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 Company **COUNTY:** Dawson

SITE NAME: B&P Handran Pit **DATE:** March 2016

LOCATION: Section 24, T15N, R54E

PROPOSAL: The applicant proposes to permit a new, long-term gravel pit to mine, screen, crush, stockpile, and transport 500,000 cubic yards of gravel from a 91.7-acre site located 6.5 miles southwest of Glendive. A reclamation bond would be held by DEQ to ensure that final reclamation of the site to a mix of rangeland/pasture and cropland and/or hayland would be completed by October 2030.

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:	The site is characterized by rolling ridges, sideslopes, and draws in the west; broad sideslopes giving way to a near-planar head of draw in the east. It is situated on alluvial terraces above the greater Yellowstone River drainage. The onsite soils consist primarily of Tinsley soils, 15 to 65 percent slopes, and Attewan loam, 2 to 4 percent slopes. The operator would replace 12 inches of soil and 6 inches of overburden. The site receives approximately 11 to 14 inches of precipitation per year. *Impacts:* 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, soil, or special reclamation considerations that would prevent reclamation success.

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	**POTENTIAL IMPACTS AND MITIGATION MEASURES**
2. WATER QUALITY, QUANTITY AND DISTRIBUTION	No surface waters are located on site. Numerous draws in the landscape drain the terrace top within the site and to the west and serve as tributaries to an ephemeral drainage to the south and the intermittent Sand Creek to the north and east. Water would be used onsite by the crusher and for dust control. Water would be obtained from a source greater than 300 feet from the proposed permit boundary and stored onsite in a water truck and water storage tank. *Impacts:* The proposed activities would have a minimal effect on the quantity and quality of the surface and groundwater resources. *Cumulative:* Cumulative impacts on water resources would likely be negligible.
3. AIR QUALITY	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. 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. 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. *Impacts:* Air quality standards as set by the federal government and enforced by the ARMB would allow minimal detrimental air impacts.
4. VEGETATION COVER, QUANTITY AND QUALITY	There are no known rare or sensitive plants or cover types present in the site area. Onsite vegetation consists of cropland, crested wheatgrasses, various native wheatgrasses, sagebrush, yucca, roses, and forbs; and provides approximately 70-80% 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. *Impacts:* No long term detrimental impacts to the vegetation would occur.
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:	Although the area is used primarily for cropland/hayland and rangeland/pasture, it also supports populations of deer, rodents, song birds, coyotes, foxes, raptors, insects and various other animal species. Population numbers for these species are not known. *Impacts:* 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.
6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:	The Montana Natural Heritage Program (MNHP) lists the following two species of concern in the vicinity of the site: **Great Blue Heron** (*Ardea herodias*) is the largest heron in North America, 60 cm tall and 97 to 135 cm long. Its upper parts are gray, and the fore-neck is streaked with white, black, and rust-brown. Great Blue Herons breed from southern Alaska southeast across central Canada to Nova Scotia and south to Guatemala, Belize, and the Galapagos Islands. Most Montana nesting colonies

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	**POTENTIAL IMPACTS AND MITIGATION MEASURES**
	are in cottonwoods along major rivers and lakes; a smaller number occur in riparian ponderosa pines and on islands in prairie wetlands. Great Blue Herons eat mostly fish but also amphibians, invertebrates, reptiles, mammals, and birds. Disturbance by humans and loss of protected colony sites are major threats. **Spotted Bat** *(Euderma maculatum)* have huge pink ears (37 to 50 millimeters long), the dorsum is blackish with a large white spot on each shoulder and on the rump, and white patches at the posterior base of each ear. Spotted Bats differ from other bats in Montana by the unique patterning of the fur and the extremely large ears. Their echolocation calls (an insect-like clicking) are audible to the unaided human ear. The species has not been reported during winter in Montana. Spotted Bats have been encountered or detected most often in open arid habitats dominated by Utah juniper (Juniperus osteosperma) and sagebrush (Artemisia tridentata and A. nova), sometimes intermixed with limber pine or Douglas-fir, or in grassy meadows in ponderosa pine savannah (Fenton et al. 1987, Worthington 1991a, Hendricks and Carlson 2001). Cliffs, rocky outcrops, and water are other attributes of sites where Spotted Bats have been found (Foresman 2012), typical for the global range. This species is insectivorous. Apparently Spotted Bats feed primarily on noctuid moths, and sometimes beetles (Barbour and Davis 1969, Schmidly 1991, Van Zyll de Jong 1985). *Impacts:* None of the listed species have been found on this site. 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.
7. HISTORICAL AND ARCHAEOLOGICAL SITES	The Montana State Historic Preservation Office (SHPO) was notified of the application. It reported that no sites have been discovered previously within the designated search locale. A pedestrian survey of the area by DEQ personnel did not reveal any artifacts or signs of occupation. SHPO does not feel that a cultural resource inventory is warranted at this site at this time. *Impacts:* 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.
8. SAGE GROUSE EXECUTIVE ORDER	The project would not be in core, general, or connectivity sage grouse habitat, as designated by the Sage Grouse Habitat Conservation Program (Program) at: **http://sagegrouse.mt.gov.**
9. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY	There are no unusual demands on land, water, air or energy anticipated as a result of this project. *Impacts:* Negligible impacts to land, water, air, or energy would occur.

