

ENVIRONMENTAL ASSESSMENT

On an Application for an OPENCUT MINING PERMIT

The Montana Department of Environmental Quality (DEQ) prepared this Environmental Assessment (EA) in accordance with requirements of the Montana Environmental Policy Act (MEPA). An EA functions to identify, disclose, and analyze the impacts of a proposed action. This document may disclose impacts that have no legislatively required mitigation measures, or over which there is no regulatory authority.

The state law that regulates gravel mining operations in Montana is the Opencut Mining Act. This law and the rules adopted thereunder place operational guidance and limitations on a project during its lifetime, and provide for the reclamation of land affected by opencut mining operations.

Local governments and other state agencies may have authority over different resources and activities under their regulations. Approval or denial of this Opencut Application will be based on a determination of whether or not the proposed operation complies with the Opencut Mining Act and the rules adopted thereunder. The DEQ approval of this application would not relieve the operator from the obligation to comply with any other applicable federal, state, or county statutes, regulations, or ordinances. The operator is responsible for obtaining any other permits, licenses, approvals, etc. that are required for any part of the proposed operation.

APPLICANT: Fisher Sand and Gravel Co.

COUNTY: Wheatland

SITE NAME: Winnecook Ranch Pit

DATE: October 2011

LOCATION: Section 6, T7 N, R17 E

PROPOSAL: The applicant proposes to permit a new, short-term gravel pit to mine, screen, crush, wash, stockpile and transport 400,000 cubic yards of gravel from a 46.5-acre site located 6 miles west of Shawmut near Highway 12. The site is on a bench about 60 feet above an irrigation canal. A reclamation bond would be held by DEQ to ensure that final reclamation of the site to rangeland would be completed by October 2016. This application contains all items required by the Opencut Mining Act and its implementing rules. Proponent commits to properly conducting opencut operations and would be legally bound by the permit.

IMPACTS ON THE PHYSICAL ENVIRONMENT

RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
1. TOPOGRAPHY, GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:	<p>The site is on the end of a bench of alluvial material which is about 60 feet above the Musselshell River Valley. The surface is very flat but slopes off fairly steeply to the north and south. The site would be mined to a depth of 17 feet. It would be sloped to daylight to the north and have a small berm to the south. All precipitation would be kept on site.</p> <p>The onsite soils consist of sandy loam. The operator will replace 12 inches of soil and 6 inches of overburden over the mine area. Most of the facility area was mined previously; only 4 inches of reclamation materials are present for that area. The site receives approximately 15 inches of precipitation a year.</p> <p><i>Impacts:</i> An irreversible and irretrievable removal of gravel from the site would occur. A small impact to the quantity and quality of soils from salvaging, stockpiling, and resoiling activities also would occur, but this would not impair the capacity of the soils to support full reclamation. There are no unusual topographic, geologic, soils, or special reclamation considerations that would prevent reclamation success.</p>

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
2. WATER QUALITY, QUANTITY AND DISTRIBUTION	<p>The bench is above the valley of the Musselshell. An irrigation canal runs along the bottom of the slope about 35 feet lower than maximum mining depth. It would not be impacted by mining activities. Water for dust control, the pug mill and other site activities would be from the landowner's off-site water right.</p> <p><i>Impacts:</i> The proposed activities would have a minimal effect on the quantity and quality of the surface and groundwater resources.</p> <p><i>Cumulative:</i> None.</p>
3. AIR QUALITY	<p>Air quality standards are based upon the Clean Air Act of Montana and pursuant rules and are administered by the DEQ Air Resources Management Bureau (ARMB). Its program is approved by the Environmental Protection Agency (EPA). These rules and standards are designed to be protective of human health and the environment.</p> <p>Air quality permits would be required on the processing equipment before installment. Machinery, such as generators, crushers and asphalt plants, are individually permitted for allowable emissions. Best Available Control Technology (BACT) is the usual standard applied.</p> <p>Fugitive dust is that which blows off the pit floor, stockpiles, gravel roads, farm fields, etc. It is considered to be a nuisance but not harmful to health.</p> <p><i>Impacts:</i> Air quality standards as set by the federal government and enforced by the ARMB would allow minimal detrimental air impacts.</p>
4. VEGETATION COVER, QUANTITY AND QUALITY	<p>There are no known rare or sensitive plants or cover types present in the site area. %0 percent of the onsite vegetation consists of native range grasses, silver sage, cactus, and the other half of the site was seeded to crested wheatgrass many years ago. Vegetation provides approximately 50 percent cover. The vegetation would be removed as soil is stripped and the site would be replanted with plant species compatible with the proposed reclaimed use.</p> <p><i>Impacts:</i> No long term detrimental impacts to the vegetation would occur.</p>
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:	<p>Although the area is used primarily for pasture, it also supports populations of whitetail and mule deer, antelope, sharp-tail grouse, raptors and various other animal species. Population numbers for these species are not known.</p> <p><i>Impacts:</i> The proposed mine is expected to temporarily displace some individual species and it is likely that the site would be re-inhabited following reclamation to similar habitat.</p>
6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:	<p>The Montana Natural Heritage Program (MNHP) lists the following 5 species of concern in the vicinity of the site: Bald and Golden Eagle, Ferruginous Hawk, Northern Redbelly Dace in the river, and several Blacktailed Prairie Dog towns across the river.</p> <p><i>Impacts:</i> None of the listed species have been found on this site. The raptors use the area for hunting grounds and undoubtedly hunt the prairie dog towns across the river but have not nested there. The dace is a fish living in the river. Even if suitable habitat did exist on this site, the disturbance area would be small and large areas of similar or identical habitat surrounds the site. The possible impact to these species would be minimal.</p>

