

## CHECKLIST ENVIRONMENTAL ASSESSMENT

**Project Name:** Phillips 66 Pipeline Removal and Replacement  
**Proposed Implementation Date:** Summer 2020  
**Proponent:** Phillips 66 Carrier LLC  
**Location:** 7N 21E 16  
8N 20E 16  
8N 20E 36  
**County:** Golden Valley  
**Trust:** Common Schools

### I. TYPE AND PURPOSE OF ACTION

The purpose of this Land Use License would be to allow Phillips 66 to remove and replace an existing crude oil pipeline that crosses three separate trust land sections. Due to anomalies detected in the existing 12-inch oil pipeline, a replacement was decided to be the best long-term response to ensure pipeline integrity and compliance with federal regulations. Phillips 66 proposes to stay within their 60' wide easement boundary during construction and then reclaim the sites in the fall of 2020.

### II. PROJECT DEVELOPMENT

#### 1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED:

*Provide a brief chronology of the scoping and ongoing involvement for this project.*

The Department of Natural Resources and Conservation (DNRC)  
Northeastern Land Office (NELO) & Lewistown Unit Office  
Proponent: Phillips 66 Carrier LLC  
Surface Lessees: Firehammers Inc., Jack Finch, Horpstead Ranch  
Other: DEQ, EPA, MSGOT

#### 2. OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION, LIST OF PERMITS NEEDED:

The DNRC, and NELO have jurisdiction over this proposed project. The Montana Department of Environmental Quality and the Environmental Protection Agency both have permits associated with this project.

Phillips 66 contacted the Montana Sage Grouse Oversight Team for their recommendation on mitigation measures due to this project being within Core and General Sage Grouse habitat. Phillips 66 has agreed to a mitigation plan that was generated by MSGOT and will also be contributing to the MSGOT's Stewardship account to fulfill their mitigation obligations.

Phillips 66 and its contractors will be required to follow all guidelines set forth in any existing and future executive orders or directives set by the Governor of the State of Montana regarding the Corona virus (COVID 19).

Other permits: MDEQ 318 Authorizations, 401 Certifications, SWPPP. Corps 404 (Nationwide 12)

#### 3. ALTERNATIVES CONSIDERED:

**Alternative A (No Action)** – Under this alternative, the Department does not grant a license to remove and replace an existing pipeline on an existing easement

**Alternative B (the Proposed Action)** – Under this alternative, the Department does grant a license to remove and replace an existing pipeline on an existing easement

### III. IMPACTS ON THE PHYSICAL ENVIRONMENT

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" If no impacts are identified or the resource is not present.*

#### 4. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:

*Consider the presence of fragile, compactable or unstable soils. Identify unusual geologic features. Specify any special reclamation considerations. Identify any cumulative impacts to soils.*

Most soils that would be affected by this project have a slight rating for off road erosion hazard only the shortest section of pipe that will cross state land that has a moderate rating. All the soils involved in the rebuild have a moderate to severe rating for soil rutting which can be mitigated by only working in dry or frozen conditions.

Because of the short-term nature of the construction there should be no compaction issues with the soil. Any minor compaction will likely be broken up when the pipeline is reclaimed.

#### 7N 21E 16 Ratings

Table — Erosion Hazard (Off-Road, Off-Trail) — Summary by Rating Value				
Summary by Rating Value				
Summary by Rating Value	Rating	Acres in AOI	Percent of AOI	
Slight		22.1	100.0%	
Totals for Area of Interest		22.1	100.0%	

Table — Soil Rutting Hazard — Summary by Rating Value				
Summary by Rating Value				
Summary by Rating Value	Rating	Acres in AOI	Percent of AOI	
Severe		22.1	100.0%	
Totals for Area of Interest		22.1	100.0%	

#### 8N 20E 16 Ratings

Table — Soil Rutting Hazard — Summary by Rating Value				
Summary by Rating Value				
Summary by Rating Value	Rating	Acres in AOI	Percent of AOI	
Severe		7.8	100.0%	
Totals for Area of Interest		7.8	100.0%	

Table — Erosion Hazard (Off-Road, Off-Trail) — Summary by Rating Value				
Summary by Rating Value				
Summary by Rating Value	Rating	Acres in AOI	Percent of AOI	
Moderate		7.8	100.0%	
Totals for Area of Interest		7.8	100.0%	

#### 8N 20E 36 Ratings

Table — Soil Rutting Hazard — Summary by Rating Value				
Summary by Rating Value				
Summary by Rating Value	Rating	Acres in AOI	Percent of AOI	
Moderate		8.4	100.0%	
Totals for Area of Interest		8.4	100.0%	

Table — Erosion Hazard (Off-Road, Off-Trail) — Summary by Rating Value				
Summary by Rating Value				
Summary by Rating Value	Rating	Acres in AOI	Percent of AOI	
Slight		8.4	100.0%	
Totals for Area of Interest		8.4	100.0%	

No significant cumulative impacts to geology or soil quality, stability, and moisture are anticipated.

#### 5. WATER QUALITY, QUANTITY AND DISTRIBUTION:

*Identify important surface or groundwater resources. Consider the potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality. Identify cumulative effects to water resources.*

There will be no surface water disturbed on state land. One creek will be crossed by the pipeline, but it will be on private land and the necessary DEQ permit is already in place.

Water well data closest to each of the construction areas shows that the groundwater should be sufficiently deep enough that no contact will be made with groundwater resources. The nearest well to 7N 21E 16 in the same geological unit and topographic position (Montana GWIC ID:120768) shows the static water level at 70ft below surface. The closest well to 8N 20E 36 (Montana GWIC ID: 19627) is on almost the same elevation as the pipeline and shows a static water level of 85ft below surface. The closest wells to the last section, 8N 20E 16, are both several miles away and at least 100ft lower in elevation than the pipeline. These two wells (Montana GWIC IDs:20937 and 20940) both show 30 feet below surface static water level.

All these wells show that the pipeline trench is not likely to disturb any groundwater during construction.

No significant impacts to local or regional water resources are anticipated.

#### 6. AIR QUALITY:

*What pollutants or particulate would be produced? Identify air quality regulations or zones (e.g. Class I air shed) the project would influence. Identify cumulative effects to air quality.*

Some temporary dust may be produced during the construction process, but this will be short term and minimal. If dust becomes extreme, mitigation measures may be required. Other sources of pollutants would be exhaust from equipment associated with the construction, but this would also be a short-term effect.

No significant impacts to air quality are anticipated.

#### 7. VEGETATION COVER, QUANTITY AND QUALITY:

*What changes would the action cause to vegetative communities? Consider rare plants or cover types that would be affected. Identify cumulative effects to vegetation.*

The vegetation for an area up to 60' wide would be totally stripped for this project. Most of the soils that will be disturbed are rated as at least moderately suited to reclamation. The one area that is rated as poorly suited for reclamation is the smallest area that will cross state lands. Any vegetation disturbed for this project will be reclaimed soon after construction is complete and should return to its current use within several years.

Phillips 66 has agreed to, within the MSGOT's mitigation plan, to the following reclamation standards:

During construction, the topsoil will be separated from subsoil, with the topsoil being replaced last to preserve as much of the existing roots and seeds as practical. Reclamation will include replacement of all disturbed or excavated soil, followed by broadcast or drill reseeding with a seed mix consisting of native grasses and forbs. Phillips 66 has a detailed noxious weed management plan. The management plan objectives are to:

- Limit the spread of existing infestations to the extent feasible;
- Prevent new populations of noxious weeds from establishing in previously un-infested areas as a result of the project;
- Monitor areas directly affected by the project to identify and control any noxious weeds occurring there;
- Respond to landowner and/or regulatory agency reports of weeds occurring as a result of the project; and,
- Monitor re-vegetation success and noxious weeds through time.

#### 7N 21E 16 Ratings

Table – Reclamation Suitability (MT) – Summary by Rating Value			
Summary by Rating Value			
Summary by Rating Value	Rating	Acres in AOI	Percent of AOI
Moderately suited		20.4	92.3%
Well suited		1.7	7.7%
<b>Totals for Area of Interest</b>		<b>22.1</b>	<b>100.0%</b>

## 8N 20E 16 Ratings

Table – Reclamation Suitability (MT) – Summary by Rating Value			
Summary by Rating Value			
Summary by Rating Value	Rating	Acres in AOI	Percent of AOI
Poorly suited		7.5	95.4%
Moderately suited		0.4	4.6%
Totals for Area of Interest		7.8	100.0%

## 8N 20E 36 Ratings

Table – Reclamation Suitability (MT) – Summary by Rating Value			
Summary by Rating Value			
Summary by Rating Value	Rating	Acres in AOI	Percent of AOI
Moderately suited		8.4	100.0%
Totals for Area of Interest		8.4	100.0%

### Plant Species of Concern [\(switch to Animals report\)](#)

Species List Last Updated 10/31/2019

0 Species

Filtered by the following criteria:

Township = 008N020E (based on mapset [Species Occurrence](#))

No significant impacts to vegetation are anticipated.

### 8. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:

*Consider substantial habitat values and use of the area by wildlife, birds or fish. Identify cumulative effects to fish and wildlife.*

All the construction will take place in Core and General Sage Grouse habitat. Two of the areas are in core habitat and one is in general. The corridor of construction has already been disturbed in the past and is likely already degraded habitat for sage grouse.

Phillips 66 has agreed to a mitigation plan generated by the Montana Sage Grouse Oversight Team. The minimization measures Phillips 66 has agreed to are:

- Phillips 66 will begin work in the less sensitive areas on the northwest end of the project and will work towards the southeast portion.
- Phillips 66 has agreed to keep the construction right of way to 60 ft on State Trust Lands.
- Phillips 66 will seek opportunities to avoid impacting sagebrush plants where practical to do so.
- Phillips 66 will limit open excavation to three miles maximum at any given time.
- Phillips 66 will adhere to daylight hours and work between 8:00 AM – 7:00 AM for the entire project duration.

Because Phillips 66 has agreed to lengthy mitigation and minimization measures, no significant adverse impacts to terrestrial, avian, or aquatic habitats are anticipated.

### 9. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:

*Consider any federally listed threatened or endangered species or habitat identified in the project area. Determine effects to wetlands. Consider Sensitive Species or Species of special concern. Identify cumulative effects to these species and their habitat.*



