10-14" P.z. ecological site. Nonirrigated land capability classification is 7s. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 10 percent. The soil has a strongly saline horizon within 30 inches of the soil surface. The soil has a strongly sodic horizon within 30 inches of the soil surface.

The Vaeda component makes up 40 percent of the map unit. Slopes are 1 to 5 percent. This component is on fans, terraces. The parent material consists of alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches is moderate. Shrink-swell potential is high. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R058AE014MT Dense Clay (dc) Rru 58a-e 10-14" P.z. ecological site. Nonirrigated land capability classification is 6s. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 3 percent. The soil has a moderately saline horizon within 30 inches of the soil surface. The soil has a moderately sodic horizon within 30 inches of the soil surface.

**Map Unit:** 7—Elloam clay loam, 1 to 5 percent slopes

The Elloam component makes up 90 percent of the map unit. Slopes are 1 to 5 percent. This component is on till plains. The parent material consists of till. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches is moderate. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is in the R052XC206MT Dense Clay (dc) 10-14" P.z. ecological site. Nonirrigated land capability classification is 6s. Irrigated land capability classification is 6s. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 10 percent. The soil has a moderately saline horizon within 30 inches of the soil surface. The soil has a moderately sodic horizon within 30 inches of the soil surface.

**Map Unit:** 8—Elloam gravelly clay, 2 to 9 percent slopes

The Elloam component makes up 90 percent of the map unit. Slopes are 2 to 9 percent. This component is on till plains. The parent material consists of till. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches is moderate. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is in the R052XC206MT Dense Clay (dc) 10-14" P.z. ecological site. Nonirrigated land capability classification is 6e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 10 percent. The soil has a moderately saline horizon within 30 inches of the soil surface. The soil has a moderately sodic horizon within 30 inches of the soil surface.

**Map Unit:** 46—Phillips loam, 0 to 5 percent slopes

The Phillips component makes up 90 percent of the map unit. Slopes are 0 to 5 percent. This component is on till plains. The parent material consists of till. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is high. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is in the R052XC217MT Silty (si) 10-14" P.z. ecological site. Nonirrigated land capability classification is 3e. Irrigated land capability classification is 3e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 13 percent.

**Map Unit:** 47—Phillips-Elloam complex, 1 to 9 percent slopes

The Phillips component makes up 50 percent of the map unit. Slopes are 1 to 9 percent. This component is on till plains. The parent material consists of till. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is high. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no

zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is in the R052XC217MT Silty (si) 10-14" P.z. ecological site. Nonirrigated land capability classification is 3e. Irrigated land capability classification is 3e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 13 percent.

The Elloam component makes up 25 percent of the map unit. Slopes are 1 to 9 percent. This component is on till plains. The parent material consists of till. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches is moderate. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is in the R052XC206MT Dense Clay (dc) 10-14" P.z. ecological site. Nonirrigated land capability classification is 6s. Irrigated land capability classification is 6s. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 10 percent. The soil has a moderately saline horizon within 30 inches of the soil surface. The soil has a moderately sodic horizon within 30 inches of the soil surface.

**Map Unit:** 48—Phillips-Nobe-Absher complex, 1 to 5 percent slopes

The Phillips component makes up 40 percent of the map unit. Slopes are 1 to 5 percent. This component is on till plains. The parent material consists of till. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is high. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is in the R052XC217MT Silty (si) 10-14" P.z. ecological site. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 13 percent.

The Absher component makes up 20 percent of the map unit. Slopes are 1 to 5 percent. The parent material consists of till. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches is low. Shrink-swell potential is high. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is in the R052XC206MT Dense Clay (dc) 10-14" P.z. ecological site. Nonirrigated land capability classification is 7s. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 10 percent. The soil has a strongly saline horizon within 30 inches of the soil surface. The soil has a strongly sodic horizon within 30 inches of the soil surface.

The Nobe component makes up 20 percent of the map unit. Slopes are 1 to 5 percent. This component is on till plains. The parent material consists of till. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches is low. Shrink-swell potential is high. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R052XC210MT Saline Upland (su) 10-14" P.z. ecological site. Nonirrigated land capability classification is 7s. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 3 percent. The soil has a moderately saline horizon within 30 inches of the soil surface. The soil has a strongly sodic horizon within 30 inches of the soil surface.

**Map Unit:** 59—Scobey-Sunburst clay loams, 5 to 25 percent slopes

The Scobey component makes up 50 percent of the map unit. Slopes are 5 to 15 percent. The parent material consists of till. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is high. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is in the R052XC217MT Silty (si) 10-14" P.z. ecological site. Nonirrigated land capability classification is 4e. Irrigated land capability classification is 4e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 10 percent.

The Sunburst component makes up 30 percent of the map unit. Slopes are 5 to 25 percent. The parent material consists of till. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is moderate. Shrink-swell potential is high. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is in the R052XC220MT Thin Hilly (th) 10-14" P.z. ecological site. Nonirrigated land capability classification is 6e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 10 percent. The soil has a slightly saline horizon within 30 inches of the soil surface.

**Map Unit:** 61—Sunburst-Lisam complex, 9 to 35 percent slopes

The Sunburst component makes up 40 percent of the map unit. Slopes are 9 to 35 percent. The parent material consists of till. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is moderate. Shrink-swell potential is high. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is in the R052XC220MT Thin Hilly (th) 10-14" P.z. ecological site. Nonirrigated land capability classification is 6e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 10 percent. The soil has a slightly saline horizon within 30 inches of the soil surface.

The Lisam component makes up 35 percent of the map unit. Slopes are 9 to 35 percent. The parent material consists of residuum weathered from clayey shale. Depth to a root restrictive layer, bedrock, paralithic, is 10 to 20 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is very low. Shrink-swell potential is high. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R052XC215MT Shallow Clay (swc) 10-14" P.z. ecological site. Nonirrigated land capability classification is 7e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 3 percent. The soil has a very slightly saline horizon within 30 inches of the soil surface.

**Map Unit:** 75—Ustic Torrifuvents, gently sloping

The Ustic Torrifuvents component makes up 100 percent of the map unit. Slopes are 0 to 5 percent. The parent material consists of alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is moderate. Shrink-swell potential is low. This soil is occasionally flooded. It is not ponded. A seasonal zone of water saturation is at 54 inches during April, May, June. Organic matter content in the surface horizon is about 2 percent. This component is in the R052XC207MT Overflow (ov) 10-14" P.z. ecological site. Nonirrigated land capability classification is 6w. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 8 percent.