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
7. HISTORICAL AND ARCHAEOLOGICAL SITES	<p>The Montana State Historic Preservation Office (SHPO) was notified of the application. It reported that no have been discovered previously on this property. A pedestrian survey of the area by DEQ personnel did not reveal any artifacts or signs of occupation. No signs were evident at depth in the previously disturbed area.</p> <p><i>Impacts:</i> If during operations resources were to be discovered, activities would be temporarily moved to another area or halted until SHPO was contacted and the importance of the resources was determined.</p>
8. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY	<p>There are no unusual demands on land, water, air or energy anticipated as a result of this project.</p> <p><i>Impacts:</i> Negligible impacts to land, water, air, or energy would occur.</p>

IMPACTS ON THE HUMAN POPULATION	
RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
9. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS	County zoning clearance has been obtained.
10. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING	<p>Based on the air photo of the surrounding area, there are no nearby residences.</p> <p><i>Impact:</i> This commercial pit is being sited in this area because of the location of the resource to provide resources for an MDT project.</p>
11. AESTHETICS	The site is located in a common grassland area. There would be a temporary alteration of aesthetics while mining is under way. However, reclamation would return the area to a visually acceptable landscape. This project is considered to be short term, i.e., planned to take 4 years to complete.
12. QUANTITY/ DISTRIBUTION OF EMPLOYMENT	<p>Existing employees would mainly be utilized for this operation. There is low potential that this project would create a significant number of new jobs.</p> <p><i>Impacts:</i> New employment opportunities would be limited.</p>
13. INDUSTRIAL, COMMERCIAL, AGRICULTURAL ACTIVITIES AND PRODUCTION	<p>The acreage listed in the proposal would be taken out of grassland use. Upon completion of mining, the land would be reclaimed to grassland.</p> <p><i>Impacts:</i> Grassland production would be reduced as soil stripping and operations progress across the site. When the entire site is opened up for mining and mine-related activities, all agricultural activities would cease.</p>
14. LOCAL, STATE TAX BASE AND TAX REVENUES, PERSONAL AND COMMUNITY INCOME	Local, state and federal governments would be responsible for appraising the property, setting tax rates, collecting taxes, etc., from the companies, employees, or landowners benefitting from this operation. Following reclamation, it is assumed the tax base would revert to pre-mine levels.
15. DEMAND FOR GOVERNMENT SERVICES	Limited oversight by DEQ Opencut Program personnel would be conducted in concert with other area activity when in the vicinity.
16. HUMAN HEALTH AND SAFETY	Any industrial activity will increase the opportunities for accidental injury. There are agencies that require specific safety measures are in place. If followed there is no reason to believe that significant safety issues would be present.

PRIVATE PROPERTY ASSESSMENT ACT (PPAA) CHECKLIST

DOES THE PROPOSED AGENCY ACTION HAVE TAKINGS IMPLICATIONS UNDER THE PPAA?