Species of Concern 6 Species Filtered by the following criteria: Township = 007N02E (based on mapped Species Occurrences)										
MAMMALS (MAMMALIA)										
SCIENTIFIC NAME COMMON NAME TAXA SORT	FAMILY (SCIENTIFIC) FAMILY (COMMON)	GLOBAL RANK	STATE RANK	USFWS USFS	BLM	FWP SWAP	% OF GLOBAL BREEDING RANGE IN IT	% OF IT THAT IS BREEDING RANGE	HABITAT	
<i>Cynomys ludovicianus</i> Black-tailed Prairie Dog	Sciuridae Squirrels	G4	S3		(Sensitive - Known on Forests (CG))	SENSITIVE	SCC03	15%	71%	Grasslands
Species Occurrences verified in these Counties: Big Horn, Blaine, Carbon, Carter, Cascade, Chouteau, Custer, Fallon, Fergus, Garfield, Golden Valley, Hill, Jefferson, Judith Basin, Lewis and Clark, Liberty, Moore, Musselshell, Petroleum, Phillips, Powder River, Prairie, Richland, Rosebud, Stillwater, Sweet Grass, Teton, Treasure, Valley, Wheatland, Yellowstone										
State Rank Reason: Across much of eastern Montana this species occurs in areas with suitable soil and topography. However, livestock grazing has caused the species to decline and has affected colony size and dynamics. Ongoing threats from disease and persecution due to perceived competition with grazing make long-term status of this species uncertain.										
BIRDS (AVES)										
SCIENTIFIC NAME COMMON NAME TAXA SORT	FAMILY (SCIENTIFIC) FAMILY (COMMON)	GLOBAL RANK	STATE RANK	USFWS USFS	BLM	FWP SWAP	% OF GLOBAL BREEDING RANGE IN IT	% OF IT THAT IS BREEDING RANGE	HABITAT	
<i>Aquila chrysaetos</i> Golden Eagle	Accipitridae Hawks / Vireos / Eagles	G5	S3	BGEPA: 187A; BCC17		SENSITIVE	SCC03	3%	100%	Grasslands
Species Occurrences verified in these Counties: Beaverhead, Big Horn, Blaine, Broadwater, Carbon, Carter, Cascade, Chouteau, Custer, Dawson, Deer Lodge, Fallon, Fergus, Glacier, Gallatin, Garfield, Glacier, Golden Valley, Granite, Hill, Jefferson, Judith Basin, Lake, Lewis and Clark, Liberty, Lincoln, Madison, Missouri, Musselshell, Park, Petroleum, Phillips, Powder River, Powell, Prairie, Ravalli, Richland, Rosebud, Sanders, Sheridan, Silver Bow, Stillwater, Sweet Grass, Teton, Toole, Treasure, Valley, Wheatland, Wibaux, Yellowstone										
<i>Ardea herodias</i> Great Blue Heron	Ardeidae Bitterns / Egrets / Herons / Night-Herons	G5	S3	187A			SCC03	3%	100%	Riparian forest
Species Occurrences verified in these Counties: Beaverhead, Big Horn, Blaine, Broadwater, Carbon, Carter, Cascade, Chouteau, Custer, Dawson, Deer Lodge, Fallon, Fergus, Glacier, Gallatin, Garfield, Glacier, Golden Valley, Granite, Hill, Jefferson, Judith Basin, Lake, Lewis and Clark, Liberty, Lincoln, Madison, Missouri, Musselshell, Park, Petroleum, Phillips, Powder River, Powell, Prairie, Ravalli, Richland, Rosebud, Sanders, Sheridan, Silver Bow, Stillwater, Sweet Grass, Teton, Toole, Treasure, Valley, Wheatland, Wibaux, Yellowstone										
State Rank Reason: Small breeding population size, evidence of recent decline, and declining regeneration of riparian cottonwood forests due to altered hydrology and grazing.										
<i>Centrocercus urophasianus</i> Greater Sage-Grouse	Phasianidae Upland Game Birds	G3G4	S2		(Sensitive - Known on Forests (SD)) (Sensitive - Suspected on Forests (CG, HLC))	SENSITIVE	SCC02	17%	75%	Sagebrush
Species Occurrences verified in these Counties: Beaverhead, Big Horn, Blaine, Broadwater, Carbon, Carter, Chouteau, Custer, Dawson, Deer Lodge, Fallon, Fergus, Glacier, Golden Valley, Hill, Madison, Missouri, Musselshell, Park, Petroleum, Phillips, Powder River, Prairie, Rosebud, Silver Bow, Stillwater, Sweet Grass, Teton, Toole, Treasure, Valley, Wheatland, Wibaux, Yellowstone										
REPTILES (REPTILIA)										
SCIENTIFIC NAME COMMON NAME TAXA SORT	FAMILY (SCIENTIFIC) FAMILY (COMMON)	GLOBAL RANK	STATE RANK	USFWS USFS	BLM	FWP SWAP	% OF GLOBAL BREEDING RANGE IN IT	% OF IT THAT IS BREEDING RANGE	HABITAT	
<i>Apalone spiniferus</i> Spiny Softshell	Trionychidae Softshell Turtles	G5	S3			SENSITIVE	SCC03	2%	24%	Prairie rivers and larger streams
Species Occurrences verified in these Counties: Big Horn, Blaine, Carbon, Cascade, Chouteau, Custer, Dawson, Fergus, Garfield, Glacier, Golden Valley, Lewis and Clark, Musselshell, Petroleum, Phillips, Powder River, Prairie, Richland, Rosebud, Stillwater, Sweet Grass, Teton, Toole, Treasure, Valley, Wheatland, Wibaux, Yellowstone										
FISH (ACTINOPTERYGII)										
SCIENTIFIC NAME COMMON NAME TAXA SORT	FAMILY (SCIENTIFIC) FAMILY (COMMON)	GLOBAL RANK	STATE RANK	USFWS USFS	BLM	FWP SWAP	% OF GLOBAL BREEDING RANGE IN IT	% OF IT THAT IS BREEDING RANGE	HABITAT	
<i>Chasmodon eys</i> Northern Redbelly Dace	Cyprinidae Minnows	G5	S3				SCC03	4%	27%	Small prairie rivers
Species Occurrences verified in these Counties: Cascade, Chouteau, Daniels, Dawson, Fergus, Golden Valley, Hill, Judith Basin, Lewis and Clark, Liberty, Moore, Musselshell, Petroleum, Phillips, Powder River, Prairie, Richland, Rosebud, Sanders, Sheridan, Silver Bow, Stillwater, Sweet Grass, Teton, Toole, Treasure, Valley, Wheatland, Wibaux, Yellowstone										
State Rank Reason: The Northern Redbelly Dace is currently listed as an "S3" species of concern in Montana based on they are potentially at risk because of limited and/or declining run times, range and/or habitat, even though it may be abundant in some areas.										
Species of Concern 6 Species Filtered by the following criteria: Township = 008V02E (based on mapped Species Occurrences)										
MAMMALS (MAMMALIA)										
SCIENTIFIC NAME COMMON NAME TAXA SORT	FAMILY (SCIENTIFIC) FAMILY (COMMON)	GLOBAL RANK	STATE RANK	USFWS USFS	BLM	FWP SWAP	% OF GLOBAL BREEDING RANGE IN IT	% OF IT THAT IS BREEDING RANGE	HABITAT	
<i>Cynomys ludovicianus</i> Black-tailed Prairie Dog	Sciuridae Squirrels	G4	S3		(Sensitive - Known on Forests (CG))	SENSITIVE	SCC03	15%	71%	Grasslands
Species Occurrences verified in these Counties: Big Horn, Blaine, Carbon, Carter, Cascade, Chouteau, Custer, Fallon, Fergus, Garfield, Golden Valley, Hill, Jefferson, Judith Basin, Lake, Lewis and Clark, Liberty, Moore, Musselshell, Petroleum, Phillips, Powder River, Prairie, Richland, Rosebud, Stillwater, Sweet Grass, Teton, Treasure, Valley, Wheatland, Yellowstone										
State Rank Reason: Across much of eastern Montana this species occurs in areas with suitable soil and topography. However, livestock grazing has caused the species to decline and has affected colony size and dynamics. Ongoing threats from disease and persecution due to perceived competition with grazing make long-term status of this species uncertain.										
BIRDS (AVES)										
SCIENTIFIC NAME COMMON NAME TAXA SORT	FAMILY (SCIENTIFIC) FAMILY (COMMON)	GLOBAL RANK	STATE RANK	USFWS USFS	BLM	FWP SWAP	% OF GLOBAL BREEDING RANGE IN IT	% OF IT THAT IS BREEDING RANGE	HABITAT	
<i>Aquila chrysaetos</i> Golden Eagle	Accipitridae Hawks / Vireos / Eagles	G5	S3	BGEPA: 187A; BCC17		SENSITIVE	SCC03	3%	100%	Grasslands
Species Occurrences verified in these Counties: Beaverhead, Big Horn, Blaine, Broadwater, Carbon, Carter, Cascade, Chouteau, Custer, Dawson, Deer Lodge, Fallon, Fergus, Glacier, Gallatin, Garfield, Glacier, Golden Valley, Granite, Hill, Jefferson, Judith Basin, Lake, Lewis and Clark, Liberty, Lincoln, Madison, Missouri, Musselshell, Park, Petroleum, Phillips, Powder River, Powell, Prairie, Ravalli, Richland, Rosebud, Sanders, Sheridan, Silver Bow, Stillwater, Sweet Grass, Teton, Toole, Treasure, Valley, Wheatland, Wibaux, Yellowstone										
<i>Centrocercus urophasianus</i> Greater Sage-Grouse	Phasianidae Upland Game Birds	G3G4	S2		(Sensitive - Known on Forests (SD)) (Sensitive - Suspected on Forests (CG, HLC))	SENSITIVE	SCC02	17%	75%	Sagebrush
Species Occurrences verified in these Counties: Beaverhead, Big Horn, Blaine, Broadwater, Carbon, Carter, Chouteau, Custer, Dawson, Deer Lodge, Fallon, Fergus, Glacier, Gallatin, Garfield, Golden Valley, Hill, Madison, Missouri, Musselshell, Park, Petroleum, Phillips, Powder River, Prairie, Rosebud, Silver Bow, Stillwater, Sweet Grass, Teton, Toole, Treasure, Valley, Wheatland, Wibaux, Yellowstone										
<i>Lanius ludovicianus</i> Loggerhead Shrike	Laniidae Shrikes	G4	S1B	187A; BCC18; BCC17		SENSITIVE	SCC03	4%	100%	Shrubland
Species Occurrences verified in these Counties: Beaverhead, Big Horn, Blaine, Broadwater, Carbon, Carter, Cascade, Chouteau, Custer, Dawson, Deer Lodge, Fallon, Fergus, Glacier, Gallatin, Garfield, Glacier, Golden Valley, Hill, Jefferson, Lake, Lewis and Clark, Liberty, Lincoln, Madison, Missouri, Musselshell, Park, Petroleum, Phillips, Powder River, Powell, Prairie, Ravalli, Richland, Rosebud, Sanders, Sheridan, Silver Bow, Stillwater, Sweet Grass, Teton, Toole, Treasure, Valley, Wheatland, Wibaux, Yellowstone										
<i>Numenius americanus</i> Long-billed Curlew	Scelopacidae Sandpipers	G5	S1B	187A; BCC18; BCC17		SENSITIVE	SCC03	19%	100%	Grasslands
Species Occurrences verified in these Counties: Beaverhead, Big Horn, Blaine, Broadwater, Carbon, Carter, Cascade, Chouteau, Custer, Dawson, Deer Lodge, Fallon, Fergus, Glacier, Gallatin, Garfield, Glacier, Golden Valley, Granite, Hill, Jefferson, Judith Basin, Lake, Lewis and Clark, Liberty, Lincoln, Madison, Missouri, Musselshell, Park, Petroleum, Phillips, Powder River, Powell, Prairie, Ravalli, Richland, Rosebud, Sanders, Sheridan, Silver Bow, Stillwater, Sweet Grass, Teton, Toole, Treasure, Valley, Wheatland, Wibaux, Yellowstone										
<i>Spizella breweri</i> Brewer's Sparrow	Passerellidae New World Sparrows	G5	S1B	187A; BCC18; BCC17		SENSITIVE	SCC03	12%	100%	Sagebrush
Species Occurrences verified in these Counties: Beaverhead, Big Horn, Blaine, Broadwater, Carbon, Carter, Cascade, Chouteau, Custer, Dawson, Deer Lodge, Fallon, Fergus, Glacier, Gallatin, Garfield, Glacier, Golden Valley, Granite, Hill, Jefferson, Lake, Lewis and Clark, Liberty, Lincoln, Madison, Missouri, Musselshell, Park, Petroleum, Phillips, Powder River, Powell, Prairie, Ravalli, Richland, Rosebud, Sanders, Sheridan, Silver Bow, Stillwater, Sweet Grass, Teton, Toole, Treasure, Valley, Wheatland, Wibaux, Yellowstone										
State Rank Reason: Species listed as threatened due to sagebrush habitat loss and dependence on it as a result of habitat conversion for agriculture and increased frequency of fire as a result of weed encroachment and drought.										

0 Species

Filtered by the following criteria:

Township = 008N020E | based on project Species Occurrence

Both the townships affected by the construction have similar species of concern present. The species most likely to be affected are Greater Sage Grouse and the Black Tailed Prairie Dog. Prairie dog towns could be affected by the construction if it already crosses the pipeline. Sage grouse breeding could be affected depending on the time of year and proximity to leks.

Effects on sage grouse in the area will be mitigated by contributing to the MT Sage Grouse Stewardship fund, operating only between the hours of 0800-1900, having wildlife biologists onsite to monitor construction, reducing the construction footprint, limiting the distance of excavation open at one time and scheduling the most sensitive areas outside of breeding season. In addition, Phillips 66 has agreed to a mitigation plan (See Attached) and will be contributing to MSGOT's Stewardship fund.

Most of other species will likely just be affected temporarily by displacement during the construction. The fish, reptiles and Great blue heron are not likely to be affected at all because the work on trust lands will not be near water.

The only place the loggerhead shrike is likely to be affected is in 8N 20E 16 because there are some ponderosa pines that that may use as nesting habitat. However the shrike is uncommon in this area of Montana and nests very early in the spring which is outside of the work timeframe of this project.

Curlews do have a potential to have their nest disturbed because curlews nest on the ground in late spring and early summer. Since the work is likely to occur later in the summer this potential should be reduced.

The Brewer's sparrow is the most likely bird to be disturbed by this project. They nest in low bushes in late spring. Because most of the habitat that will be disturbed is low shrubs and grasses this could damage the Brewer sparrow habitat.

This project has the potential to damage the nesting and general habitat of several species, but since the area of disturbance is so narrow and will only be actively disturbed for a short period, no significant long-term impacts to fragile environmental resources are anticipated.

#### 10. HISTORICAL AND ARCHAEOLOGICAL SITES:

*Identify and determine effects to historical, archaeological or paleontological resources.*

A Class I (literature review) level review was conducted by the DNRC staff archaeologist for the area of potential effect (APE). This entailed inspection of project maps, DNRC's sites/site leads database, land use records, General Land Office Survey Plats, and control cards. The Class I search revealed that *Antiquities* have not been identified in the APE. No additional archaeological investigative work will be conducted in response to this proposed development. However, if previously unknown cultural or paleontological materials are identified during project related activities, all work will cease until a professional assessment of such resources can be made.

A third-party archaeological survey was also conducted on the ground and did not find any cultural sites that would be disturbed. The report is attached as an addendum.

In addition, the 60 feet right-of-way, that Phillips 66 is proposing to use for construction, has already been previously disturbed when they installed the original crude oil pipeline.

No significant effects on historical, archaeological, or paleontological resources anticipated.

#### 11. AESTHETICS:

*Determine if the project is located on a prominent topographic feature or may be visible from populated or scenic areas. What level of noise, light or visual change would be produced? Identify cumulative effects to aesthetics.*

The area disturbed by this project will only be 60' wide and will be reclaimed soon after construction is complete. Due to the short-term nature there should be no extended significant impacts to the aesthetics of the area.

**12. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:**

*Determine the amount of limited resources the project would require. Identify other activities nearby that the project would affect. Identify cumulative effects to environmental resources.*

No limited environmental resources will be significantly impacted because of this project. This project will also not add any significant cumulative demands on environmental resources. The land will still be used for its current purpose after construction is complete.

**13. OTHER ENVIRONMENTAL DOCUMENTS PERTINENT TO THE AREA:**

*List other studies, plans or projects on this tract. Determine cumulative impacts likely to occur as a result of current private, state or federal actions in the analysis area, and from future proposed state actions in the analysis area that are under MEPA review (scoped) or permitting review by any state agency.*

There are no other projects or plans being considered on the tracts listed in this EA Checklist.

**IV. IMPACTS ON THE HUMAN POPULATION**

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" if no impacts are identified or the resource is not present.*

**14. HUMAN HEALTH AND SAFETY:**

*Identify any health and safety risks posed by the project.*

There will be risks involved with the installation of pipeline and the operation of heavy equipment. The mitigation of risk is the responsibility of the proponent.

**15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:**

*Identify how the project would add to or alter these activities.*

This project will not add to or deter from other industrial, agricultural, or commercial activities in the area.

**16. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:**

*Estimate the number of jobs the project would create, move or eliminate. Identify cumulative effects to the employment market.*

The project will not create or eliminate any jobs, so no significant effects to the employment market are anticipated.

**17. LOCAL AND STATE TAX BASE AND TAX REVENUES:**

*Estimate tax revenue the project would create or eliminate. Identify cumulative effects to taxes and revenue.*

There are no direct or cumulative effects to taxes or revenue for the proposed project.

**18. DEMAND FOR GOVERNMENT SERVICES:**

*Estimate increases in traffic and changes to traffic patterns. What changes would be needed to fire protection, police, schools, etc.? Identify cumulative effects of this and other projects on government services*

There will not be any significant increases in traffic, school attendance, or need for fire and police protection if this project is approved.

**19. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:**

*List State, County, City, USFS, BLM, Tribal, and other zoning or management plans, and identify how they would affect this project.*

The proposed project falls within core and general sage grouse habitat as described in the Governor's Executive Order 12-2015. Phillips 66 has consulted with the Montana Sage Grouse Oversight Team and their recommendations are



attached. In addition, Phillips 66 has voluntarily agreed to a mitigation plan to limit the impact on sage grouse habitat and will be contributing to the MSGOT Stewardship Fund.

**20. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:**

*Identify any wilderness or recreational areas nearby or access routes through this tract. Determine the effects of the project on recreational potential within the tract. Identify cumulative effects to recreational and wilderness activities.*

Recreational quality of the land may be temporarily affected during construction but will return to normal after the reclamation is complete. No wilderness will be affected by this pipeline. There will be no significant direct or cumulative effects on access to or quality of recreation and wilderness activities because of this project.

**21. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:**

*Estimate population changes and additional housing the project would require. Identify cumulative effects to population and housing*

The proposed project does not include any changes to housing or developments.

**22. SOCIAL STRUCTURES AND MORES:**

*Identify potential disruption of native or traditional lifestyles or communities.*

There are no native, unique or traditional lifestyles or communities in the vicinity that would be significantly impacted by the proposal.

**23. CULTURAL UNIQUENESS AND DIVERSITY:**

*How would the action affect any unique quality of the area?*

The proposed project will have no significant impact on any culturally unique quality of the area.

**24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:**

*Estimate the return to the trust. Include appropriate economic analysis. Identify potential future uses for the analysis area other than existing management. Identify cumulative economic and social effects likely to occur as a result of the proposed action.*

The proposed project would be authorized under a Land Use License issued by the DNRC's Northeastern Land Office. The Land Use License fee of \$1000 would benefit the Common Schools Trust.

**V. FINDING**

**25. ALTERNATIVE SELECTED:**

**Alternative B (the Proposed Action)** – Under this alternative, the Department does grant a Land Use License to Phillips 66 to remove and replace an existing pipeline on an existing easement.

**26. SIGNIFICANCE OF POTENTIAL IMPACTS:**

I have evaluated the potential environment effects and have determined no significant impact to the environment because of this project.