### **Appendix 3**

#### Mitigation Measures and Conservation Actions for Greater Sage-Grouse Habitat (Appendix I - Hiline RMP)

These mitigation measures and conservation actions for Greater Sage-Grouse would be implemented on a project-specific basis in sage-grouse priority habitat, depending on the specific characteristics of the project area and the types of disturbance being proposed. They may not be appropriate to implement in all cases. The mitigation would be requirements, procedures, management practices, or design features that the BLM, through issuance of the Record of Decision (ROD), would adopt as operational requirements. The BLM may add additional site-specific restrictions as deemed necessary by further environmental analysis and as developed through coordination with other federal, state, and local regulatory and resource agencies. Because mitigation measures change or are modified based on new information, the guidelines will be updated periodically.

In the very early stages of the development of siting and design plans, project developers shall coordinate with appropriate federal, state, and local agencies that regulate activities that affect Greater Sage-Grouse and their habitats to determine what expected level of mitigation will be needed to ensure the RMP goals and objectives can be met within the proposed action. An environmental review shall demonstrate how the mitigation measures and conservation actions being applied to the project lead to impacts (direct, indirect, and cumulative) that do not cause the BLM to authorize actions that would exceed habitat level thresholds causing goals and objectives for the priority area to not be met. This will analyze at the project level at least two considerations to examine functionality of sage-steppe systems and thresholds where populations are known to be impacted:

- At the landscape scale, priority areas should be maintained with enough land cover composed of adequate sagebrush habitat to provide Greater Sage-Grouse needs to meet priority habitat objectives. This is measured using broad-scale habitat classification to determine the amount of potential habitat based on ecological sites against habitat lost to permanent to short-term habitat loss from disturbances such as agricultural tillage, fire, etc.
- At the local population scale discrete anthropogenic disturbances should be avoided, minimized, or mitigated to maintain the highest quality habitat. The actual impact to sage-grouse will depend on the amount of direct disturbance, the level of activity associated with the direct disturbance that leads to indirect disturbance, and the cumulative effects of the disturbance level, habitat loss and habitat degradation.

In analyzing the impact from a project, consideration should be given to the type of activity, the amount of anthropogenic disturbance to seasonal Greater Sage-Grouse habitat utilized by the local population, and the landscape context. The BLM will analyze and disclose how permitted actions, including included mitigation measures and conservation actions, affect the ability of priority area goals and objectives to be met and ensure permitted activities are in conformance with the RMP.

## **Priority Habitat - Travel Management**

Travel management should evaluate, during site-specific travel planning, the need for permanent or seasonal road or area closures to protect Greater Sage-Grouse priority habitat areas.

Use existing roads or realignments to access valid existing rights that are not yet developed. If valid existing rights cannot be accessed via existing roads, then any new roads would be constructed to the absolute minimum standard necessary.

Allow no upgrading of existing routes that would change route category (road, primitive road, or trail) or capacity unless the upgrading would have minimal or beneficial impacts on Greater Sage-Grouse habitat, is necessary for motorist safety, or eliminates the need to construct a new road.

Reclaim roads, primitive roads and trails not designated in travel management plans. This also includes primitive route/roads that were not designated in Wilderness Study Areas and within lands with wilderness characteristics that have been selected for protection.

When reclaiming roads, primitive roads and trails, use appropriate seed mixes and consider the use of transplanted sagebrush.

Evaluate impacts of existing roads, including two-tracks, in relation to known lek locations and Greater Sage-Grouse winter ranges.

Consider the use of speed bumps where appropriate to reduce vehicle speeds near leks, such as during oil and gas development.

Manage on-road travel and OHV use in sage-grouse habitat to avoid disturbance during critical times such as winter, breeding and nesting periods.

Plan or permit organized events to avoid impacts to Greater Sage-Grouse.

Manage motorized and mechanized travel to minimize impacts to Greater Sage-Grouse and their habitat by developing standards for future roads to give to BLM, FS, BIA, state, county, and private parties.

Manage motorized and mechanized travel to minimize impacts to Greater Sage-Grouse by enforcement of existing OHV and travel management plans.

Provide educational opportunities for users of OHVs dealing with the possible effects they may have on Greater Sage-Grouse.

Develop a transportation management plan across ownership boundaries in Greater Sage-Grouse habitats.

Participate in travel planning efforts and educate the general public about the impacts of roads on Greater Sage-Grouse and their habitat.

Consider buffers, removal, realignment, or seasonal closures where appropriate to avoid degradation of habitat.

Reclaim closed roads with locally adapted native plant species beneficial to sage-grouse.

Close and reclaim travel ways in sage-grouse habitat where appropriate.