YES	NO	
X		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	X	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	X	3. Does the action deprive the owner of all economically viable uses of the property?
	X	4. Does the action deny a fundamental attribute of ownership?
	X	5. Does the action require a property owner to dedicate a portion of property or to grant an easement? (If answer is NO, skip questions 5a and 5b and continue with question 6.)
		5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
		5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
	X	6. Does the action have a severe impact on the value of the property?
	X	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally? (If the answer is NO, skip questions 7a-7c)
		7a. Is the impact of government action direct, peculiar, and significant?
		7b. Has the government action resulted in the property becoming practically inaccessible, waterlogged, or flooded?
		7c. Has the government action diminished property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?

Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b.

If taking or damaging implications exist, the agency must comply with § 5 of the Private Property Assessment Act, to include the preparation of a taking or damaging impact assessment. Normally, the preparation of an impact assessment will require consultation with agency legal staff.

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P.O. Box 201800 • 1515 East Sixth Avenue • Helena, MT 59620-1800 • fax 406.444.0581 • tel 406.444.5354 • <http://mtnhp.org>

September 16, 2011

Elizabeth Smith
MT DEQ
655 Timberwolf Parkway
Kalispell, MT 59901

Dear Elizabeth,

I am writing in response to your recent request regarding Montana species of concern in the vicinity of the Fisher Sand and Gravel Co. - Winnecook Ranch Pit Site, in Section 6, T07N, R17E. I checked our databases for information in this general area and have enclosed 9 species occurrence reports for 5 species of concern and a map depicting species of concern locations. Note that the maps are in Adobe GeoPDF format. With the appropriate Adobe Reader, it provides a convenient way to query and understand the information presented on the map.

Please keep in mind the following when using and interpreting the enclosed information and maps:

- (1) These materials are the result of a search of our database for species of concern that occur in an area defined by requested township, range and section with an additional one-mile buffer surrounding the requested area. This is done to provide a more inclusive set of records and to capture records that may be immediately adjacent to the requested area. Reports are provided for the species of concern that are located in your requested area with a one-mile buffer. Species of concern outside of this buffered area may be depicted on the map due to the map extent, but are not selected for the SOC report.
- (2) On the map, polygons represent one or more source features as well as the locational uncertainty associated with the source features. A source feature is a point, line, or polygon that is the basic mapping unit of a Species Occurrence (SO) representation. The recorded location of the occurrence may vary from its true location due to many factors, including the level of expertise of the data collector, differences in survey techniques and equipment used, and the amount and type of information obtained. Therefore, this inaccuracy is characterized as locational uncertainty, and is now incorporated in the representation of an SO. If you have a question concerning a specific SO, please do not hesitate to contact us.
- (3) This report may include sensitive data, and is not intended for general distribution, publication or for use outside of your agency. In particular, public release of specific location information may jeopardize the welfare of threatened, endangered, or sensitive species or communities.
- (4) The accompanying map(s) display management status, which may differ from ownership. Also, this report may include data from privately owned lands, and approval by the landowner is advisable if specific location information is considered for distribution. Features shown on this map do not imply public access to any lands.
- (5) Additional biological data for the search area(s) may be available from other sources. We suggest you contact the U.S. Fish and Wildlife Service for any additional information on threatened and endangered species (406-449-5225). Also, significant gaps exist in the Heritage Program's fisheries data, and we suggest you contact the

Montana Fisheries Information System for information related to your area of interest (phone: 406-444-3373, or web site: <http://fwp.mt.gov/fishing/mFish/>).

- (6) Additional information on species habitat, ecology and management is available on our web site in the Plant and Animal Field Guides, which we encourage you to consult for valuable information. You can access these guides at <http://mtnhp.org>. General information on any species can be found by accessing the link to NatureServe Explorer.**

The results of a data search by the Montana Natural Heritage Program reflect the current status of our data collection efforts. These results are not intended as a final statement on sensitive species within a given area, or as a substitute for on-site surveys, which may be required for environmental assessments. The information is intended for project screening only with respect to species of concern, and not as a determination of environmental impacts, which should be gained in consultation with appropriate agencies and authorities.

I hope the enclosed information is helpful to you. Please feel free to contact me at (406) 444-3290 or via my e-mail address, below, should you have any questions or require additional information.

Sincerely,



Martin P. Miller
Montana Natural Heritage Program
martinm@mt.gov



Species of Concern Data Report

Visit <http://mtnhp.org> for additional information.

Report Date:
Friday, September 16, 2011

Haliaeetus leucocephalus

[View Species in MT Field Guide](#)

Common Name: Bald Eagle

General Habitat: Riparian forest

Description: Vertebrate Animal

Mapping Delineation:

Confirmed nesting area buffered by a minimum distance of 2,000 meters in order to be conservative about encompassing the breeding territory and area commonly used for re-nesting and otherwise buffered by the locational uncertainty associated with the observation up to a maximum distance of 10,000 meters.