**27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:**

☐

EIS


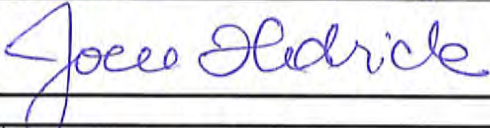

☐

More Detailed EA

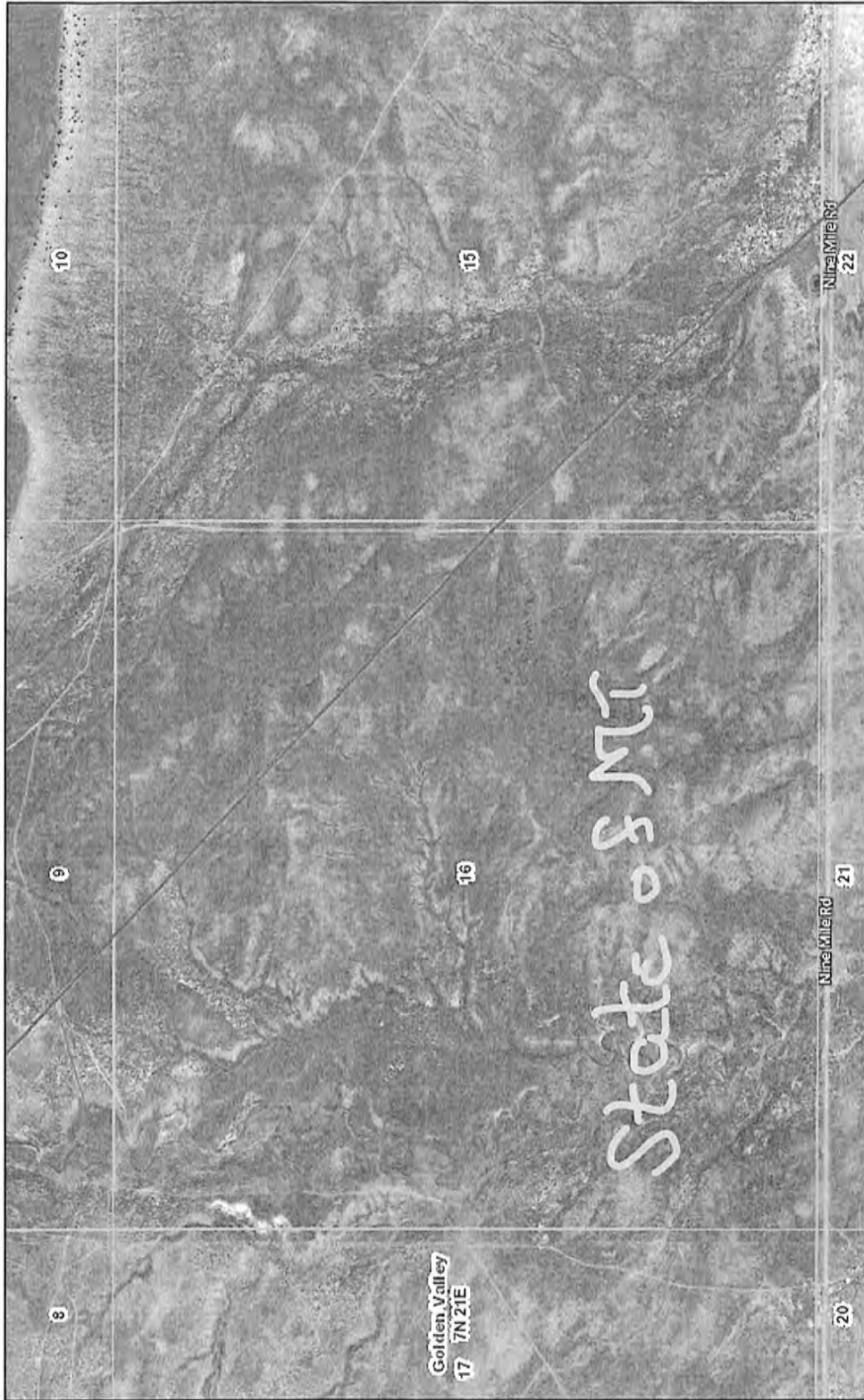
☒

No Further Analysis



<b>EA Checklist Prepared By:</b>	<b>Name:</b> Jocee Hedrick	& Dustin Lenz
	<b>Title:</b> Lewistown Unit Manager	& Land Use Specialist
<b>Signature:</b>	 <b>Date:</b> 5/5/2020	
<b>Signature:</b>	 <b>Date:</b> 5/5/2020	
<b>EA Checklist Approved By:</b>	<b>Name:</b> Clive Rooney	
	<b>Title:</b> Area Manager, Northeastern Land Office	
<b>Signature:</b>	 <b>Date:</b> 5/7/20	

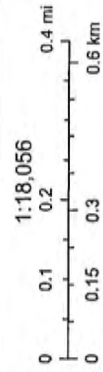
# GL9\_MP53\_Sec16\_T7N\_R21E\_State of MT



35552

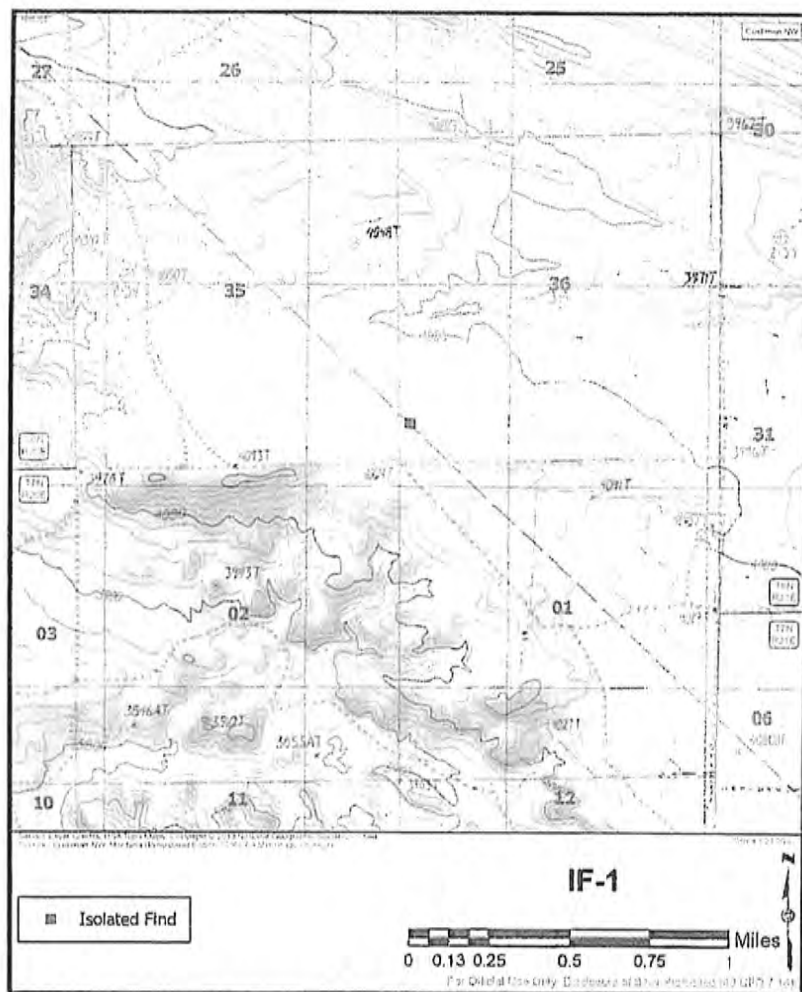
2/21/2020, 9:57:58 AM

- PIPELINES
- ☐ IDLED/OUT OF SERVICE
  - ☐ ACTIVE
  - ☐ IDLED/IN-SERVICE
- SECTIONS
- ☐ USLG\_Parcels
  - ☐ TOWNSHIPS



1:18,056

Contact Mapping Group for more information. © 2020 Microsoft Corporation  
© 2020 DigitalGlobe ©CNES (2020) Distribution Airbus DS © 2020 HERE  
Web AppBuilder for ArcGIS  
property of Phillips 66 Company



9) Artifact/ Feature Description:

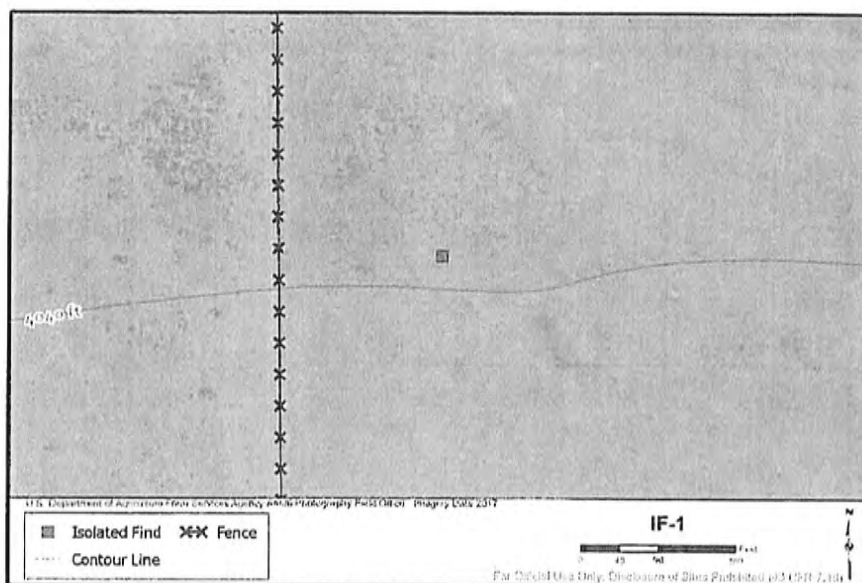
One (1) brass spray can - post 1963 measuring 8 in long x 5 in wide.

10) Environmental Location (Topography/Vegetation/Soils and Deposition/Slope/Water Sources:

The located find was located in a short grass prairie on an upland plain. Soils at the location are Rusby-Twilight fine sandy loams, 2 to 9 percent slopes, originating from Alluvium derived from sandstone. The closest water source is Springs Creek located 0.35 miles north from the find.

III) Attach Copy of YOUR Location Map





Attach Photo



**RECOMMENDED ISOLATED FIND/FEATURE FORM**

---

**Montana IF Form**

1) Field Number: IF1

2) Curation Number:

3) Legal Location: T8 R20 N32E

4) County: Golden Valley

USGS Map Reference: Cashman NW, Montana 1986

5) Owner: State

6) Collected: No

Repository: N/A

7) Name of Repository: Quinn Black

Date: 3/6/1999

Company/Agency: Montana Department of Natural Resources

8) Attach Sketch Map

## Appendix A: Isolated Find Form

## 5.0 CONCLUSION

The 2020 Class III cultural resource inventory of the proposed Phillips 66 Pipeline Project investigated 13.6 total acres, all of which are located on state land in Golden Valley County, Montana. The cultural resource inventory identified one isolated find. Isolated finds are not eligible in the state of Montana. No additional cultural resource work is recommended within the project area.

## 6.0 BIBLIOGRAPHY

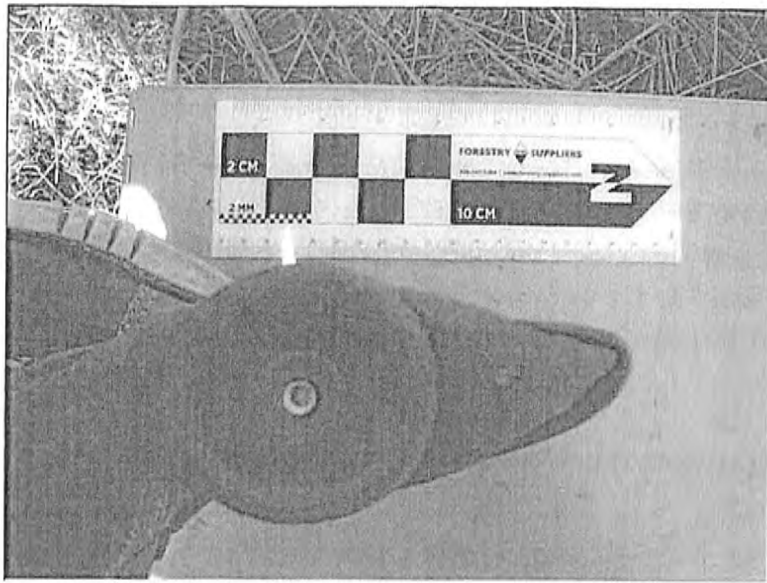
National Park Service (NPS)

1997 Bulletin 15: How to Apply National Register Criteria for Evaluation, edited by National Park Service United States Department of the Interior, Washington DC.

USDA Natural Resource Conservation Service

2019 Web Soil Survey. United States Department of Agriculture  
<https://websoilsurvey.sc.egov.usda.gov/>, accessed January 2020.





*Figure 4 – Aerosol spray can with intact gasket and stem.*



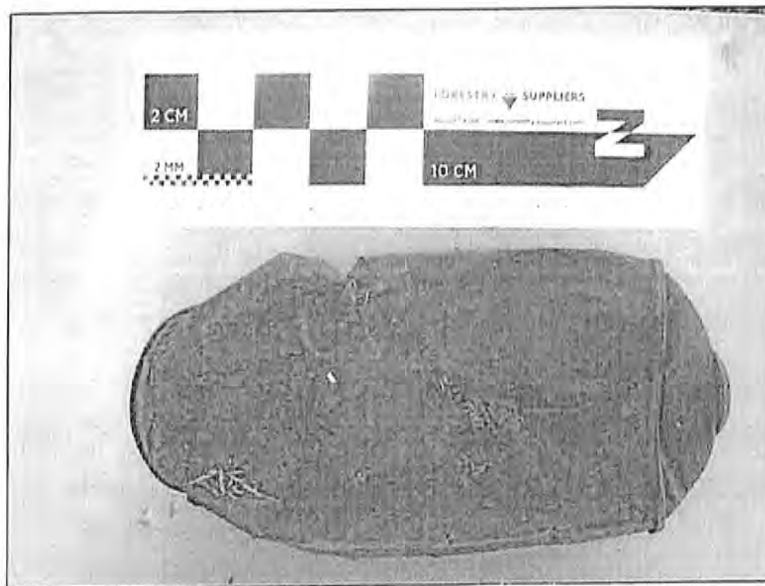
*Figure 5 – Location of isolated find. View to the northwest.*

## 4.0 RESULTS

### Isolated Find – IF1

The isolated find consists of one aerosol spray can with an intact stem and gasket, which dates to post 1953 (Figures 3 and 4). It measures 8 inches long by 5 inches wide. The isolated find was located in a short grass prairie on an upland plain (Figure 5). Soils at the location are Busby-Twilight fine sandy loams, 2 to 8 percent slopes, originating from Alluvium derived from sandstone (USDA 2019). The closest water source is Springs Creek located 0.35 miles north from the find.

Isolated finds are not eligible for the NRHP in Montana. No further work is recommended.



*Figure 3 – Planview of aerosol spray can.*

attributes of features includes the overall site composition, materials, alterations, function, condition, and dimensions.

NRHP guidelines were used to recommend site eligibility. Of particular importance for evaluating site eligibility is the National Register Bulletin entitled *How to Apply National Register Criteria for Evaluation* (National Park Service [NPS] 1997). According to the Bulletin, a property must possess historic significance and integrity to be listed on the NRHP. The four criteria for evaluation are as follows:

- **Criterion A:** Properties that are associated with events that have made a significant contribution to the broad patterns of our past.
- **Criterion B:** Properties that are associated with the lives of persons significant in our past.
- **Criterion C:** Properties that embody the distinctive characteristics of a type, period or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.
- **Criterion D:** Properties that have yielded, or may be likely to yield, information important to prehistory or history.

The significance of a property can only be judged and explained when evaluated within its historic context (NPS 1997:3). According to Bulletin 15 (NPS 1997:11) a context is the “information about historic trends and properties grouped by an important theme in the prehistory or history of a community, state or nation during a particular period of time.” Furthermore, “A property is not eligible if it cannot be related to a particular time period or cultural group and, as a result, lacks any historic context within which to evaluate the importance of the information to be gained” (NPS 1997:22).

The property must also retain integrity of those features necessary to convey its significance. Seven qualities of integrity are defined. These are integrity of location, design, setting, materials, workmanship, feeling and association (NPS 1997:44-45). For archeological sites, integrity is generally “based on the degree to which remaining evidence can provide important information. All seven qualities do not need to be present” (NPS 1997:4).



*Figure 2 – Photographic overview of a disturbed area. View to the northwest.*

Prehistoric sites are defined as any prehistoric feature (e.g. ring, arc, or cairn) and/or five or more artifacts (e.g. lithics, fire cracked rock, bone) within a 50 square meter area. The presence of one to four artifacts within a 50 square meter area is identified as an isolate. All prehistoric sites and artifacts are recorded in metric units (i.e. meters and centimeters).

Historic sites are defined as any historic feature (e.g. foundation, canal, or well) and/or five or more artifacts of at least three different material types (e.g. glass, metal, and ceramic) that are 50 years of age or older within a 50 square meter area. The investigations of historic sites include a descriptive analysis of all standing buildings and structures and all historic features. Historic sites and features are recorded in imperial units (i.e., feet and inches).