## Appendix 4

***Image 1:*** Unnamed Tributary to Big Coulee (T. 34 N., R. 36 E., sec 13 W $\frac{1}{2}$ NWSE)



***Image 2:*** Unnamed Tributary to Willow Creek (T. 35 N., R. 37 E., sec 28 S $\frac{1}{2}$ SWSE)



**Image 3:** Unnamed Tributary to Deep Creek (T. 36 N., R. 38 E., sec 25 SESENE)



**Image 4:** Enos Reservoir [satellite imagery] (T. 34 N., R. 37 E., sec 5 E½NE)



**Image 5:** Hackamore Reservoir (T. 35 N., R. 37 E., sec 33 W $\frac{1}{2}$ SENW)



**Image 6:** PEMA Wetland (T. 35 N., R. 38 E., sec 18 S $\frac{1}{2}$ L4 & sec 19 N $\frac{1}{2}$ L1)



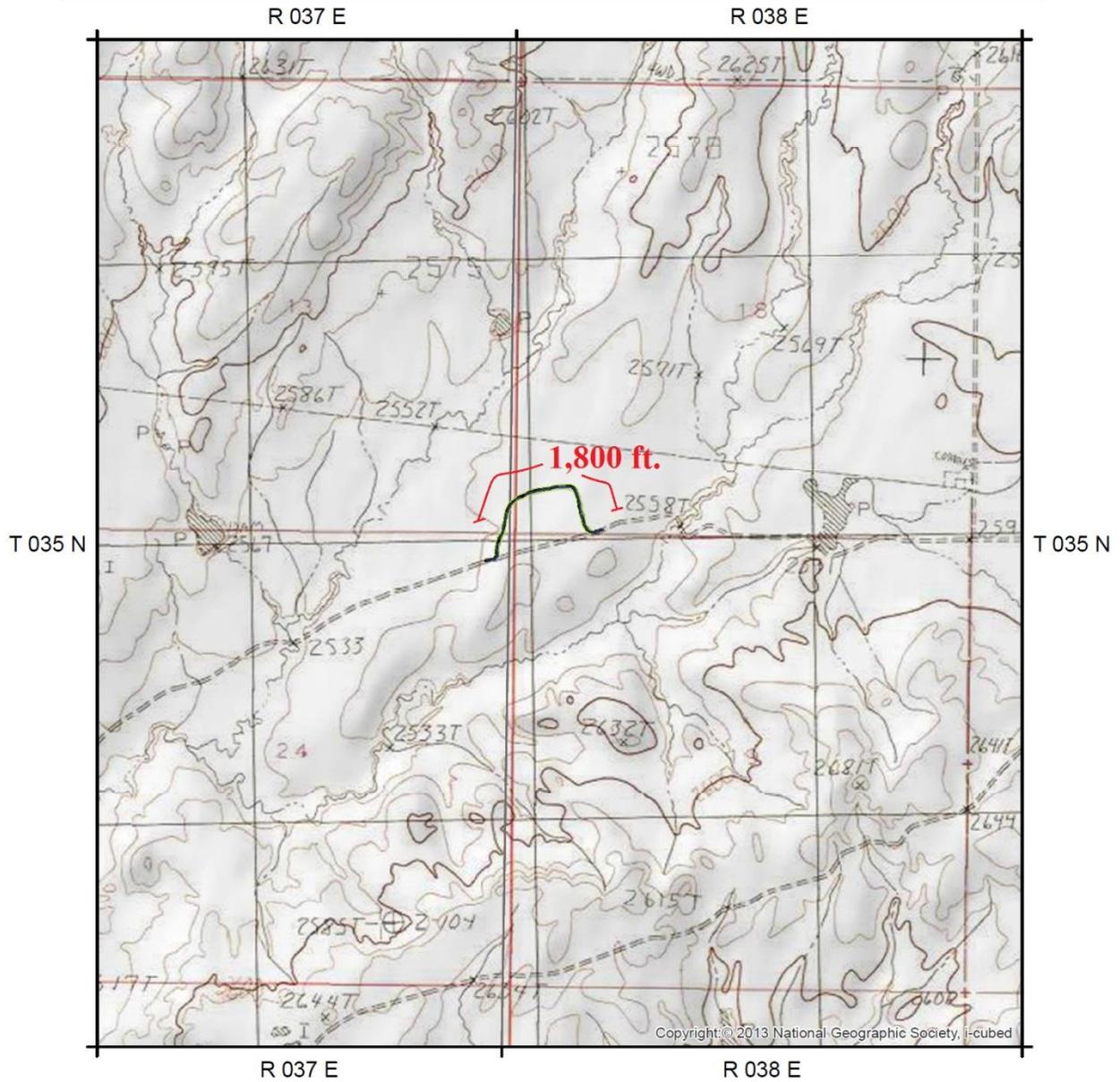
*Image 7:* PEMA Wetland (T. 35 N., R. 38 E., sec 19 N½L1)



Appendix 4

# PEMA Wetland

T. 35 N., R. 38 E., sections 18 & 19



1:18,400

Map Projection: NAD 1983 Albers

0.35

Miles

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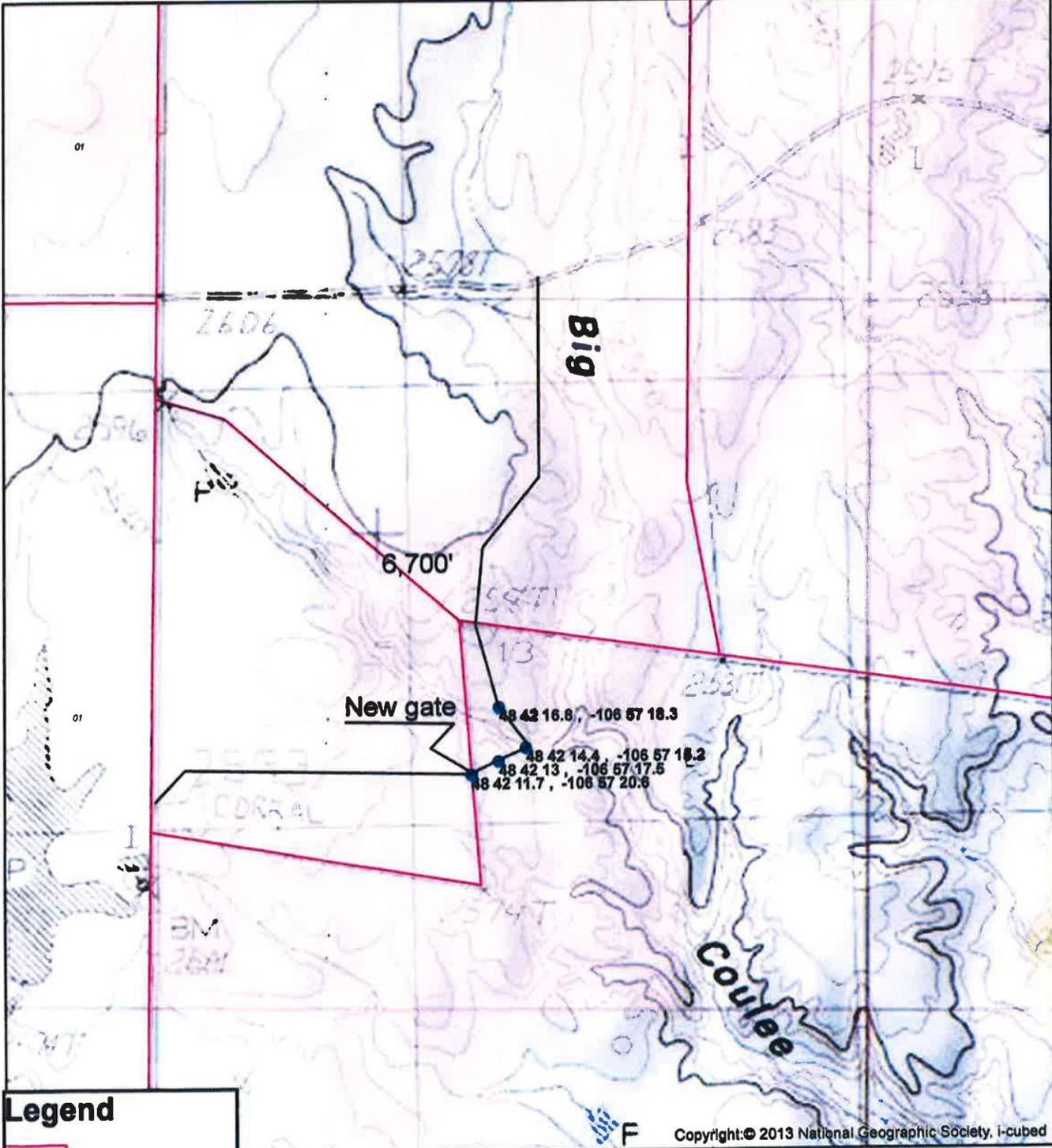
Map Created: 10/1/2015