Species Status

[Click Status for Explanations](#)

Natural Heritage Ranks:

State: S3
Global: G5

Federal Agency Status:

U.S. Fish & Wildlife Service: DM
U.S. Forest Service: SENSITIVE
U.S. Bureau of Land Management: SENSITIVE

FWP CFWCS Tier: 1

MT PIF Code: 2

Species Occurrences

Species Occurrence Map Label:	362196	SO Number:	876
First Observation Date:	2004-03-01	Acreage:	3,089
Last Observation Date:	2009-09-01	SO Rank:	

Buteo regalis

[View Species in MT Field Guide](#)

Common Name: Ferruginous Hawk

General Habitat: Sagebrush grassland

Description: Vertebrate Animal

Mapping Delineation:

Confirmed nesting area buffered by a minimum distance of 2,000 meters in order to encompass the average home range size reported for the species and otherwise buffered by the locational uncertainty associated with the observation up to a maximum distance of 10,000 meters.

Species Status

[Click Status for Explanations](#)

Natural Heritage Ranks:

State: S3B
Global: G4

Federal Agency Status:

U.S. Fish & Wildlife Service:
U.S. Forest Service:
U.S. Bureau of Land Management: SENSITIVE

FWP CFWCS Tier: 2

MT PIF Code: 2

Species Occurrences

Species Occurrence Map Label:	355746	SO Number:	659
First Observation Date:	1996-05-01	Acreage:	3,089
Last Observation Date:	1996-05-01	SO Rank:	

Species Occurrence Map Label:	355744	SO Number:	660
First Observation Date:	1996-05-01	Acreage:	3,089
Last Observation Date:	1996-05-01	SO Rank:	



Species of Concern Data Report

Visit <http://mtnhp.org> for additional information.

Report Date:
 Friday, September 16, 2011

Aquila chrysaetos

[View Species in MT Field Guide](#)

Common Name: Golden Eagle

General Habitat: Grasslands

Description: Vertebrate Animal

Mapping Delineation:

Confirmed nesting area buffered by a minimum distance of 3,000 meters in order to be conservative about encompassing the entire breeding territory and area commonly used for renesting and otherwise buffered by the locational uncertainty associated with the observation up to a maximum distance of 10,000 meters.

Species Status

[Click Status for Explanations](#)

Natural Heritage Ranks:

State: S3
Global: G5

Federal Agency Status:

U.S. Fish & Wildlife Service:
U.S. Forest Service:
U.S. Bureau of Land Management: SENSITIVE

FWP CFWCS Tier: 2

MT PIF Code:

Species Occurrences

Species Occurrence Map Label:	270134	SO Number:	370
First Observation Date:	2000-04-04	Acreage:	6,951
Last Observation Date:	2000-04-04	SO Rank:	

Species Occurrence Map Label:	270132	SO Number:	371
First Observation Date:	2000-04-04	Acreage:	6,951
Last Observation Date:	2000-04-04	SO Rank:	

Phoxinus eos

[View Species in MT Field Guide](#)

Common Name: Northern Redbelly Dace

General Habitat: Small prairie rivers

Description: Vertebrate Animal

Mapping Delineation:

Stream reaches and standing water bodies where the species presence has been confirmed through direct capture or where they are believed to be present based on the professional judgement of a fisheries biologist due to confirmed presence in adjacent areas. In order to reflect the importance of adjacent terrestrial habitats to survival, stream reaches are buffered 100 meters, standing water bodies greater than 1 acre are buffered 50 meters, and standing water bodies less than 1 acre are buffered 30 meters into the terrestrial habitat based on PACFISH/INFISH Riparian Conservation Area standards.

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U.S. Fish & Wildlife Service:
U.S. Forest Service:
U.S. Bureau of Land Management:

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Species of Concern Data Report

Visit <http://mtnhp.org> for additional information.

Report Date:
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Species Occurrences

Species Occurrence Map Label:	254133	SO Number:	2,843
First Observation Date:		Acreage:	14,074
Last Observation Date:		SO Rank:	

Cynomys ludovicianus [View Species in MT Field Guide](#)

Common Name: Black-tailed Prairie Dog

General Habitat: Grasslands

Description: Vertebrate Animal

Mapping Delineation:

Areas with recent evidence of activity (i.e. burrow entrances) visible on the 2005 or 2009 National Agricultural Imagery Program (NAIP) aerial color photographic imagery that either contain or are within a distance of 200 meters of a definitive observation of the species.