All identified sites are recorded on the Montana Cultural Resources Information System form (CRIS). Digital photographs were taken of features and site overviews. A scaled sketch map of each site incorporating all of the features was created. Information collected on the physical



## **2.0 BACKGROUND RESEARCH**

Before fieldwork, Ethnoscience requested a file search (#2020030303) from the Montana State Historic Preservation Office for the townships, ranges, and sections crossed by the project corridor. Ethnoscience also examined the NRHP site database, pertinent General Land Office (GLO) maps, and United States Geological Survey (USGS) 7.5-minute series topographic maps. Information obtained from these sources was used to identify potential sites and previously recorded sites within the inventory area. The project area and site boundaries were uploaded to an AshTech hand-held global positioning system (GPS) capable of sub-meter accuracy to facilitate in-field identification.

The records search did not indicate any previously recorded sites or previously written reports within the project area.

## **3.0 METHODS**

Ethnoscience archaeologist Quinn Black conducted a Class III cultural resource inventory of the proposed project area on March 5, 2020. The project corridor covers 13.6 acres on state lands. The Class III inventory consisted of a pedestrian survey utilizing a single-spaced transect placed in the center of the pipeline corridor. The inventory consisted of a 100-foot wide corridor. Artifacts visible on the surface and features 50 years of age or older were recorded, except for roads, fence lines, field clearing piles, and stock dams. No subsurface testing was conducted, no artifacts were collected, and no Native American consultation was conducted.

Ground surface visibility at the time of survey ranged from 15 percent to 45 percent. Visibility was partially obscured by the growth of prairie grasses and sage brush. Noted disturbances include evidence of berms and pipe scarring within the project corridor (Figure 2). Areas of exceptional ground surface visibility (i.e., road cuts, rodent borrows, eroded areas, and animal trails) were thoroughly investigated. Weather conditions were sunny and dry. These are acceptable inventory conditions.

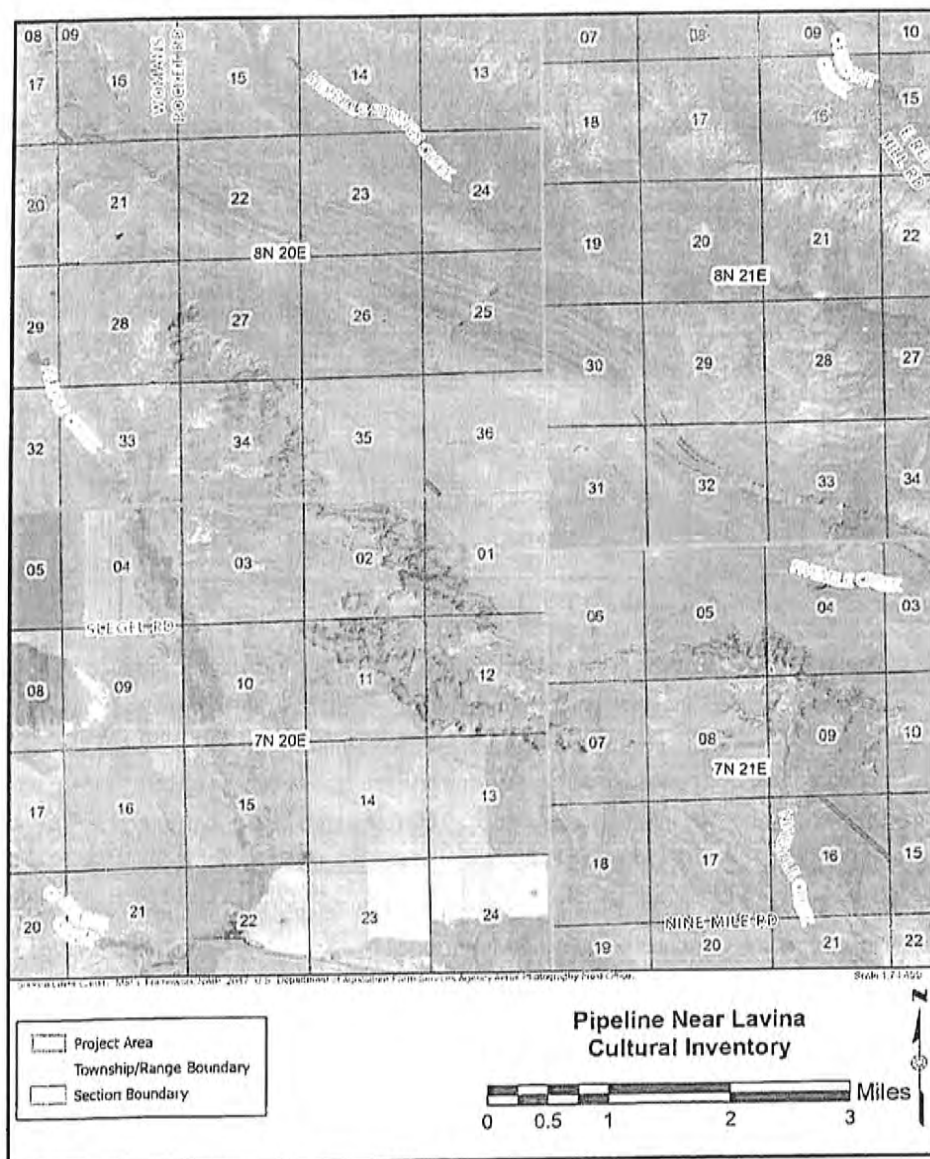


Figure 1 – Aerial map of the project area.

## 1.0 INTRODUCTION

Phillips 66 proposes to construct a pipeline in Golden Valley County, Montana (Table 1). Phillips 66 contracted Terracon Consultants to assist with the project. Terracon contracted Ethnoscience, Inc. to conduct a Class III cultural resource inventory of three segments of the pipeline situated on state lands (Figure 1). The undertaking requires ground disturbing activity. The proposed pipeline corridor is 100 feet wide and 5,920 ft long. The three pipeline segments investigated parallel an existing pipeline just to the southwest of the proposed corridor. The ground disturbances will be reclaimed after construction.

*Table 1 – Project area location.*

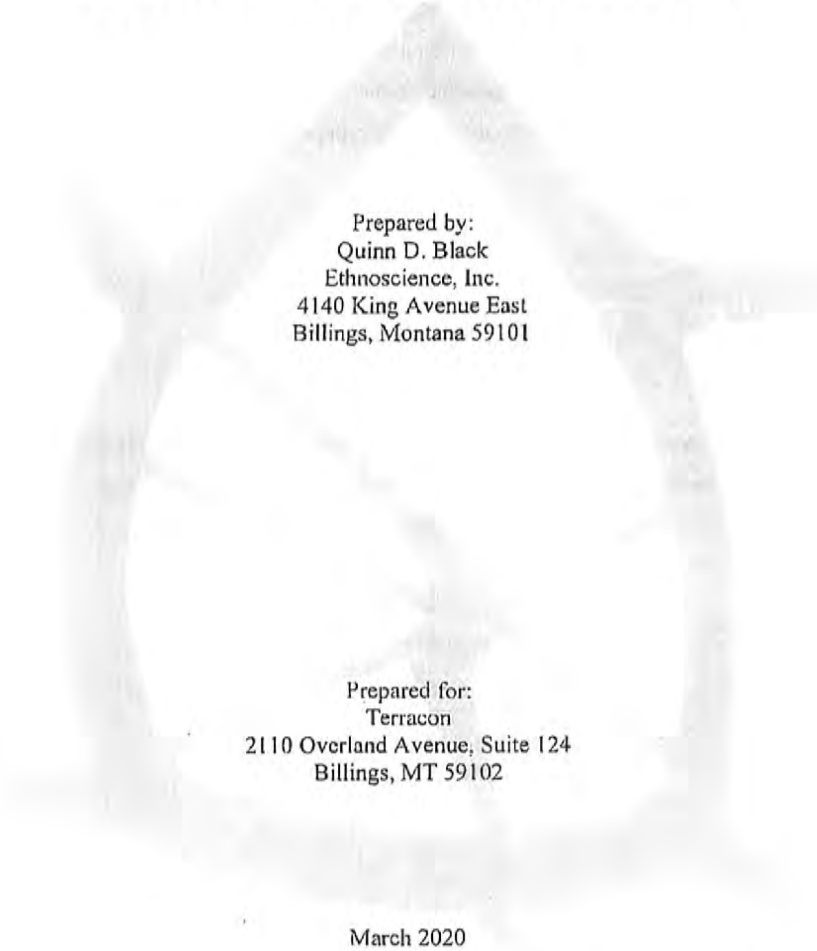
<b>Project Area Location</b>		
<b>Township</b>	<b>Range</b>	<b>Section(s)</b>
7N	21E	16
8N	20E	16,36

The Class III cultural resource inventory includes 13.6 acres, all of which are administered by the Montana Department of Natural Resources and Conservation (State) [Table 2]. One isolated find was identified during the survey. This report documents the results of the investigation.

*Table 2 – Landowner and acreage of project area.*

<b>Landowner and acreage at project area</b>				
<b>Township</b>	<b>Range</b>	<b>Section(s)</b>	<b>Landowner</b>	<b>Acreage</b>
7N	21E	16	State	10.5
8N	20E	16	State	1.58
8N	20E	36	State	1.52
<b>Total Acres</b>				<b>13.6</b>

**Terracon:  
A Class III Cultural Resource Inventory  
of Three Pipeline Segments near Lavina  
in Golden Valley County, Montana**



Prepared by:  
Quinn D. Black  
Ethnoscience, Inc.  
4140 King Avenue East  
Billings, Montana 59101

Prepared for:  
Terracon  
2110 Overland Avenue, Suite 124  
Billings, MT 59102

March 2020



## MONTANA WELL LOG REPORT

### Other Options

This well log reports the activities of a licensed Montana well driller, serves as the official record of work done within the borehole and casing, and describes the amount of water encountered. This report is compiled electronically from the contents of the Ground Water Information Center (GWIC) database for this site. Acquiring water rights is the well owner's responsibility and is NOT accomplished by the filing of this report.

[Go to GWIC website](#)  
[Plot this site in State Library Digital Atlas](#)  
[Plot this site in Google Maps](#)  
[View scanned well log \(7/27/2009 8:04:53 AM\)](#)

Site Name: SCHAFF, NED  
GWIC Id: 120768  
DNRC Water Right: 075759

## Section 1: Well Owner(s)

1) SCHAFF, NED (MAIL)  
BOX 205  
LAVINA MT 59046 [05/30/1990]

## Section 2: Location

Township	Range	Section	Quarter Sections
06N	21E	1	NE¼ NW¼
	County		Geocode

GOLDEN VALLEY

Latitude	Longitude	Geomethod	Datum
46.3064816841	-109.04489249	TRS-SEC	NAD83
Ground Surface Altitude	Ground Surface Method	Datum	Date

### Addition

## Block

Lot

## Section 7: Well Test Data

Total Depth: 175  
Static Water Level: 70  
Water Temperature:

### Bailer Test \*

25 gpm with      feet of drawdown after 1 hours.  
Time of recovery      hours.  
Recovery water level      feet.  
Pumping water level      feet.

*\* During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.*

## Section 8: Remarks

### Section 3: Proposed Use of Water

STOCKWATER (1)

#### Section 4: Type of Work

Drilling Method: FORWARD ROTARY  
Status: NEW WELL

## Section 5: Well Completion Date

Date well completed: Wednesday, May 30, 1990

## Section 6: Well Construction Details

### **Borehole dimensions**

From	To	Diameter
0	18	10
0	175	6.5

### Casing

From	To	Diameter	Wall Thickness	Pressure Rating	Joint	Type
-1.5	18	7				STEEL
0	175	4				PLASTIC

**Completion (Perf/Screen)**

From	To	Diameter	# of Openings	Size of Openings	Description
137	175	4			SLOTS

**Annular Space (Seal/Grout/Packer)**

From	To	Description	Cont. Fed?
0	18	VOLCLAY AND BENTONITE	

## Section 9: Well Log

### Geologic Source

211EGLE - EAGLE SANDSTONE

[illegible]

### Driller Certification

All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Name: MERLE E. HUNT  
Company: HUNT DRILLING  
License No: WWC-207  
Date Completed: 5/30/1990

**MONTANA WELL LOG REPORT****Other Options**

This well log reports the activities of a licensed Montana well driller, serves as the official record of work done within the borehole and casing, and describes the amount of water encountered. This report is compiled electronically from the contents of the Ground Water Information Center (GWIC) database for this site. Acquiring water rights is the well owner's responsibility and is NOT accomplished by the filing of this report.

[Go to GWIC website](#)  
[Plot this site in State Library Digital Atlas](#)  
[Plot this site in Google Maps](#)  
[View scanned well log \(7/29/2009 10:41:36 AM\)](#)

**Site Name:** DICK, ROBERT  
**GWIC Id:** 20940

**Section 7: Well Test Data**

Total Depth: 195  
 Static Water Level: 30  
 Water Temperature:

**Section 1: Well Owner(s)**  
 1) DICK, ROBERT (MAIL)  
 UPPER WOMAN'S POCKET  
 N/A MT N/A [01/01/1961]

**Bailer Test \***

4 gpm with    feet of drawdown after    hours.  
 Time of recovery    hours.  
 Recovery water level    feet.  
 Pumping water level    feet.

**Section 2: Location**

Township	Range	Section	Quarter Sections
08N	20E	25	SE¼
			Geocode

**GOLDEN VALLEY**

Latitude	Longitude	Geomethod	Datum
46.42040443495	-109.158176331	TRS-SEC	NAD83
Ground Surface Altitude	Ground Surface Method	Datum	Date

\* During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.

**Addition**                      **Block**                      **Lot**

**Section 8: Remarks**

**Section 3: Proposed Use of Water**  
 UNKNOWN (1)

**Section 9: Well Log****Geologic Source**

211JDRV - JUDITH RIVER FORMATION (OF MONTANA GROUP)

From	To	Description
0	6	TOPSOIL
6	14	YELLOW SANDY CLAY
14	34	GRAY AND YELLOW CLAY, SANDY
34	51	GRAY SHALE, SANDY (WATER)
51	55	HARD GRAY SANDSTONE (SHELL)
55	75	YELLOW SANDSTONE (SHOW OF WATER 65 FEET)
75	85	GRAY SAND (SMALL AMOUNT OF WATER)
85	125	SHALE AND SAND STREAKS OF GRAY FINE
125	132	GRAY SANDSTONE, MED GRAINED (WATER)
132	165	SHALE AND STREAKS, GRAY, FINE TO MEDIUM GRAINED SANDSTONE, STEAKS OF DARK GRAY SHALE. TEST 3.5 GPM WATER 35 FEET FROM TOP
165	184	GRAY SHALE, MEDIUM HARD
184	188	DARK GRAY SANDSTONE, MEDIUM
188	192	DARK GRAY SANDY SHALE
192	195	GRAY SANDSTONE, HARD

**Section 6: Well Construction Details**

There are no borehole dimensions assigned to this well.  
 There are no casing strings assigned to this well.  
 There are no completion records assigned to this well.  
**Annular Space (Seal/Grout/Packer)**

There are no annular space records assigned to this well.

**Driller Certification**

All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

**Name:**  
**Company:**  
**License No: -**  
**Date Completed:** 1/1/1961

## MONTANA WELL LOG REPORT

### Other Options

This well log reports the activities of a licensed Montana well driller, serves as the official record of work done within the borehole and casing, and describes the amount of water encountered. This report is compiled electronically from the contents of the Ground Water Information Center (GWIC) database for this site. Acquiring water rights is the well owner's responsibility and is NOT accomplished by the filing of this report.