# PROPOSED BITTER CREEK ACCESS ROAD - #1



Printed on: 8/6/2015



**Legend**

- Pastures
- BLM - Land Utilization
- BLM - Public Domain
- USA Topo Maps

Projected Coordinate System: NAD 1983 Albers  
 Geographic Coordinate System: GCS North American 1983  
 Datum: D North American 1983

1:12,224



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UNITED STATES DEPARTMENT OF THE INTERIOR  
 BUREAU OF LAND MANAGEMENT  
 Hillas District - Glasgow Field Office

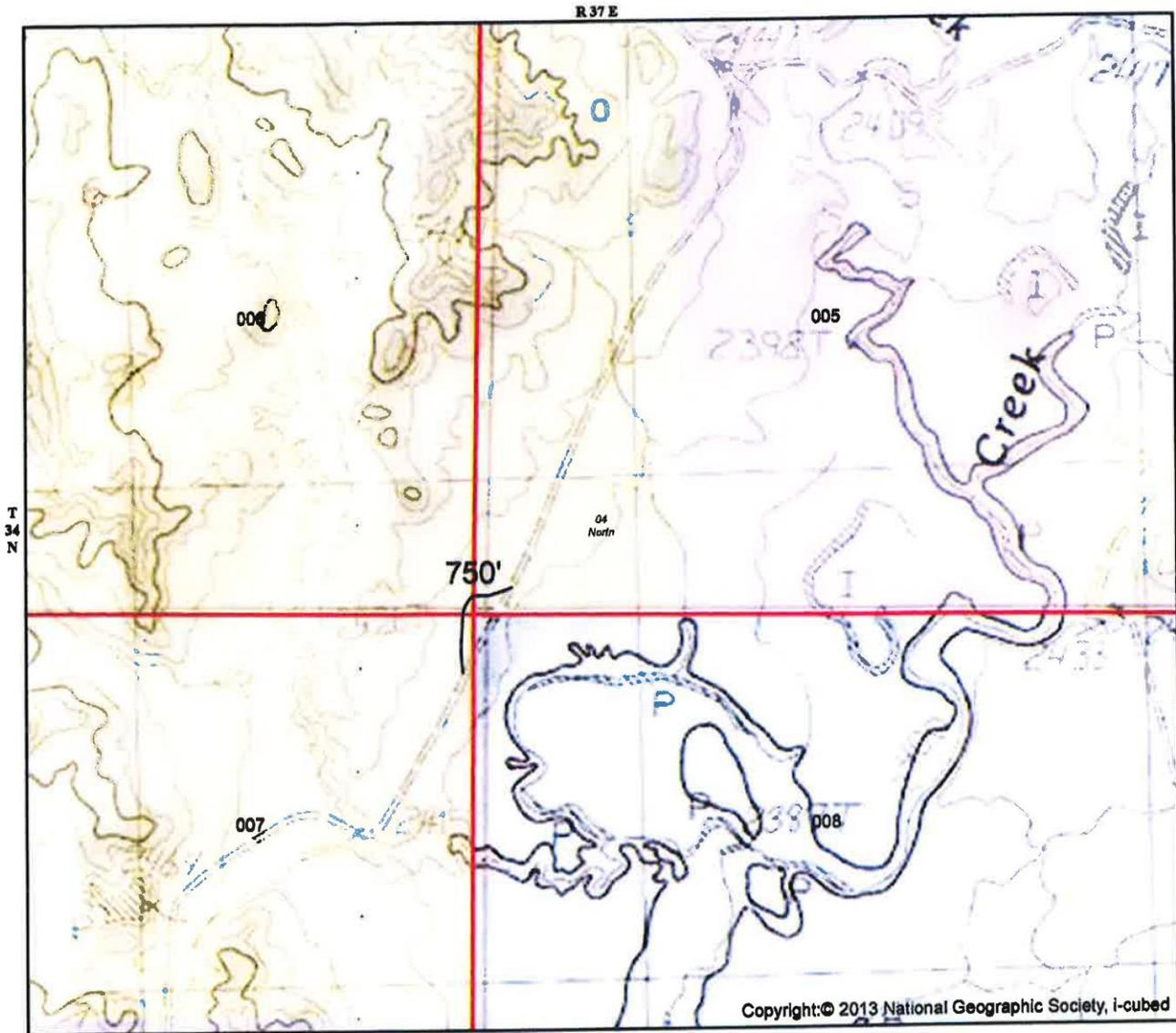
CAUTION:  
 Land ownership data derived from less  
 accurate data than the BLM's own base  
 map. Therefore, land ownership may not be  
 shown for parcels smaller than 40 acres, and  
 land ownership lines may have shifting errors  
 due to source data.

No warranty is made by the Bureau of Land Management  
 for the use of the data for purposes not intended by the BLM.