Species Status

[Click Status for Explanations](#)

Natural Heritage Ranks:

State: S3
Global: G4

Federal Agency Status:

U.S. Fish & Wildlife Service:
U.S. Forest Service: SENSITIVE
U.S. Bureau of Land Management: SENSITIVE

FWP CFWCS Tier: 1

MT PIF Code:

Species Occurrences

Species Occurrence Map Label:	311952	SO Number:	6,134
First Observation Date:		Acreage:	82
Last Observation Date:		SO Rank:	

Species Occurrence Map Label:	311950	SO Number:	6,133
First Observation Date:		Acreage:	230
Last Observation Date:		SO Rank:	

Species Occurrence Map Label:	312000	SO Number:	6,257
First Observation Date:		Acreage:	17
Last Observation Date:		SO Rank:	

Montana Species of Concern Fisher Sand and Gravel Co. Winnecook Ranch Pit Site

SPECIES OF CONCERN: A polygon feature representing only what is known from direct observation with a defined level of certainty regarding the spatial location of the feature.

NonVascular Plants

NonVascular Plants

Vascular Plants

Vascular Plants

Invertebrates

Invertebrates

Amphibians

Amphibians

Fish

Fish

Reptiles

Reptiles

Birds

Birds

Mammals

Mammals

Sites

Sites

Wetland and Riparian Classes

Lacustrine

Freshwater Pond

Freshwater Emergent Wetland

Freshwater Shrub Wetland

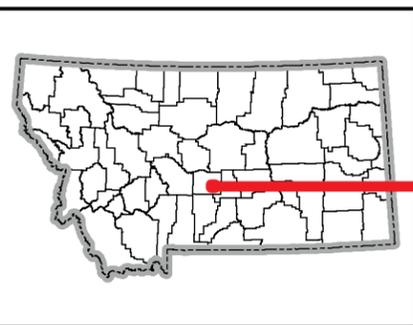
Freshwater Forested Wetland

Riverine

Riparian Emergent

Riparian Shrub

Riparian Forested



Not all legend items may occur on the map.

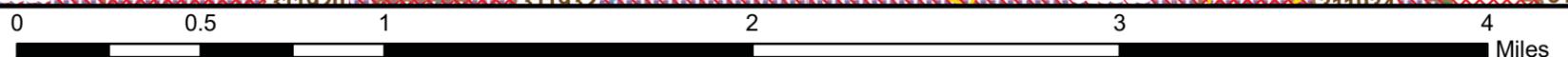
Features shown on this map do not imply public access to any lands.

This map displays management status, which may vary from ownership.