[Go to GWIC website](#)  
[Plot this site in State Library Digital Atlas](#)  
[Plot this site in Google Maps](#)  
[View scanned well log \(7/29/2009 10:40:37 AM\)](#)

Site Name: GARFIELD, EMMY LLOU  
GWIC Id: 20937

## Section 7: Well Test Data

## Section 1: Well Owner(s)

1) GARFIELD, EMMY LLOU (MAIL)  
N/A  
RYEGATE MT 59074 [08/29/1966]

Total Depth: 73  
Static Water Level: 31  
Water Temperature:

### Bailer Test \*

## Section 2: Location

Township	Range	Section	Quarter Sections
08N	20E	20	SW¼
	County		Geocode

35 gpm with \_ feet of drawdown after \_ hours.  
Time of recovery \_ hours.  
Recovery water level \_ feet.  
Pumping water level 48 feet.

GOLDEN VALLEY

Latitude	Longitude	Geomethod	Datum
46.4348112027	-109.2521610975	TRS-SEC	NAD83
Ground Surface Altitude	Ground Surface Method	Datum	Date

\* During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.

Addition	Block	Lot
----------	-------	-----

## Section 8: Remarks

### Section 3: Proposed Use of Water

#### STOCKWATER (1)

#### Section 4: Type of Work

Drilling Method: CHURN DRILL  
Status: NEW WELL

## Section 9: Well Log

### Geologic Source

211JDRV - JUDITH RIVER FORMATION (OF MONTANA GROUP)

[illegible]

## Section 6: Well Construction Details

### **Borehole dimensions**

From	To	Diameter
0	73	6.5

## Casing

From	To	Diameter	Wall Thickness	Pressure Rating	Joint	Type
0	15	6.5				IRON
12	73	6.5				GALVANIZED

## Completion (Perf/Screen)

From	To	Diameter	# of Openings	Size of Openings	Description
45	51	6.5		1/8X4	SLOTS
67	73	6.5		1/8X4	SLOTS

**Annular Space (Seal/Grout/Packer)**

There are no annular space records assigned to this well.

### Driller Certification

All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Name: JOSEPH PIRRIE  
Company: JOE PIRRIE WATER WELLS  
License No: WWC-80  
Date Completed: 8/29/1966

### Other Options

[Go to GWIC website](#)  
[Plot this site in State Library Digital Atlas](#)  
[Plot this site in Google Maps](#)  
[View field visits for this site](#)  
[View water quality for this site](#)  
[View scanned well log \(7/29/2009 8:35:01 AM\)](#)

Section 7: Well Test Data

Total Depth: 164

Static Water Level: 85  
Water Temperature:

### Bailer Test \*

15 gpm with \_ feet of drawdown after \_ hours.  
Time of recovery \_ hours.  
Recovery water level \_ feet.  
Pumping water level 160 feet.

\* During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.

## Section 8: Remarks

Section 9: Well Log

### Geologic Source

211HLCK - HELL CREEK FORMATION

[illegible]

### Driller Certification

All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Name: JOSEPH PIRRIE

**Company:** JOE PIRRIE WATER WELLS

License No: WWC-80

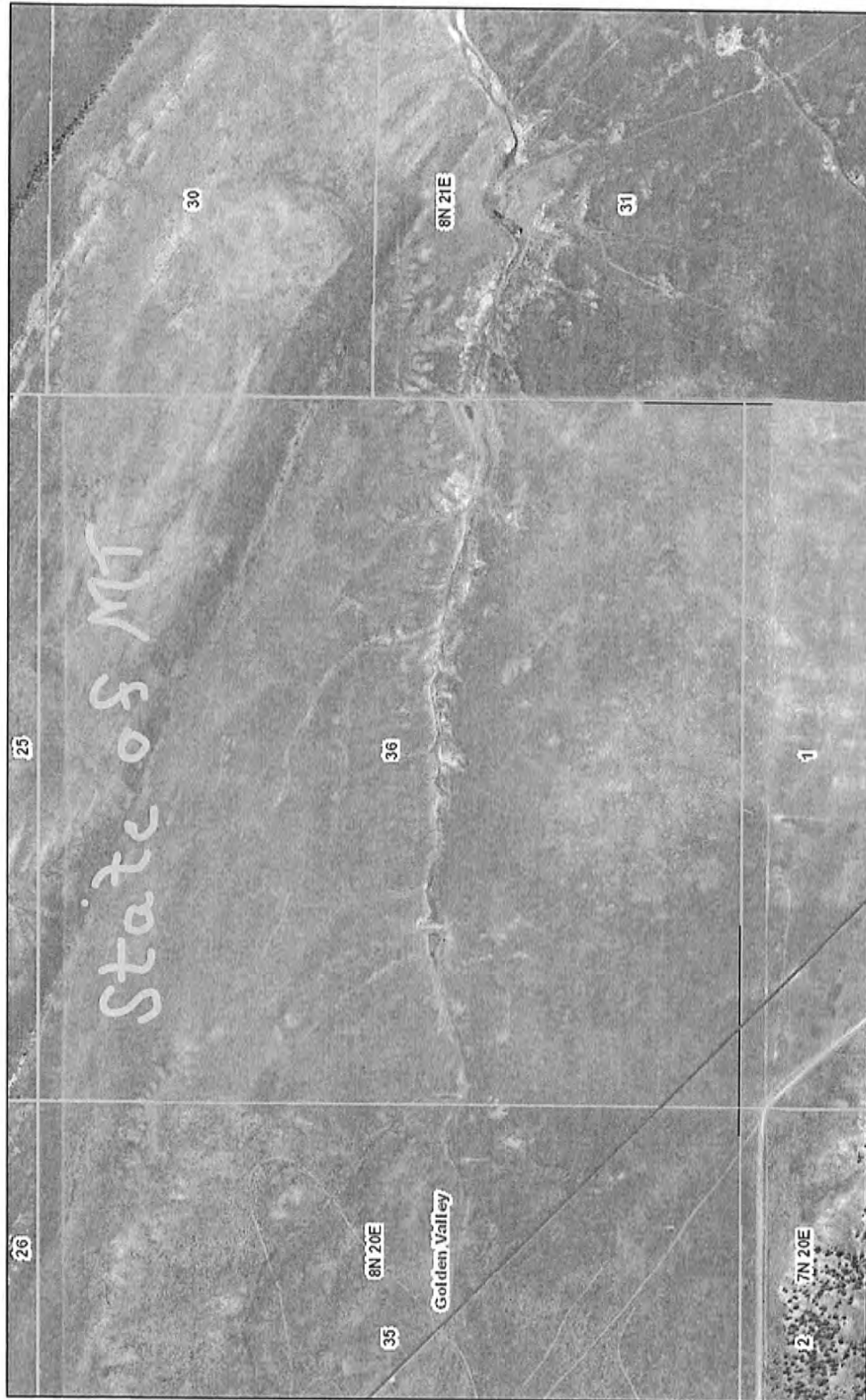
Date Completed: 5/27/1964

From	To	Diameter	# of Openings	Size of Openings	Description
136	142	6		1X1/8	SLOTS
151	153	6		1X1/8	SLOTS
161	164	6		1X1/8	SLOTS

**Annular Space (Seal/Grout/Packer)**

There are no annular space records assigned to this well.

# GL9\_MP58\_Sec36\_T8N\_R20E\_State of MT



35548

2/21/2020, 9:56:01 AM

- PIPELINES
- ☐ IDLED/OUT OF SERVICE
  - ☐ ACTIVE
  - ☐ IDLED/IN-SERVICE
- SECTIONS
- ☐ USLG\_Parcels
  - ☐ TOWNSHIPS

1:18,056

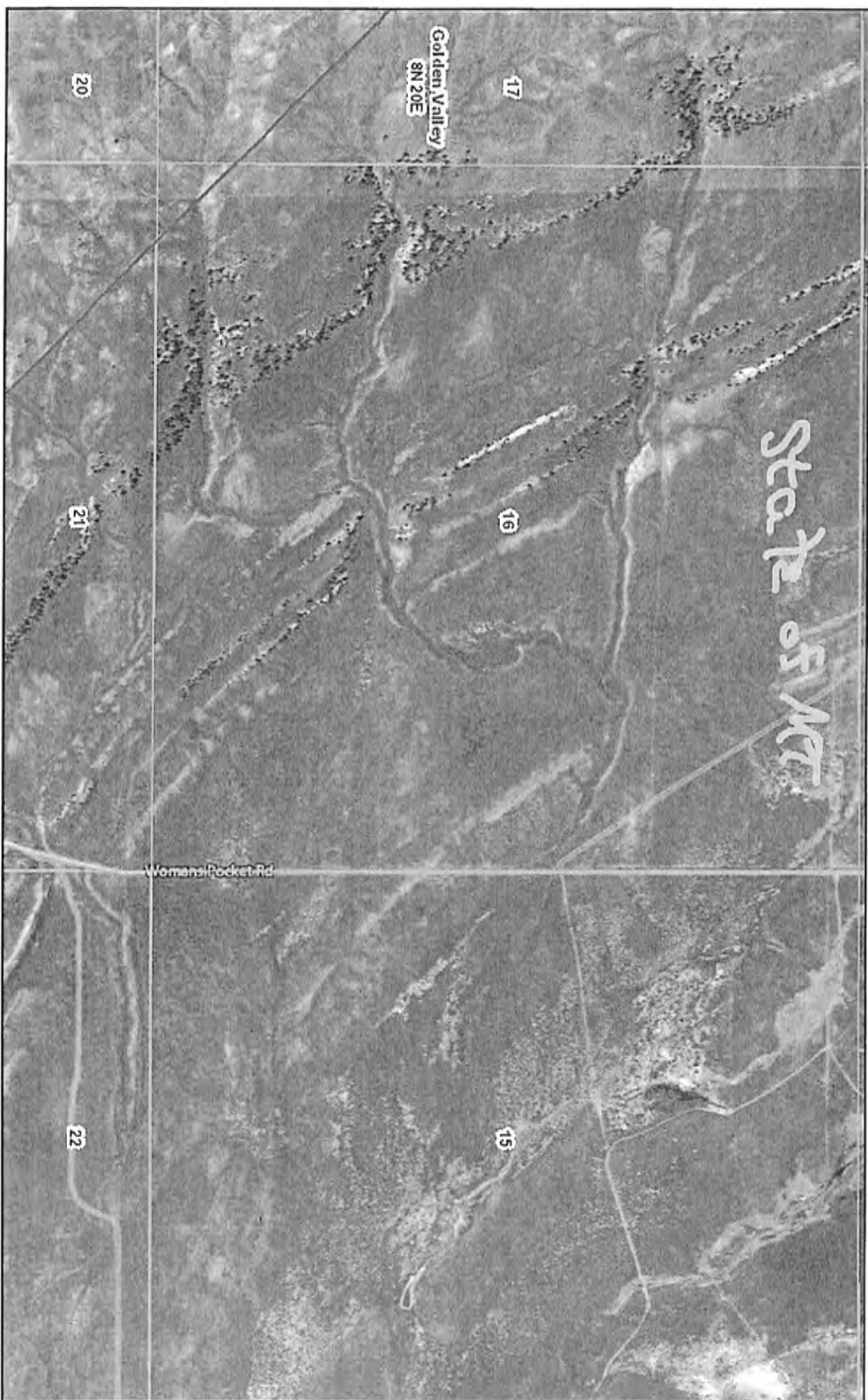
0 0.1 0.2 0.4 mi

0 0.15 0.3 0.6 km

Contact Mapping Group for more information, © 2020 Microsoft Corporation  
 © 2020 DigitalGlobe ©CNES (2020) Distribution Airbus DS © 2020 HERE  
 Web AppBuilder for ArcGIS  
 property of Phillips 66 Company



# GL9\_MP62\_Sec16\_T8N\_R20E\_State of MT



2/21/2020, 9:53:14 AM

PIPELINES

ACTIVE

IDLED/IN-SERVICE

IDLED/OUT OF SERVICE

USL G\_Parcel

TOWNSHIPS

1:18,066

0 0.1 0.2 0.4 mi  
0 0.15 0.3 0.6 km

Contact Mapping Group for more information, © 2020 Microsoft Corporation  
© 2020 DigitalGlobe © CNES (2020) Distribution Airbus DS © 2020 HERE

Web AppBuilder for ArcGIS  
property of Phillips 66 Company

35545



# Attachment A:

## MONTANA SAGE GROUSE HABITAT CONSERVATION PROGRAM



STEVE BULLOCK, GOVERNOR

1539 ELEVENTH AVENUE

STATE OF MONTANA

PHONE: (406) 444-0554  
FAX: (406) 444-6721

PO BOX 201601  
HELENA, MONTANA 59620-1601

Project No. 3875  
Governor's Executive Orders 12-2015 and 21-2015  
Lavina Pipeline Replacement Project

Jean Ramer  
2110 Overland Avenue, Suite 124  
Billings, MT 59102

May 1, 2020

Dear Ms. Ramer,

The Montana Sage Grouse Habitat Conservation Program received a request for consultation and review of your project or proposed activity on February 5, 2020, with additional information necessary for Program review received on April 27, 2020. Based on the information provided, all or a portion of this project is located within General Habitat and Core Area for sage grouse. The Bureau of Land Management (BLM) classifies this area as a General Habitat Management Area (GHMA) and Priority Habitat Management Area (PHMA).

Executive Orders 12-2015 and 21-2015 set forth Montana's Sage Grouse Conservation Strategy. Montana's goal is to maintain viable sage grouse populations and conserve habitat so that Montana maintains flexibility to manage our own lands, our wildlife, and our economy and a listing under the federal Endangered Species Act is not warranted in the future.

The Program has completed its review, including:

### Project Description:

**Project Type:** Infrastructure – Pipeline (Major)

**Project Disturbance:** 12.5 Mile of Pipeline Replacement, Three Storage Areas Totaling Three Acres

**Construction Dates:** May 11, 2020 to September 30, 2020, Temporary (< 1 Year)

**Operation Duration:** September 30, 2020 to November 1, 2020, Permanent (>25 Years)

### Project Location:

**Legal:** Township 7 North, Range 20 East, Section 1

Township 7 North, Range 21 East, Sections 5, 6, 8, 9, 15, 16, 22, 23, 26

Township 8 North, Range 20 East, Sections 16, 17, 21, 22, 26, 27, 35, 36



Hosted by the Montana Department of Natural Resources and Conservation  
Director's Office: (406) 444-2074



**County:** Golden Valley  
**Ownership:** Montana State Trust Lands, Private

**Project Description and Executive Orders 12-2015 and 21-2015 Consistency:**

The project proposes to replace a crude oil pipeline in designated General Habitat and Core Area for sage grouse.

Phillips 66 proposes a pipeline replacement located approximately 6 miles northwest of Lavina, Montana. See Figure 1 in the enclosed Mitigation Plan (Lavina Pipeline Replacement Project Location Map). Due to anomalies detected in the existing 12-inch diameter pipeline, a replacement was decided to be the best long-term response to ensure pipeline integrity and comply with federal regulations.

The replacement is being conducted as part of the Phillips 66 Maintenance and Integrity Program. Phillips 66 proposes to replace a 12.5-mile, 12-inch diameter crude oil pipeline. The pipeline will be placed 4 feet below the ground surface. The new pipeline will tie into the existing pipeline and a block valve from the existing pipeline will be removed. In addition, the existing pipeline will be abandoned in place on private land once the new section is tied in place and operational. The abandoned pipeline will be removed on state land.

The new pipeline will be placed within the existing easement corridor (legal right-of-way) of the current pipeline which crosses state and private land. The current easement corridor varies from 40 to 60 feet on private land, depending on the individual landowner agreements, respectively. The legal right of way easement corridor for the portions that cross State Trust Land is 60 feet wide.

The temporary construction work space on private land will be 100 feet wide. For the portions crossing State Trust Lands, all construction activity will occur within the 60-foot existing corridor. In addition, three temporary storage areas will be required to accommodate soil stockpiles and equipment access.

Existing roads will be used to access the pipeline corridor. All disturbance will be temporary and therefore, there will be no new permanent above ground facilities. The entire 12.5-mile segment will be openly excavated in spreads of between one and three miles in length at a time, respectively. Therefore, the entire 12.5 miles will not be open at the same time.