Segment #2

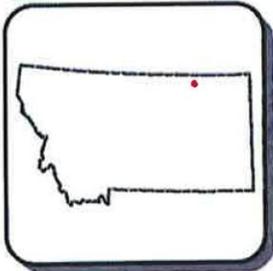
PROPOSED BITTER CREEK ACCESS ROAD- #2

State of Montana



Legend

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| BLM Wilderness Area                 | IR Wilderness Area           | National Forest Lands (USFS)   | USFW Service Wilderness Area                       |
| Bankhead-Jones Land Use Lands (BLM) | Indian Lands or Reservations | National Grasslands (USFS)     | USFW Service, National Wildlife Refuges            |
| Bureau of Reclamation (BOR)         | Intermittent Water           | National Park Service (NPS)    | Military Reservations/Corps of Engineers           |
| Bureau of Land Management (BLM)     | Lands in Litigation          | State Lands                    | Wildlife Protective Area (WPA-County Administered) |
| County and City Lands               | Other Federal Lands          | Private Lands                  | Water  |
| Forest Service Wilderness Area      | NPS Wilderness Area          | State Fish, Wildlife and Parks |  |



1 = 12,277



CAUTION:

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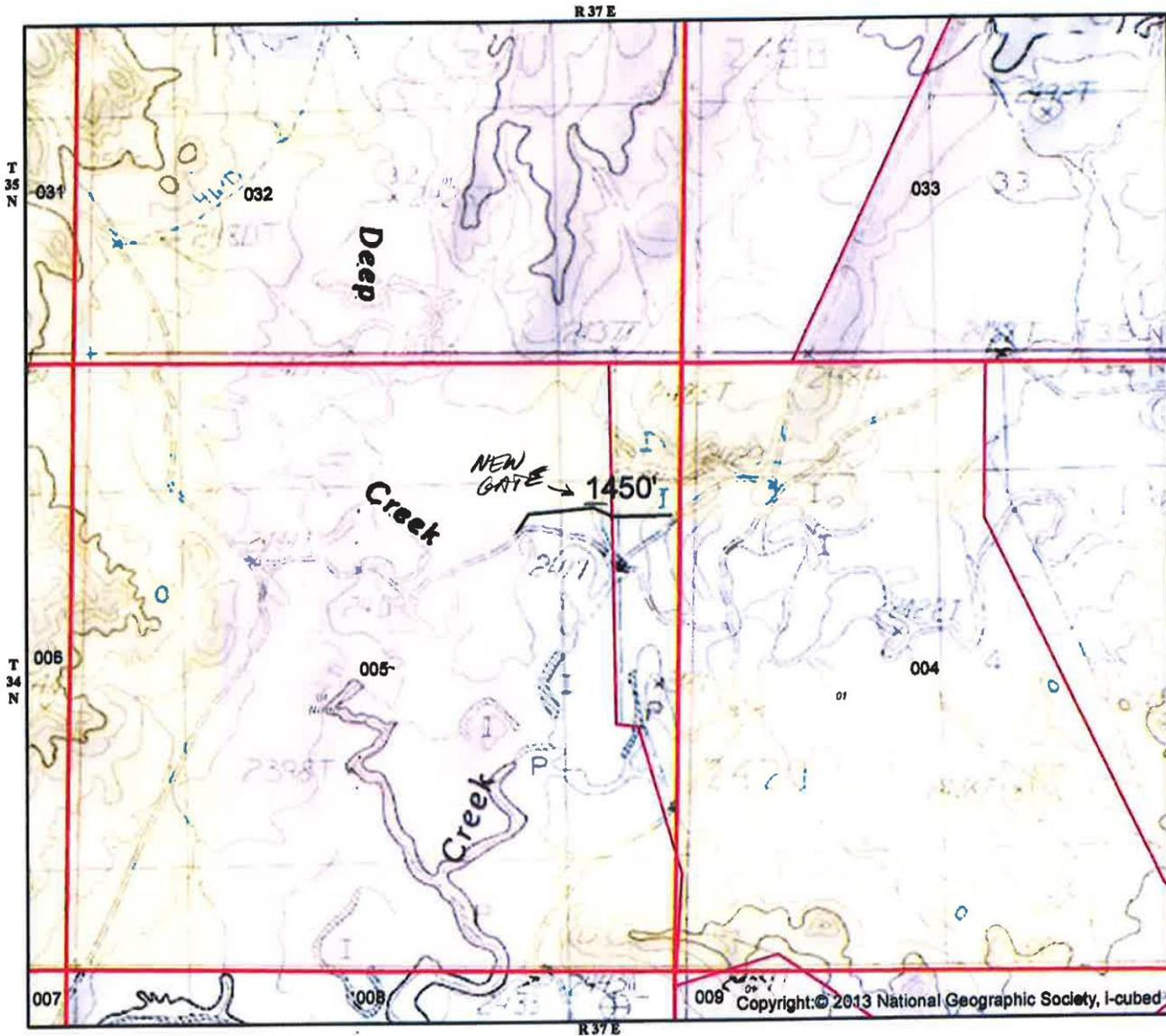
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Segment #3

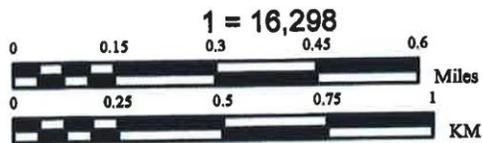
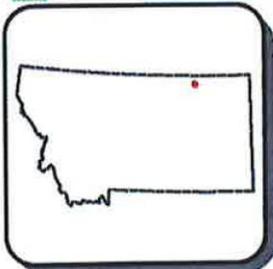
BITTER CREEK PROPOSED ROAD ACCESS #3

State of Montana



Legend

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| Bankhead-Jones Land Use Lands (BLM) Bureau of Reclamation (BOR) | Indian Lands or Reservations | National Grasslands (USFS)     | USFW Service, National Wildlife Refuges            |
| Bureau of Land Management (BLM)                                 | Intermittent Water           | National Park Service (NPS)    | Military Reservations/Corps of Engineers           |
| County and City Lands   | Lands in Litigation          | State Lands                    | Wildlife Protective Area (WPA-County Administered) |
| Forest Service Wilderness Area                                  | Other Federal Lands          | Private Lands                  | Water  |
|   | NPS Wilderness Area          | State Fish, Wildlife and Parks |  |