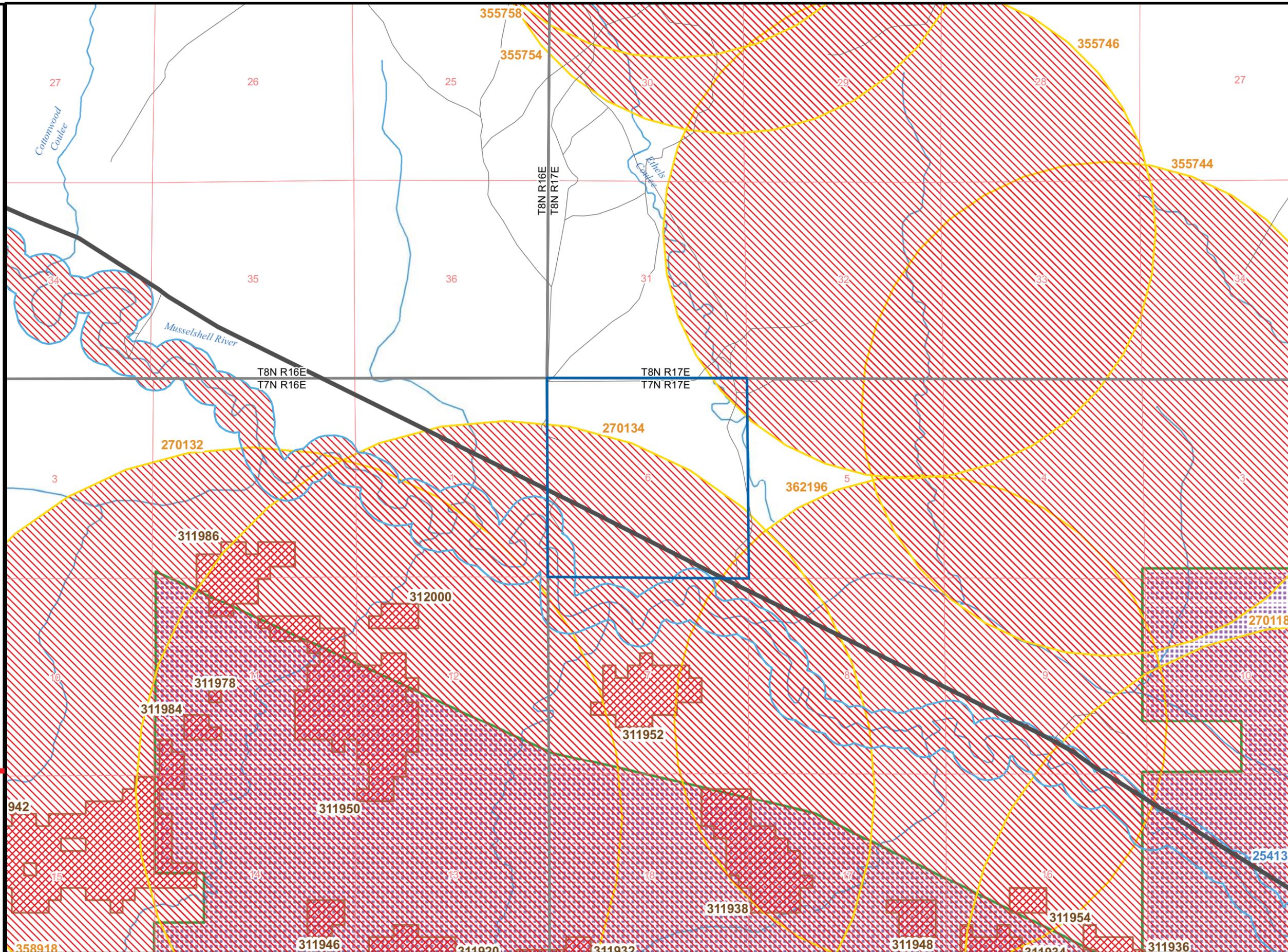


Natural Resource Information System, Montana State Library
1515 East Sixth Ave., Helena, MT 59620-1800

406 444-5354 <http://mtnhp.org> mtnhp@mt.gov



Map Document: K:\REQUESTS\Requests\12\DEQ\12deq0043\12deq0043.mxd (9/16/2011)



Smith, Elizabeth

From: Murdo, Damon
Sent: Monday, September 19, 2011 10:42 AM
To: Smith, Elizabeth
Subject: RE: SHPO Reports
Attachments: 2011091606-DEQ.xls



September 19, 2011

Elizabeth Smith
Hard Rock/Openpit Programs
DEQ, Permitting & Compliance Division
655 Timberwolf Parkway
Kalispell MT 59901

RE: FISHER SAND AND GRAVEL – WINNECOOK RANCH PIT SITE - PERMIT #2184. SHPO Project #: 2011091606

Dear Elizabeth:

A file search of the statewide cultural resource information databases and a review of your letter resulted in the following information regarding the proposed project location:

- 1) **Previously recorded sites**
According to our records there have no previously recorded historic or archaeological sites within the designated search locale.
- 2) **Previous surveys conducted in the project area**
The absence of more cultural properties in the area does not mean that they do not exist but rather may reflect the absence of any previous cultural resource inventory in the area, as our records indicated none.
- 3) **Previous disturbance in the area of potential effect**
Cropland/Pasture/Rangeland.
- 4) **DEQ Gravel Source Inspection Form results**
None provided.
- 5) **Additional comment or information**
Based on the lack of inventory and the ground disturbance required by this undertaking we feel that this project has the potential to impact cultural properties. We, therefore, recommend that a cultural resource inventory be conducted in any areas where there will be new ground disturbance in order to determine whether or not sites exist and if they will be impacted.

If you have any further questions or comments you may contact me at (406) 444-7767 or by e-mail at dmurdo@mt.gov. I have attached an invoice for the file search. Thank you for consulting with us.

Sincerely,

Damon Murdo
Cultural Records Manager
State Historic Preservation Office

File: DEQ/OPENCUT/2011