The pipeline will be replaced by excavating a trench using a track hoe, installing the new pipeline and then backfilling the trench. Track hoes will be used to move the stockpiles. Trailers will be used for transporting the pipe to the site and sidebooms will be used for moving the pipe into the ground. Pickups and UTVs will also be used to access project areas.



It will take approximately three months to complete the entire 12.5 segment. All construction disturbances will be reclaimed at the end of the construction phase in Fall of 2020. Reclamation will include replacement of all disturbed or excavated soil, followed by broadcast or drill reseeding with a seed mix consisting of native grasses and forbs. Re-vegetation success and noxious weeds will be monitored by Phillips 66. Phillips 66 will consider the feasibility of using sagebrush seedling plugs to increase the potential for sage brush recovery. If determined feasible, this revegetation method will be incorporated into the final reseeding plan.

Based on the information you provided, your project is within four miles of ten active sage grouse leks in a Core Area and General Habitat. See Figure 2 in the Mitigation Plan (Lavina Pipeline Replacement Project Lek Location Map). Phillips 66 cannot adhere to seasonal timing stipulations. However, Phillips 66 has agreed to restrict construction work within daylight hours of 8:00 A.M. -7:00 P.M.

#### **Discussion:**

Executive Orders 12-2015, 21-2015 and the Greater Sage Grouse Stewardship Act (Stewardship Act) state that existing land uses and activities that exist at the time the Program became effective are not to be managed under the stipulations of the Sage Grouse Conservation Strategy. Specifically, operations and maintenance activities of existing energy systems that occur within a defined project boundary may not be managed under the stipulations of the Sage Grouse Conservation Strategy.

Here, the pipeline was constructed prior to 2015, the effective date of the Executive Orders. It is considered an existing land use within a defined project boundary consisting of the pipeline corridor easements on private and State Trust Lands respectively. No changes in land use or the boundaries of the permanent easement corridor are proposed. However, construction work space is needed outside the present defined project boundary of the easement corridor. This will result in new, but temporary surface disturbance and disrupting activities in close proximity to ten active leks in a Core Area and just outside of a two-mile buffer of one active lek in General Habitat between the seasonal period from March 15 to July 15.

ONEOK will acquire an additional temporary 100-foot-wide construction right-of-way for the work space needed on the portions of the pipeline on private lands. Therefore, 40-feet of the total 100-foot construction work space and the three storage areas will be located outside of the existing 60-foot wide easement corridor on the private lands' portions of the project. On State Trust Lands, all construction activities will occur within the existing easement corridor.

Because the 60-foot easement corridor is considered the existing defined project boundary for this existing land use, no mitigation was assessed for disturbance associated with this portion of the project overall for the entire 12.5-mile segment. However, the new temporary construction work space outside of the easement corridor does fall within the scope of Executive Order 12-2015 and the Stewardship Act, including mitigation.



### Density Disturbance Calculation Tool (DDCT) Analysis

A portion of the proposed project is to occur in a designated Core Area for sage grouse. The Program has calculated the density and disturbance levels for the 12.5-mile pipeline construction work space and the three storage areas using a Density Disturbance Calculation Tool. The results were compared to allowable thresholds set forth in the Executive Order 12-2015. Your project results are as follows. See Figure 3 in the Mitigation Plan (Lavina Pipeline Replacement DDCT Map) and the Density Disturbance Calculation Tool Explanation and Results Summary in the enclosed Mitigation Plan.

DDCT Analysis Area Acres: 100,304.16  
Total Preliminary Disturbance Acres: 54.58  
Total Disturbed Acres in Analysis Area: 9,842  
DDCT Result: 9.81%  
New Disturbed Acres: 46.31  
Affected Leks Within the DDCT Analysis Area: 10

### Estimated Functional Acres Lost Over the Life of the Project and Total Debit Obligation

The Program has calculated functional acres lost on private land for the 40 foot by 12.5-mile construction work space and the three storage areas using the Habitat Quantification Tool (HQT) October 2018 v1.0, and Policy Guidance Document October 2018 v1.0. The HQT was run on April 29, 2020. The HQT results are based on one year of construction activity, zero years of operations and the default 75 years of reclamation. The results for this project are described as follows.

HQT Functional Acres Lost: 1745.39  
Reserve Account (20%): 349.08  
Advance Payment (10%): 174.54  
Site Specific Deviations from Executive Order 12-2015: 22  
Total Debit Obligation: 4,752.57

The direct footprint, indirect impact area and site-specific deviations for the temporary work space outside the existing easement corridor and the three storage areas will result in a total of 4,752.57 debits. See Figure 4 in the enclosed Mitigation Plan (Pipeline Replacement Project HQT Basemap v1.0 Map and Operation Phase Map).

### Mitigation Plan

Phillips 66 provided a mitigation plan to address project impacts. The Mitigation Plan describes avoidance, minimization, reclamation, and compensatory mitigation measures Phillips 66 will implement to address and mitigate for unavoidable impacts from Executive Order 12-2015. In particular, Phillips 66 has agreed to the following minimization activities during pipeline replacement construction activities:





- Phillips 66 will begin work in the less sensitive area on the northwest end of the project, and work towards the southeast portion.
- Phillips 66 will reduce the construction right-of-way from 100 feet to 60 feet on State Trust Land. Other areas on private land where the construction disturbance width can be reduced to less than 100 feet will be examined in the field and will be up to the contractor to ensure the work in a reduced space can be done safely. This will reduce overall project disturbance.
- Phillips 66 will seek opportunities to avoid impacting sagebrush plants where practical to do so.
- Ground surfaces that are in crops, are unvegetated, or consist of other non-sagebrush species will be prioritized for staging and storage of materials and equipment.
- Phillips 66 will limit open excavation to three miles maximum at any given time.
- Phillips 66 will adhere to daylight hours and work between 8:00 A.M.-7:00 P.M. for the entire project duration.

Phillips 66 has voluntarily committed to this Mitigation Plan (including compensatory mitigation).

**The Mitigation Plan:**

- describes the project and summarizes activities that would occur within it;
- describes project mitigation in accordance with Executive Orders 12-2015 and 21-2015, and the Greater Sage Grouse Stewardship Act;
- summarizes potential impacts to sage grouse and sage grouse habitats;
- describes where the project adheres to the mitigation hierarchy through avoidance, minimization, reclamation; and
- explains Phillips 66 will make a contribution to the Stewardship Account to fulfill the mitigation debit obligation for aspects of the project that fall within the scope of the Executive Order and the Stewardship Act.

Phillips 66 chose to fulfill the mitigation obligation by making a contribution to the Stewardship Account. Instructions for making a contribution to the Stewardship Account are enclosed and require your signature. The Payment Cover Memo is intended to assist with the Program's recordkeeping. The Stewardship Account Donation Form includes instructions for wire transfer or check payments, found at the bottom of the form. Let us know what form of payment you would like to use when you return the signed forms. Payment should be made **after** you obtain your necessary permits but **before** initiating the project activity.

**Program Recommendations:**

The following stipulations are taken from Montana Executive Order 12-2015. These stipulations



are designed to maintain existing levels of suitable sage grouse habitat by managing uses and activities in sage grouse habitat to ensure the maintenance of sage grouse abundance and distribution in Montana. Development should be designed and managed to maintain populations and sage grouse habitats.

- Reclamation should re-establish native grasses, forbs, and shrubs during interim and final reclamation. The goal of reclamation is to achieve cover, species composition, and life form diversity commensurate with the surrounding plant community or desired ecological condition to the benefit of sage grouse and replace or enhance sage grouse habitat to the degree that environmental conditions allow.
  - Planting sagebrush plugs to accelerate reestablishment of sagebrush shrubs is strongly encouraged. The Program can provide additional assistance.
- Weed management is required within Core Areas and General Habitat for sage grouse. Reclamation of disturbed areas must include control of noxious weeds and invasive plant species, including cheatgrass (*Bromus tectorum*) and Japanese brome (*Bromus japonicas*).
- Implementation of the Mitigation Plan is binding, and the signed Program letter and Mitigation Plan package shall be attached to any permit the State issues. It is the Program's and MSGOT's expectation that the Mitigation Plan will be an integral part of any associated project permits.

Subject to the stipulations described above and voluntarily agreed to by Phillips 66 in the enclosed Mitigation Plan, your activities are consistent with the Montana Sage Grouse Conservation Strategy. Your proposed project or activity may need to obtain additional permits or authorization from other Montana state agencies or possibly federal agencies. They are very likely to request a copy of this consultation letter, so please retain it for your records.

Please be aware that if the location or boundaries of your proposed project or activity change in the future, or if new activities are proposed within one of the designated sage grouse habitat areas, please visit <https://sagegrouse.mt.gov/projects/> and submit the new information.

Thanks for your interest in sage grouse and your commitment to taking the steps necessary to ensure Montana's Sage Grouse Conservation Strategy is successful.

Sincerely,



Carolyn Sime  
Montana Sage Grouse Habitat Conservation Program Manager





Enclosures:

1. Lavina Pipeline Replacement Mitigation Plan
2. Stewardship Funds Account Forms

cc: Shawn Thomas  
DNRC-Trust Land Management Administrator  
P.O. Box 201601  
Helena, MT 59620-1601



Lavina Pipeline Replacement  
Project ID- 3925

May 1, 2020

## Table of Contents

List of Tables .....	1
List of Figures .....	1
1.0 Introduction and Project Description .....	2
1.1 Vegetative Community .....	3
1.2 Sage Grouse Populations Affected.....	3
2.0 Executive Order 12-2015 Consistency Review.....	4
2.1 Stipulations That Apply to the Lavina Pipeline Replacement Project.....	4
2.2 Potential Deviations from Montana EO 12-2015.....	4
3.0 Adherence to the Mitigation Hierarchy .....	5
3.1 Avoidance.....	5
3.2 Minimization .....	5
3.3 Reclamation .....	5
3.1 Compensatory Mitigation .....	6
3.1.1 Habitat Quantification Tool Results .....	6
3.1.2 Application of Policy Modifiers .....	6
3.1.3 Total Mitigation Debit Obligation .....	7
4.0 Mechanism Selected to Fulfill the Compensatory Mitigation Obligation.....	8

## List of Tables

Table 1. Leks within the Density Disturbance Calculation Tool analysis area. ....	3
Table 2. Raw HQT Score Applied to the Lavina Pipeline Replacement Project. ....	6
Table 3. Policy Multipliers Applied to the Lavina Pipeline Replacement Project. ....	7
Table 4. Total Debits Applied to the Lavina Pipeline Replacement Project.....	8
Table 5. Total When Making Contribution to Stewardship Account. ....	8

## List of Figures

Figure 1. Lavina Pipeline Replacement Location Map.....	9
Figure 2. Lavina Pipeline Replacement Lek Location Map.....	10
Figure 3. Lavina Pipeline Replacement DDCT Map and Summary.....	11
Figure 4. Lavina Pipeline Replacement HQT Maps.....	12

## 1.0 Introduction and Project Description

The project proposes to replace a crude oil pipeline in designated General Habitat and Core Area for sage grouse.

Phillips 66 proposes a pipeline replacement located approximately 6 miles northwest of Lavina, Montana. See Figure 1 (Lavina Pipeline Replacement Project Location Map). Due to anomalies detected in the existing 12-inch diameter pipeline, a replacement was decided to be the best long-term response to ensure pipeline integrity and comply with federal regulations.

The replacement is being conducted as part of the Phillips 66 Maintenance and Integrity Program. Phillips 66 proposes to replace a 12.5-mile, 12-inch diameter crude oil pipeline. The pipeline will be placed 4 feet below the ground surface. The new pipeline will tie into the existing pipeline and a block valve from the existing pipeline will be removed. In addition, the existing pipeline will be abandoned in place on private land once the new section is tied in place and operational. The abandoned pipeline will be removed on state land.

The new pipeline will be placed within the existing easement corridor (legal right-of-way) of the current pipeline which crosses state and private land. The current easement corridor varies from 40 to 60 feet on private land, depending on the individual landowner agreements, respectively. The legal right of way easement corridor for the portions that cross State Trust Land is 60 feet wide.

The temporary construction work space on private land will be 100 feet wide. For the portions crossing State Trust Lands, all construction activity will occur within the 60-foot existing corridor. In addition, three temporary storage areas will be required to accommodate soil stockpiles and equipment access.

Existing roads will be used to access the pipeline corridor. All disturbance will be temporary and therefore, there will be no new permanent above ground facilities. The entire 12.5-mile segment will be openly excavated in spreads of between one and three miles in length at a time, respectively. Therefore, the entire 12.5 miles will not be open at the same time.

The pipeline will be replaced by excavating a trench using a track hoe, installing the new pipeline and then backfilling the trench. Track hoes will be used to move the stockpiles. Trailers will be used for transporting the pipe to the site and sidebooms will be used for moving the pipe into the ground. Pickups and UTVs will also be used to access project areas.

It will take approximately three months to complete the entire 12.5 segment. All construction disturbances will be reclaimed at the end of the construction phase in Fall of 2020. Reclamation will include replacement of all disturbed or excavated soil, followed by broadcast or drill reseedling with a seed mix consisting of native grasses and forbs. Re-vegetation success and noxious weeds will be monitored by Phillips 66. Phillips 66 will consider the feasibility of using sagebrush seedling plugs to increase the potential for sage brush recovery. If determined feasible, this revegetation method will be incorporated into the final reseedling plan.

Based on the information you provided, your project is within four miles of ten active sage grouse leks in a Core Area and General Habitat. See Figure 2 (Lavina Pipeline Replacement Project Lek Location Map).

Phillips 66 cannot adhere to seasonal timing stipulations. However, Phillips 66 has agreed to restrict construction work within daylight hours of 8:00 A.M. -7:00 P.M.

### 1.1 Vegetative Community

The Montana Spatial Data Infrastructure Land Use/Land Cover database (MSDI LULC, last updated December 2017) classifies the vegetation within the direct footprint as Big Sagebrush Steppe, Great Plains Mixed Grass Prairie, Rocky Mountain Foothill Woodland-Steppe Transition, Greasewood Flat, Great Plains Sand Prairie, and Great Plains Saline Depression Wetland. The habitat adjacent to the proposed project is similar in composition with the addition of Open Roads, Great Plains Riparian, Introduced Upland Vegetation - Annual and Biennial Forbland, Great Plains Ponderosa Pine Woodland and Savanna, and Railroad.

### 1.2 Sage Grouse Populations Affected

The project is located within four miles of ten active sage grouse leks in General Habitat and a Core area. See Figure 2 (Lavina Pipeline Replacement Lek Locations Map). There are 11 active sage grouse leks within the Density Disturbance Calculation Tool (DDCT) analysis area of the Lavina Pipeline Replacement Project as shown on the Lavina Pipeline Replacement Project Density Disturbance Calculation Tool Analysis Area Map (Table 1; Figure 3).

Table 1. Leks within the Density Disturbance Calculation Tool analysis area.

Lek Name	Distance to disturbance (Miles)	Last Male Count	Last Survey Year	Lowest Male Count (excluding zeros)	Highest Male Count
GV-SG-11	1.1	6	2019	1	70
GV-SG-17	1.8	19	2019	7	86
GV-SG-2	3.2	47	2019	15	126
GV-SG-27	1.6	7	2019	2	47
GV-SG-2s	3.7	0	2017	6	27
GV-SG-36	2.8	32	2019	5	63
GV-SG-45	2.3	0	2017	5	31
GV-SG-5	0 (within NSO)	23	2019	17	104
Harmon's Hillside	6	7	2019	5	32
Lone Pine	2.2	5	2016	3	31

## 2.0 Executive Order 12-2015 Consistency Review

The Lavina Pipeline Replacement is located within both a Core Area and General Habitat. Stipulations recommended in Executive Order 12-2015 (EO) are designed to maintain existing sage grouse populations and levels of suitable sage grouse habitat, and guide development activities in a Core Area and General Habitat in a manner that sustains sage grouse abundance and distribution in Montana.