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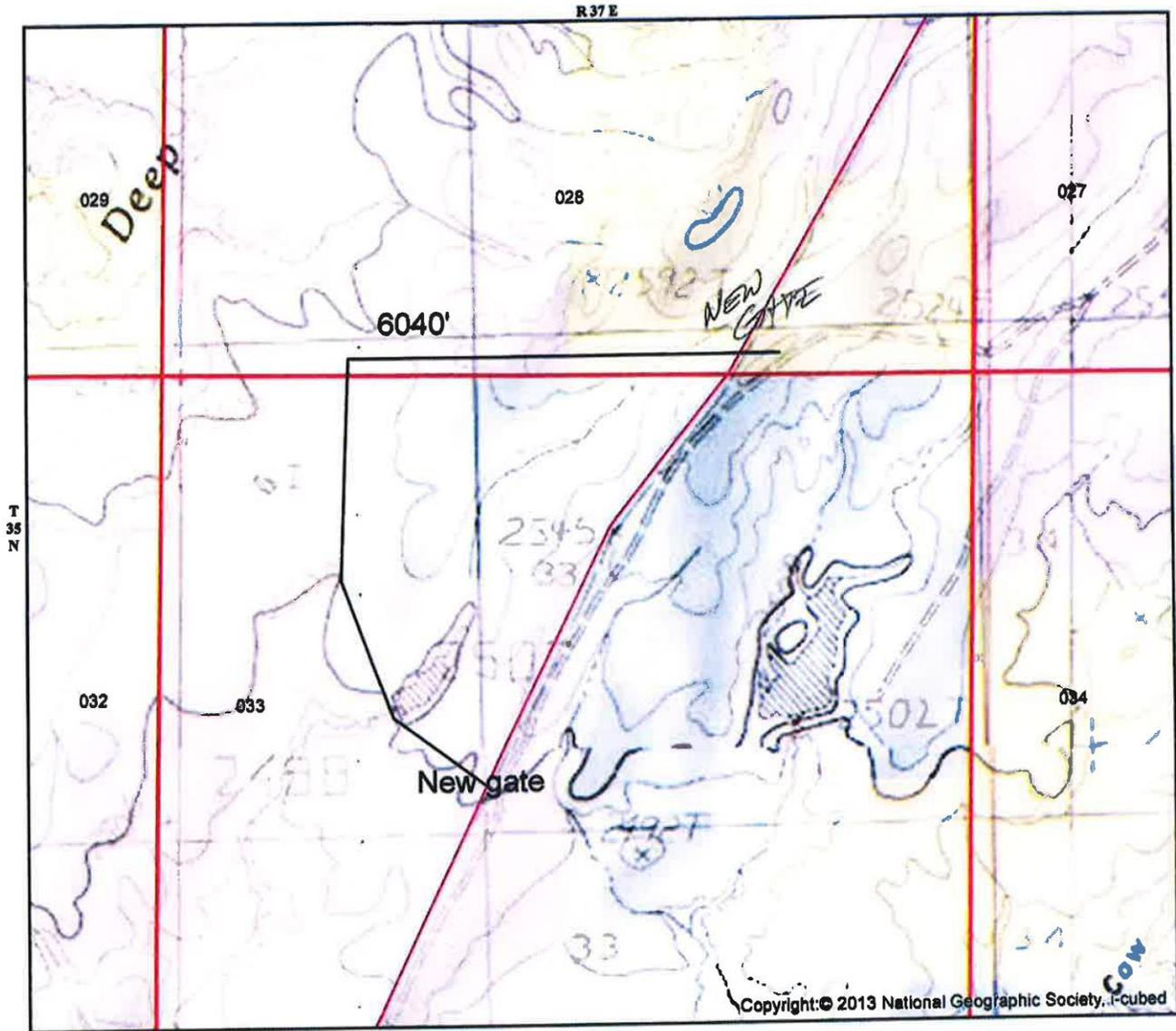
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Bureau of Land Management  
Montana/Dakotas State Office

Map created on 08 05, 2015

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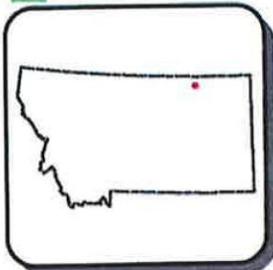
BITTER CREEK PROPOSED ACCESS ROAD #44

State of Montana



Legend

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| Bankhead-Jones Land Use Lands (BLM) | Indian Lands or Reservations | National Grasslands (USFS)     | USFW Service, National Wildlife Refuges            |
| Bureau of Reclamation (BOR)         | Intermittent Water           | National Park Service (NPS)    | Military Reservations/Corps of Engineers           |
| Bureau of Land Management (BLM)     | Lands in Litigation          | State Lands                    | Wildlife Protective Area (WPA-County Administered) |
| County and City Lands               | Other Federal Lands          | Private Lands                  | Water  |
| Forest Service Wilderness Area      | NPS Wilderness Area          | State Fish, Wildlife and Parks |  |



1 = 12,224



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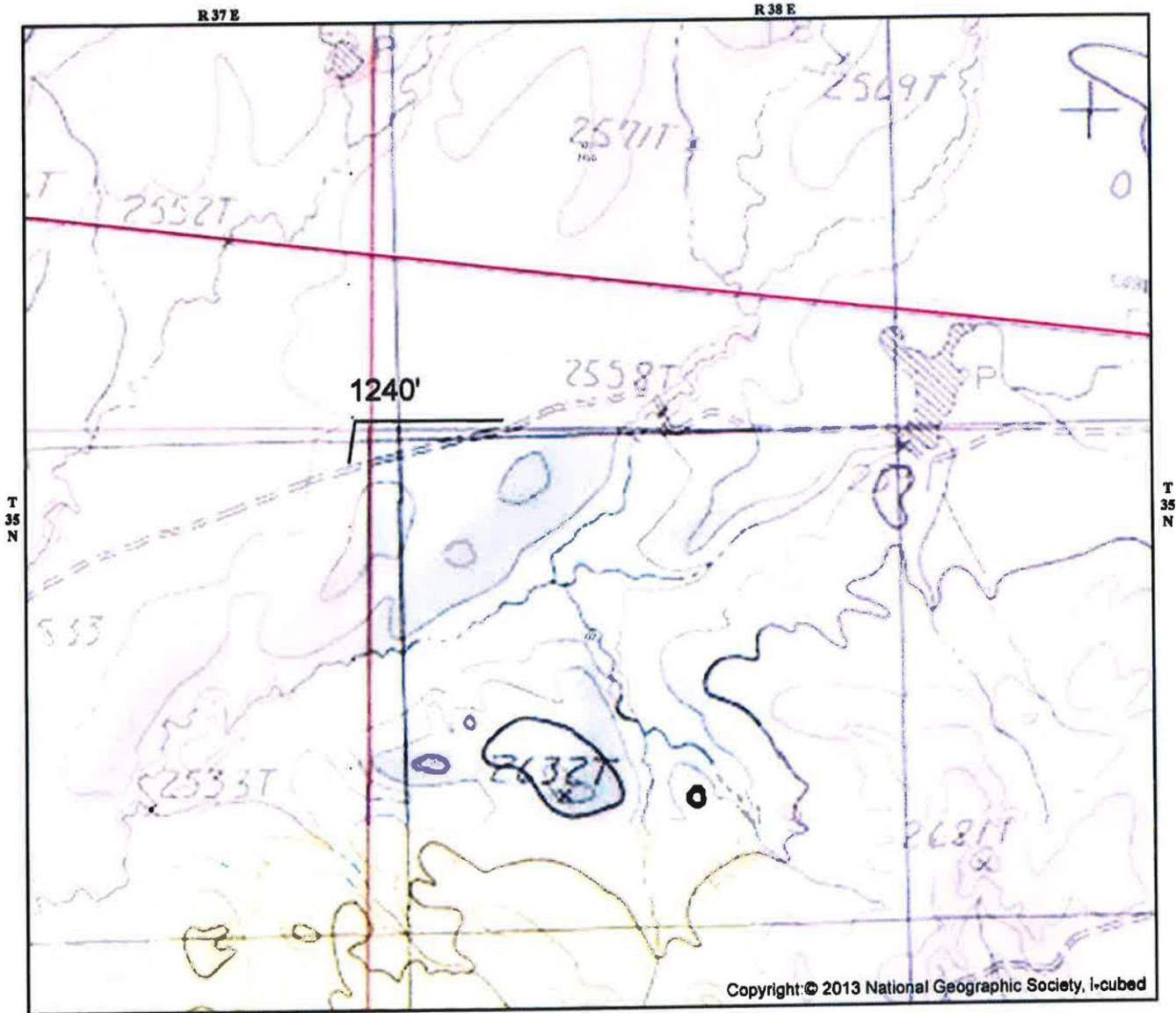
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Montana/Dakotas State Office

Map created on 08 06, 2015

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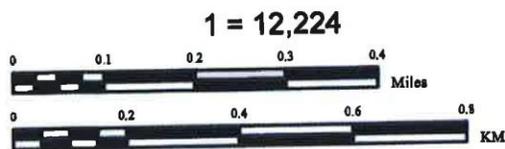
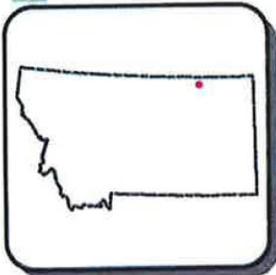
BITTER CREEK PROPOSED ACCESS ROAD-#5

State of Montana



Legend

- |                                     |                              |                                |  |
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| BLM Wilderness Area                 | IR Wilderness Area           | National Forest Lands (USFS)   | USFW Service Wilderness Area                       |
| Bankhead-Jones Land Use Lands (BLM) | Indian Lands or Reservations | National Grasslands (USFS)     | USFW Service, National Wildlife Refuge             |
| Bureau of Reclamation (BOR)         | Intermittent Water           | National Park Service (NPS)    | Military Reservations/Corps of Engineers           |
| Bureau of Land Management (BLM)     | Lands in Litigation          | State Lands                    | Wildlife Protective Area (WPA-County Administered) |
| County and City Lands               | Other Federal Lands          | Private Lands                  | Water  |
| Forest Service Wilderness Area      | NPS Wilderness Area          | State Fish, Wildlife and Parks |  |