Delineated Core Areas are important for maintaining the abundance and distribution of sage grouse across Montana. Development scenarios in General Habitat are more flexible than in Core Areas but must still be designed and managed to maintain sage grouse populations and habitats.

### 2.1 Stipulations That Apply to the Lavina Pipeline Replacement Project

The Lavina Pipeline Replacement project is located within a Core Area and General Habitat. Therefore, the following seasonal stipulations apply.

- **Surface Disturbance:** Surface disturbance will be limited to 5% of suitable sage grouse habitat averaged across the area affected by the project within a Core Area.
- **Surface Occupancy:** Within 0.6 miles of the perimeter of active sage grouse leks there will be no surface occupancy (NSO) for new activities for the portion of the project located in a Core Area and within 0.25 miles of the perimeter of active sage grouse leks in General Habitat.
- **Seasonal Use:** As authorized by permitting agency or agencies, activities will be prohibited from March 15 through July 15 outside of the NSO perimeter of an active lek in Core Areas where breeding, nesting, and early brood-rearing habitat is present or within two miles of active leks in General Habitat.
- **Vegetation Removal:** limited to the minimum disturbance required by the project. All soil stripping and vegetation removal in suitable habitat will occur between July 16 and March 14 in areas within 4 miles of an active lek.

### 2.2 Potential Deviations from Montana EO 12-2015

The Lavina Pipeline Replacement project is within four miles of ten active sage grouse leks located in a Core Area. A small portion of the pipeline replacement work will occur within 2.1 miles of an active lek in General Habitat. Therefore, activities associated with the project are expected to deviate from Executive Order 12-2015 guidance and stipulations.

- **Surface Disturbance:** The Density Disturbance Calculation Tool (DDCT) for the pipeline installment and the storage areas is 9.81%. This exceeds the disturbance threshold allowed.
- **Surface Occupancy:** Within 0.6 miles of the perimeter of active sage grouse leks there will be no surface occupancy (NSO) for new activities. The pipeline replacement construction work space and activities will be located within one lek NSO. However, the storage areas are not located within any lek NSOs.
- **Seasonal Use:** Phillips 66 cannot adhere to seasonal timing stipulations for the pipeline replacement. Therefore, the project will not be consistent with Executive Order 12-2015 for the seasonal use stipulations during the construction phase of the project.



- **Vegetation Removal:** Because Phillips 66 cannot adhere to the seasonal timing stipulations, the project will not be consistent with Executive Order 12-2015 with respect to the vegetation removal stipulations during the construction phase of the project.

### 3.0 Adherence to the Mitigation Hierarchy

The Lavina Pipeline Replacement is located within a designated Core Area and General Habitat for sage grouse.

#### 3.1 Avoidance

The Lavina Pipeline Replacement project is located in a Core Area and General Habitat. Therefore, the project does not avoid impacts to sage grouse habitat.

#### 3.2 Minimization

Phillips 66 has agreed to the following minimization activities during construction of the pipeline:

- Phillips 66 will begin work in the less sensitive area on the northwest end of the project, and work towards the southeast portion.
- Phillips 66 will reduce the construction right-of-way from 100 feet to 60 feet on State Trust Land. Other areas on private land where the construction disturbance width can be reduced to less than 100 feet will be examined in the field and will be up to the contractor to ensure the work in a reduced space can be done safely. This will reduce overall project disturbance.
- Phillips 66 will seek opportunities to avoid impacting sagebrush plants where practical to do so.
- Ground surfaces that are in crops, are unvegetated, or consist of other non-sagebrush species will be prioritized for staging and storage of materials and equipment.
- Phillips 66 will limit open excavation to three miles maximum at any given time.
- Phillips 66 will adhere to daylight hours and work between 8:00 A.M.-7:00 P.M. for the entire project duration.

#### 3.3 Reclamation

All construction disturbances will be reclaimed at the end of the construction phase in Fall of 2020. During construction, the topsoil will be separated from the subsoil, with the topsoil being replaced last to preserve as much of the existing roots and seeds as practical. Reclamation will include replacement of all disturbed or excavated soil, followed by broadcast or drill reseeding with a seed mix consisting of native grasses and forbs. Phillips 66 provided a detailed noxious weed Management Plan. The Management Plans objectives are to:

- limit the spread of existing infestations to the extent feasible;
- Prevent new populations of noxious weeds from establishing in previously uninfested areas as a result of the Project;
- Monitor areas directly affected by the Project (e.g. access roads, temporary work space, and the disturbed pipeline right-of-way,) to identify and control any noxious weeds occurring there;
- Respond to landowner and/or regulatory agency reports of weeds occurring as a result of the Project; and,
- monitor re-vegetation success and noxious weeds through time. 66.

Phillips 66 will consider the feasibility of using sagebrush seedling plugs to increase the potential for and accelerate sagebrush recovery. If determined feasible, this revegetation method will be incorporated into the final reseeding plan.

### 3.1 Compensatory Mitigation

The Program ran the Habitat Quantification Tool (HQT) using HQT v1.0 October 2018. The HQT models direct and indirect impacts from a project, and overlays those impacts on the HQT Basemap to calculate the total amount of functional acres lost due to the project (Table 2). The HQT was run on April 29, 2020. The HQT was run on 40 feet of the total 100-foot wide construction right-of-way for the entire 12.5-mile pipeline segment to analyze disturbance associated with the temporary construction work space. In addition, the three temporary storage areas were included in the HQT. The model was calculated with one year of construction activity, zero-years of operations and the default 75 years of reclamation. See Figure 4 (Lavina Pipeline Replacement Project HQT map). The Raw HQT Score is 1,745.39 functional acres lost.

#### 3.1.1 Habitat Quantification Tool Results

Table 2. Raw HQT Score Applied to the Lavina Pipeline Replacement Project.

Raw HQT Score - Preliminary Results			
Habitat Type	Project Phase	Impact Area	Raw HQT Score
Core Area	Construction	Direct Impact	13.90
		Indirect Impact	1,164.74
	Operations	Direct Impact	0.00
		Indirect Impact	0.00
	Reclamation	Direct Impact Only	414.42
	All Phases	Direct Impact	432.33
		Indirect Impact	1164.74
General Habitat	Construction	Direct Impact	2.37
		Indirect Impact	141.96
	Operations	Direct Impact	0.00
		Indirect Impact	0.00
	Reclamation	Direct Impact Only	3.99
	All Phases	Direct Impact	6.36
		Indirect Impact	141.96
Total Raw HQT Score			1,745.39

#### 3.1.2 Application of Policy Modifiers

The Mitigation System Policy Guidance v1.0 October 2018 document was applied to the Lavina Pipeline Replacement project. The Policy outlines specific multipliers to incentivize consistency with the EO stipulations. Multipliers also ensure that mitigation is timely and effective throughout the life of the project.

Risk and The Reserve Account Contribution is accounted for through the Reserve Account multiplier. It is mandatory. Twenty percent of the Raw HQT Score is calculated and added to the Raw HQT Score. This accounts for the fact that impacts are estimated. The Reserve Account also functions as a shared insurance pool so that credits may be replaced if credit sites do not produce as many credits as predicted or credits are lost due to an Act of God, such as a wildfire.

Advance Payment of 10% is applied to the total Raw HQT Score for direct and indirect impacts for the life of the project where the proponent will not undertake permittee responsible mitigation and would make a contribution to the Stewardship Account.

Federal Net Gain of 10% is applied when the project involves a federal nexus.

Site-Specific Impacts are addressed through a multiplier of 10% for a Core Area, or 5% for General Habitat for each aspect of a proposed project that is not consistent with the EO 12-2015 stipulations during either construction or operations phase of a project.

Programmatic Multipliers for all phases of the Lavina Pipeline Replacement project are shown on Table 3. The Raw HQT Score of 1,745.39 was multiplied by 20% to calculate Reserve Account debits of 349.08. A 10% Advance Payment of 174.54 debits is added because here the State assumes responsibility to find offsets in that Liberty County Road Department opted to make a contribution instead of undertaking a permittee responsible mitigation project. The project is not consistent with EO 12-2015 site specific stipulations therefore, the following site-specific multipliers were added to the HQT score, eleven seasonal use, eleven vegetation removal. The Policy Multipliers resulted in 3,125.44 debits.

Table 3. Policy Multipliers Applied to the Lavina Pipeline Replacement Project.

Policy Multiplier			
Policy Application (conversion from Functional Acres Lost to Debits)			
Multiplier Type	Specific Multiplier	Core Area and General Habitat	Debits
Programmatic Multipliers (Construction Operation and Reclamation)	Reserve Account (20%)	1	349.08
	Adv. Payment (10%)	1	174.54
Federal	Net Gain	0	0.00
Site-Specific EO Stipulation Deviation Multipliers	DDCT (5%)	1	118.26
	NSOs	1	118.26
	Seasonal Use	10	1,182.65
	Veg Removal	10	1,182.65
	Noise	0	0.00
Total Policy Multiplier Debits			<b>3,125.44</b>

### 3.1.3 Total Mitigation Debit Obligation

The total mitigation debit obligation is based on the total Raw HQT Score of 1,745.39 plus the total Policy Multiplier debits of 3,125.44, applicable to the Lavina Pipeline Replacement project (Table 4). The final total mitigation debit obligation for the project is 4,870.83 debits.

Table 4. Total Debits Applied to the Lavina Pipeline Replacement Project.

Total Debits	
Total Raw HQT Score	1,745.39
Total Policy Multiplier Debits	3,125.44
<b>Total Debit Obligation</b>	<b>4,870.83</b>

To fulfill the 4,870.83-mitigation debit obligation, ONEOK elected to make a contribution to the Stewardship Account. Credits obtained through the Stewardship Account are currently \$13 per debit. The total mitigation debit obligation of 4,870.83 is multiplied by \$13. The total is then discounted by 3% over the life of the project using a discounting method. The final total for the Lavina Pipeline Replacement project is \$60,260.63 (Table 5).

Table 5. Total When Making Contribution to Stewardship Account.

Total	
Total Debit Obligation	4,870.83
<b>Contribution After Applying Credit Discount Method</b>	<b>\$60,260.63</b>

## 4.0 Mechanism Selected to Fulfill the Compensatory Mitigation Obligation

Phillips 66 has committed to a compensatory mitigation obligation of \$60,260.63 to be deposited in the Montana Sage Grouse Stewardship Account (see MCA 76-22-111((1)(a)(ii))). Funds would be deposited after confirmation of approval for permits but before construction begins.

The MSGOT and Program would disburse these funds through the Stewardship Account granting process to conserve habitat and sage-grouse populations through offsite mitigation. Any benefit of onsite mitigation would be negated until such activities were completed and disturbed lands fully reclaimed. The Lavina Pipeline Replacement project is in the Central Service Area. MSGOT will be encouraged to apply these funds to mitigation within the project's same Service Area so that greater conservation benefits to sage-grouse can be secured offsite.