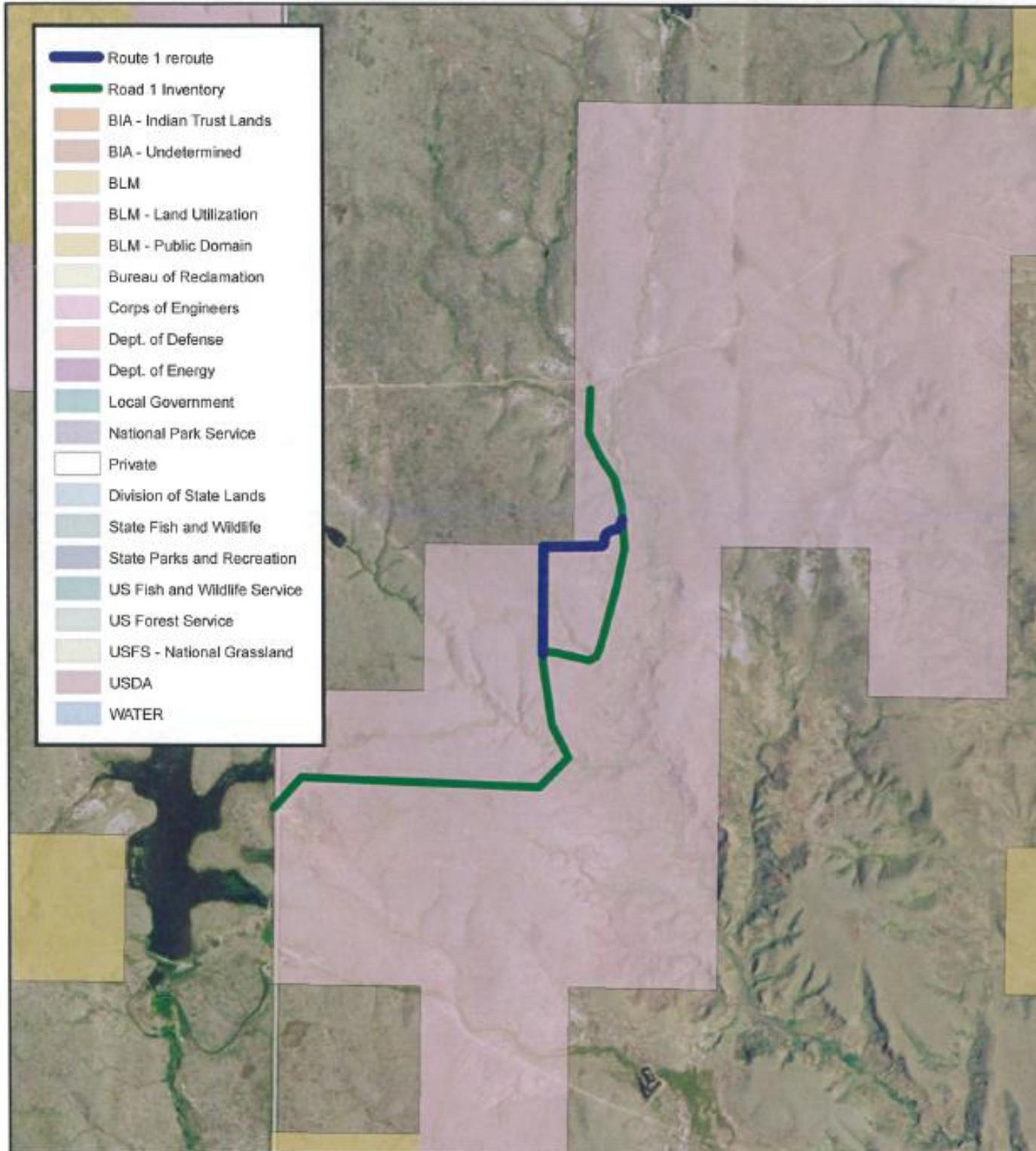
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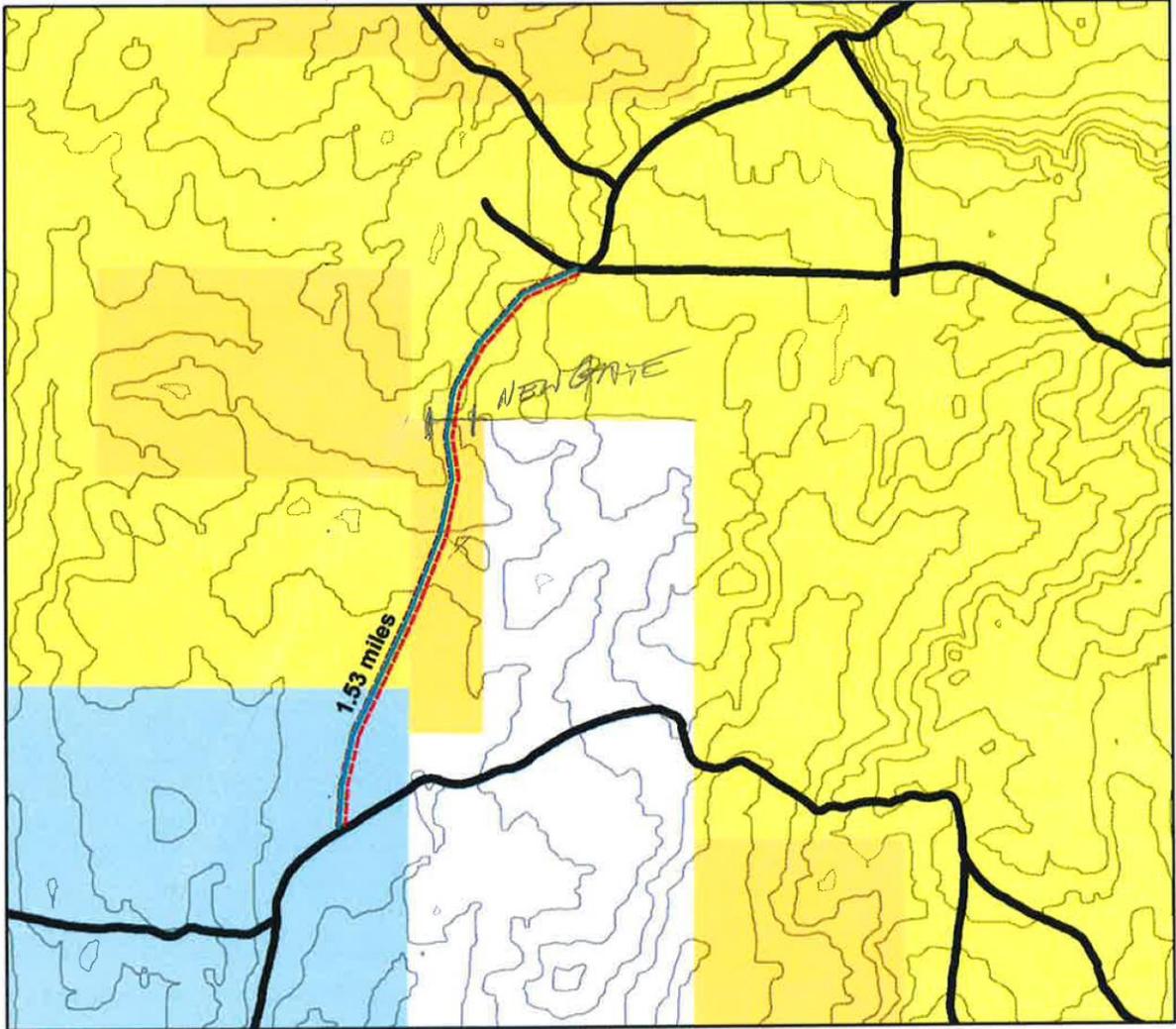
# Road 1 Proposed Re-route (Blue)



The surface management status ("land ownership") should be used as a general guide only. Official land records, located at the Bureau of Land

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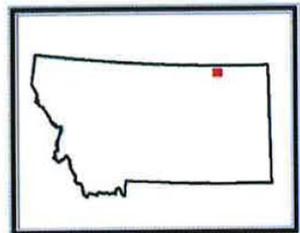
# Segment #6



- |                          |                       |                            |                              |
|--------------------------|-----------------------|----------------------------|------------------------------|
| BIA - Indian Trust Lands | Bureau of Reclamation | National Park Service      | US Fish and Wildlife Service |
| BIA - Undetermined       | Corps of Engineers    | Private                    | US Forest Service            |
| BLM                      | Dept. of Defense      | Division of State Lands    | USFS - National Grassland    |
| BLM - Land Utilization   | Dept. of Energy       | State Fish and Wildlife    | USDA                         |
| BLM - Public Domain      | Local Government      | State Parks and Recreation | WATER                        |
| Proposed Road            | Roads                 | Contour_20ft               |                              |

0 0.25 0.5 1 Miles

0 0.35 0.7 1.4 Kilometers



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