Figure 1

# 3925- Pipeline Replacement Project Location

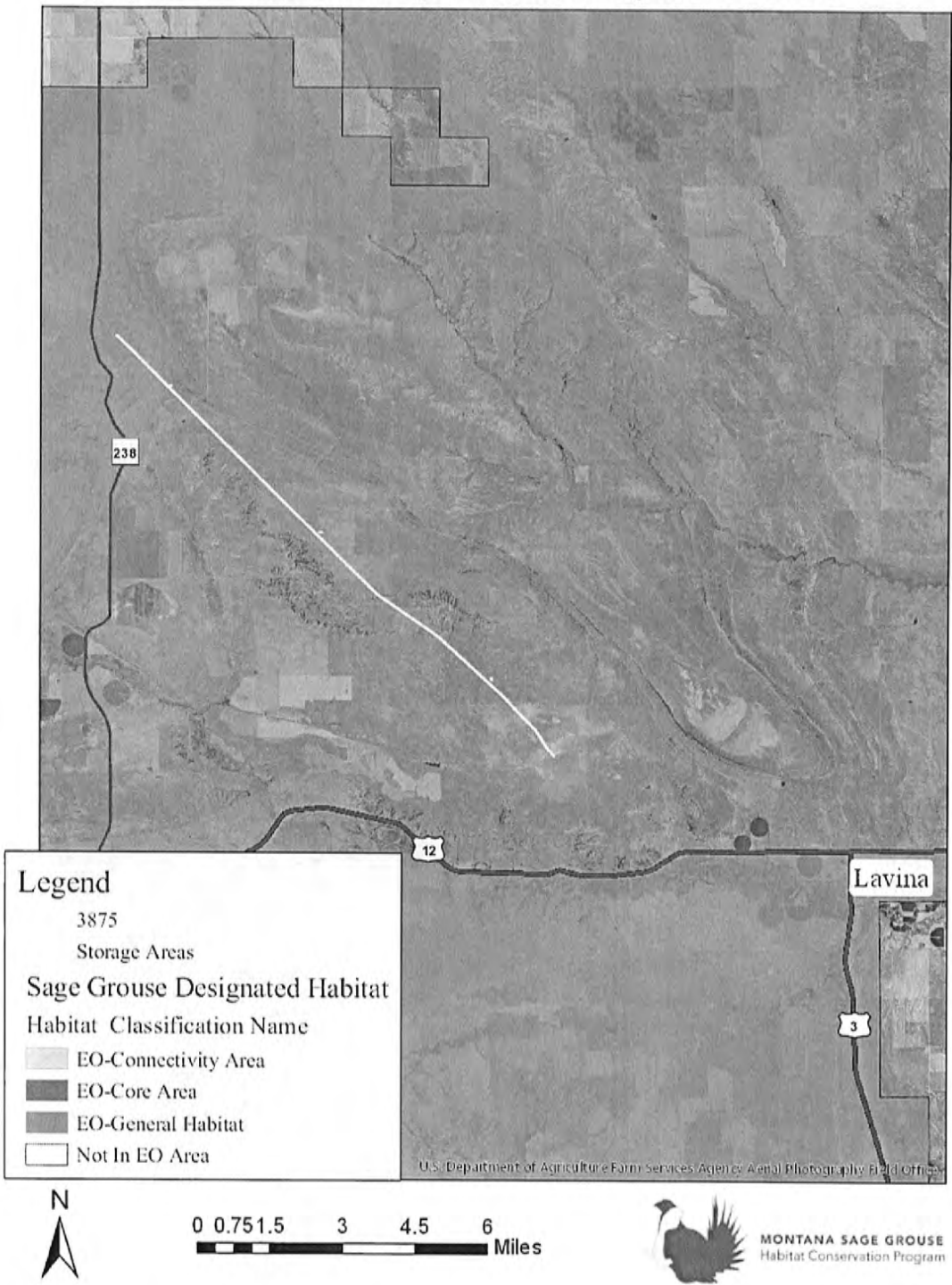




Figure 2

# 3925- Pipeline Replacement Project Lek Locations

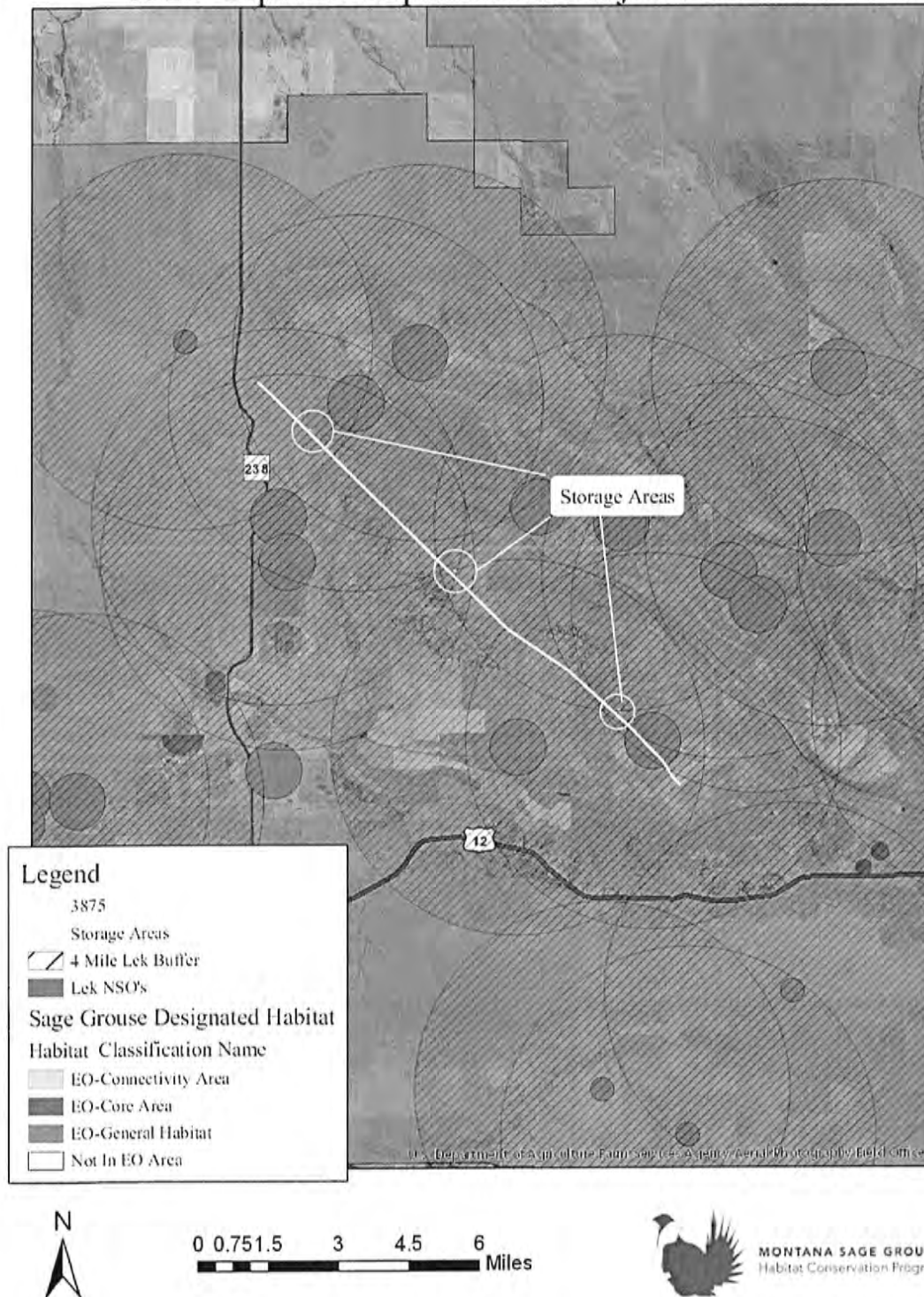




Figure 3

# Lavina Pipeline Replacement Project Density Disturbance Calculation Tool Analysis Area



## Density Disturbance Calculation Tool Explanation and Results

### [#3925] Glacier Pipeline GL09 J&L Pipe Replacement - Lavina Segment

Created on 04/28/2020 11:49 AM

Project stage changed from Returned to Due Diligence.

Results are based on the data submitted by the proponent. DDCT calculation results are as follows.

DDCT Analysis Area	Proposed Disturbances Area	Existing + Proposed Disturbances Area within DDCT Analysis Area	DDCT Result	New disturbed acres	Affected Leks within the DDCT Analysis Area
100,294.7 acres	54.58 acres	9,842 acres	9.81%	46.31 acres	10

Result calculated on 04/28/2020 11:49 AM

### Analysis Process and General Definitions

**Existing Disturbances:** All surface disturbances existing on the ground prior to any Proposed Disturbances that would be created by a new project.

**Preliminary Disturbances:** All surface disturbances associated with this project, as submitted to the Projects On-line Tool.

**Total Preliminary Disturbance Acres:** The number of acres contained within the entire polygon(s) delineating the disturbance area of this proponent's project.

**Previously Proposed Disturbances:** All Preliminary Disturbances proposed by other people prior to the current Preliminary Disturbance being submitted. Once a Preliminary Disturbance is finalized, the disturbance becomes an Existing Disturbance.

**DDCT Analysis Area Acres:** The number of acres within a polygon created by the following steps:

1. Map the *Preliminary Disturbance* polygon submitted by proponent.
2. Classify the habitat where proposed *Preliminary Disturbance* would occur: core area, general habitat, connectivity area, outside the Executive Order (none of the above). May include unsuitable habitat.
3. Buffer *Preliminary Disturbance/s* that would only occur in core habitat by four miles.
4. Look to see if the 4-mile buffer includes any active leks.
5. If yes, buffer those leks by four miles and add the acres to the polygon.
6. Remove any portion of the polygon that is not classified as core habitat so the DDCT Analysis Area only contains acres in core habitat.
7. Finalize the polygon. This is the DDCT Analysis Area polygon.
8. Calculate the number of acres in the DDCT analysis area polygon.

**Total Disturbed Acres in DDCT Analysis Area:** The total number of acres of disturbance within the DDCT Analysis Area polygon: all Existing Disturbances + Previously Proposed Disturbances + current Preliminary Disturbance.

**DDCT Result:** The Total Disturbed in DDCT Analysis Area acres divided by the DDCT Analysis Area acres x 100 to determine the percent disturbance which is compared to Executive Order 12-2015 5% disturbance threshold for core areas.

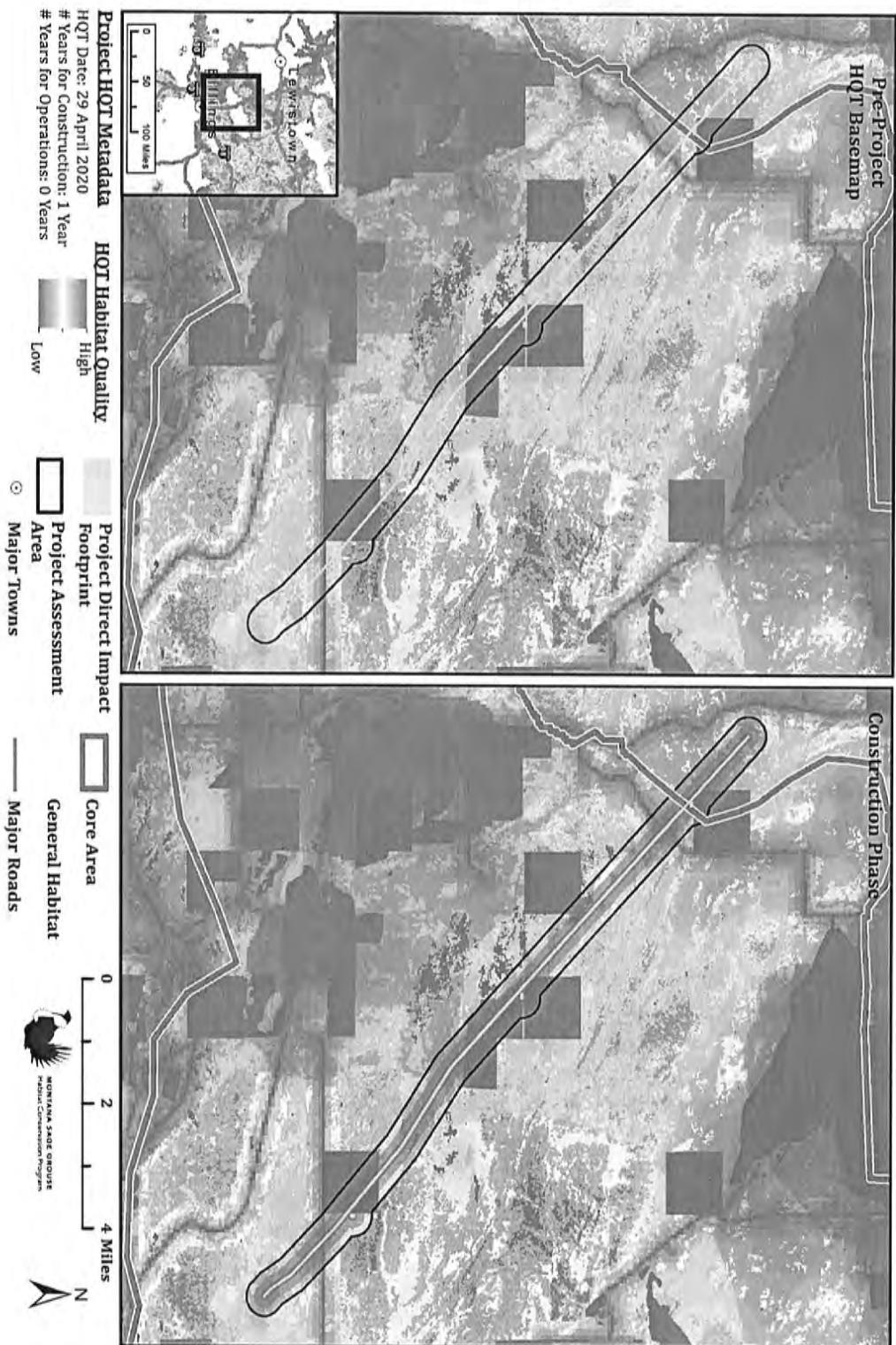
**New Disturbed Acres:** the total of new ground disturbance as a result of the project. This is portion of Preliminary Disturbances that do not overlap with already Existing Disturbances or Previously Proposed Disturbances. Acres are calculated from the resulting polygon, which is all new ground disturbance.

**Affected Leks within DDCT Analysis Area:** The total number of leks where any portion of the No Surface Occupancy area is within the DDCT Analysis Area.

**Lek Distances:** The shortest distance between the Preliminary Disturbance and any active leks with 4 miles of the Preliminary Disturbance.

Figure 4

# 3925 - Lavina Pipeline Replacement Project





**MONTANA SAGE GROUSE**  
Habitat Conservation Program

## **Instructions for Contribution to the Stewardship Account**

1. The project developer/permit holder or applicant should review the two attached forms.
  - The Payment Acknowledgment Form allows DNRC fiscal staff and the Program to track of the transaction.
  - The Stewardship Account Contribution Form recaps your mitigation approach and serves as an invoice for payment. You are welcome to forward this form to your accounting office or bookkeeper.
2. The forms should be signed by the developer, authorized permit applicant or permit holder and returned to the Program prior to making a payment.

The signed forms may be scanned and emailed to the Program reviewer:

\_\_\_\_\_ Ella.lunny@mt.gov

or mailed to:

Montana Sage Grouse Habitat Conservation Program  
P.O. Box 201601  
Helena, MT 59620

3. Payment should be made **after** you obtain your necessary permits but **before** initiating the project activity.

Instructions for wire transfer or check payments are found at the bottom of the Stewardship Account Contribution Form.

4. The Program will sign the forms and will save the completed Payment Acknowledgment Form and Stewardship Account Donation Form as a package within your online project file, if you need a copy of the documents in the future.

## Payment Acknowledgment

FOR DNRC AND SAGE GROUSE PROGRAM USE ONLY

APPROVED / DATE

DeveloperName(Payor): Phillips 66  
ProjectName: Lavina Pipeline Replacement  
ProjectIDNo: 3925  
TotalNumberOfDebits: 4,870.83  
Sage Grouse ServiceAreaofProject: Central  
Majorand Minor Version of the HQT Technical Manual: October 2018 v1.0  
Majorand Minor Version of the Policy Guidance: October 2018 v1.0

MSGOT: \_\_\_\_\_  
SG Program Manager: \_\_\_\_\_  
CARDD Administrator: \_\_\_\_\_



MONTANA SAGE GROUSE  
Habitat Conservation Program

Amount of Deposit: 60,260.63  
Date of Wire Transfer or Check Deposit:  
Multiple Payments Expected: ☐ Yes ☒ No If Yes, date anticipated:  
Purchasing Stewardship Account Credits: ☒ Yes ☐ No If Yes Grant Project Name:  
Contribution Equivalent to Average Cost of Credits: ☒ Yes ☐ No If Yes, Average Cost of Credit: \$13.00  
Donation for Purposes Other than Mitigation: ☐ Yes ☒ No Purpose:

Fund Name: Sage Grouse Stewardship Account (Payee) Fund No. 02318 Org. No: 13 Speed Chart: R2310

Taken together, Executive Orders 12-2015 and 21-2015 and the 2015 Greater Sage Grouse Stewardship Act (Act) set forth that Montana will observe the mitigation hierarchy and that compensatory mitigation is consistent with the purpose of incentivizing voluntary conservation measures for sage grouse habitat and populations. MCA §§ 76-22-102, 76-22-111(1)(a)-(b), (2), and (3). The number of debits attributed to a development project, and ultimately the final mitigation obligation is determined by applying the Habitat Quantification Tool and accompanying policy guidance, and as approved by the Montana Sage Grouse Oversight Team. MCA §§ 76-22-103(5), 76-22-103(9), 76-22-103(10), 76-22-105(1)(g), 76-22-111(1)-(3).

Once the amount of compensatory mitigation is determined and approved, developers select their own method for offsetting debits. The Act provides for many different methods, and developers can use more than one method. MCA § 76-22-110(1)(b). Among the available methods, the Act provides that developers can purchase an equal number of credits from the available credits tracked by the Montana Sage Grouse Oversight Team or, if sufficient conservation credits are unavailable for purchase, making a financial contribution to the Sage Grouse Stewardship Account established in MCA § 76-22-109. MCA §§ 76-22-103(4), 76-22-109, 76-22-111(1)(b)(i)-(ii).

This payment to the Sage Grouse Stewardship Account is made by Phillips 66 to provide compensatory mitigation for the debits of the Lavina Pipeline Replacement project in designated sage grouse habitat pursuant to MCA §§ 76-22-111(1)-(3). The purpose of the funds is to mitigate and offset impacts to sage grouse populations and habitats resulting from the Project. Additional details can be found in the approved mitigation plan and donation form.

The Montana Sage Grouse Oversight Team will approve expenditures of funds deposited to the Sage Grouse Stewardship Account consistent with the approved mitigation plan, the Greater Sage Grouse Stewardship Act, and applicable administrative rules.

\_\_\_\_\_  
Date

By: \_\_\_\_\_  
Developer or Authorized Representative (Payor)

\_\_\_\_\_  
Date

By: \_\_\_\_\_  
Sage Grouse Habitat Conservation Program (Payee)

\_\_\_\_\_  
Date

By: \_\_\_\_\_  
Department of Natural Resources & Conservation (Payee)



# STATE OF MONTANA SAGE GROUSE STEWARDSHIP ACCOUNT CONTRIBUTION FORM



Developer's Name Phillips 66  
 Address 2110 Overland Avenue, Suite 124, Billings  
 City Billings State MT Zip 59102  
 Phone (406) 830-7621

Date 4/30/2020

Description of Purpose of Funds	Amount
The Program completed a review of the Lavina Pipeline Replacement Project, on April 30, 2020. The October 2018 v1 Habitat Quantification Tool Technical Manual and the October 2018 v1 Policy Guidance documents were used to determine the total number of debits associated with this project. The mitigation method that Phillips 66 selected to fulfill the mitigation obligation is to make a payment to the Sage Grouse Stewardship Account, as provided for in MCA 76-22-111.	60,260.63

Developer's Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## COMMENTS FOR SPECIAL INSTRUCTION:

Funds can be remitted by check or wire.

## Check Payments:

Make checks payable to:

DNRC

Re: Sage Grouse Stewardship

P.O. Box 201601

1539 11th Avenue

Helena, MT 59601

## Wire Instructions:

Name on Account: State of Montana

Routing # 092900383 (last digit is a check digit)

Checking Account # 156041200221

Bank: US Bank NA MT

US Bank Contract: Kimberly Spiroff at 406-447-5251

## Please include on wire info:

DNRC 57060, Sage Grouse Stewardship

## Sage Grouse Contact:

Carolyn Sime

406-444-0554

CSime2@mt.gov

<https://sagegrouse.mt.gov/>

Speed Chart:R2310