IMPACTS ON THE HUMAN POPULATION	
RESOURCE	**POTENTIAL IMPACTS AND MITIGATION MEASURES**
10. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS	Dawson County zoning clearance has been obtained. The site is not zoned.

IMPACTS ON THE HUMAN POPULATION	
RESOURCE	**POTENTIAL IMPACTS AND MITIGATION MEASURES**
11. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING	As seen on the aerial photo of the surrounding area, there are a few nearby residences. The closest is within 300 feet of the southwest corner of the proposed boundary. Two others are within 1,000 feet to the east. *Impact:* This commercial pit is being sited in this area because of the location of the resource, and to service projects in the area.
12. AESTHETICS	The site is located in a common cropland/hayland and rangeland/pasture 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 long-term, i.e., planned to take 14 years to complete. The nearest residence is approximately 300 feet from the southwest corner. They indicated that they did not request a public meeting.
13. QUANTITY/ DISTRIBUTION OF EMPLOYMENT	Existing employees would mainly be utilized for this operation. There is low potential that this project would create a significant number of new jobs. *Impacts:* New employment opportunities would be limited.
14. INDUSTRIAL, COMMERCIAL, AGRICULTURAL ACTIVITIES AND PRODUCTION	The acreage listed in the proposal would be taken out of cropland/hayland and rangeland/pasture use. Upon completion of mining, the land would be reclaimed to cropland/hayland and rangeland/pasture. *Impacts:* Cropland/hayland and rangeland/pasture 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 cropland/hayland and rangeland/pasture activities would cease, but would be restored as the site is reclaimed.
15. 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.
16. DEMAND FOR GOVERNMENT SERVICES	Limited oversight by DEQ Opencut Program personnel would be conducted in concert with other area activity when in the vicinity.
17. HUMAN HEALTH AND SAFETY	Any industrial activity would increase the opportunities for accidental injury. There are agencies that require the Operator to implement specific safety measures. If followed there is no reason to believe that significant safety issues would be present.
18. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES	This activity would not inhibit the use of the identified resources.
19. NATIVE CULTURAL CONCERNS	*Impacts:* None identified.

20. Alternatives Considered:

A. Denial Alternative: The Department would deny an application that does not comply with the Act and Rules. No impacts to the natural or human environment would occur.

B. Approval Alternative: The Department would approve an application that complies with the Act and Rules. Impacts of this application are addressed in the body of the EA.

21. Public Involvement, Agencies, Groups or Individuals contacted: Montana State Historic Preservation Office, Montana Natural Heritage Program.

22. Other Governmental Agencies which May Have Overlapping or Sole Jurisdiction include, but may not be limited to: Dawson County Commission or County Planning Department (zoning), Dawson County Weed Control Board, MSHA and OSHA (worker safety), DEQ ARMB (air quality) and Water Protection Bureau (groundwater and surface water discharge; stormwater), DNRC (water rights), and MDT (road access).

23. Regulatory Impact on Private Property: The analysis done in response to the Private Property Assessment Act indicates no impact. The Department does not plan to deny the application or impose conditions that would restrict the use of private property so as to constitute a taking.

24. Magnitude and Significance of Potential Impacts: This proposal is not likely to create impacts of significance due to mitigation, restrictions, and oversight mandated by the Opencut Mining Act and pursuant rules and the Montana Clean Air Act.

25. Recommendation for Further Environmental Analysis: [ ] EIS [X] No Further Analysis

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Name — Title

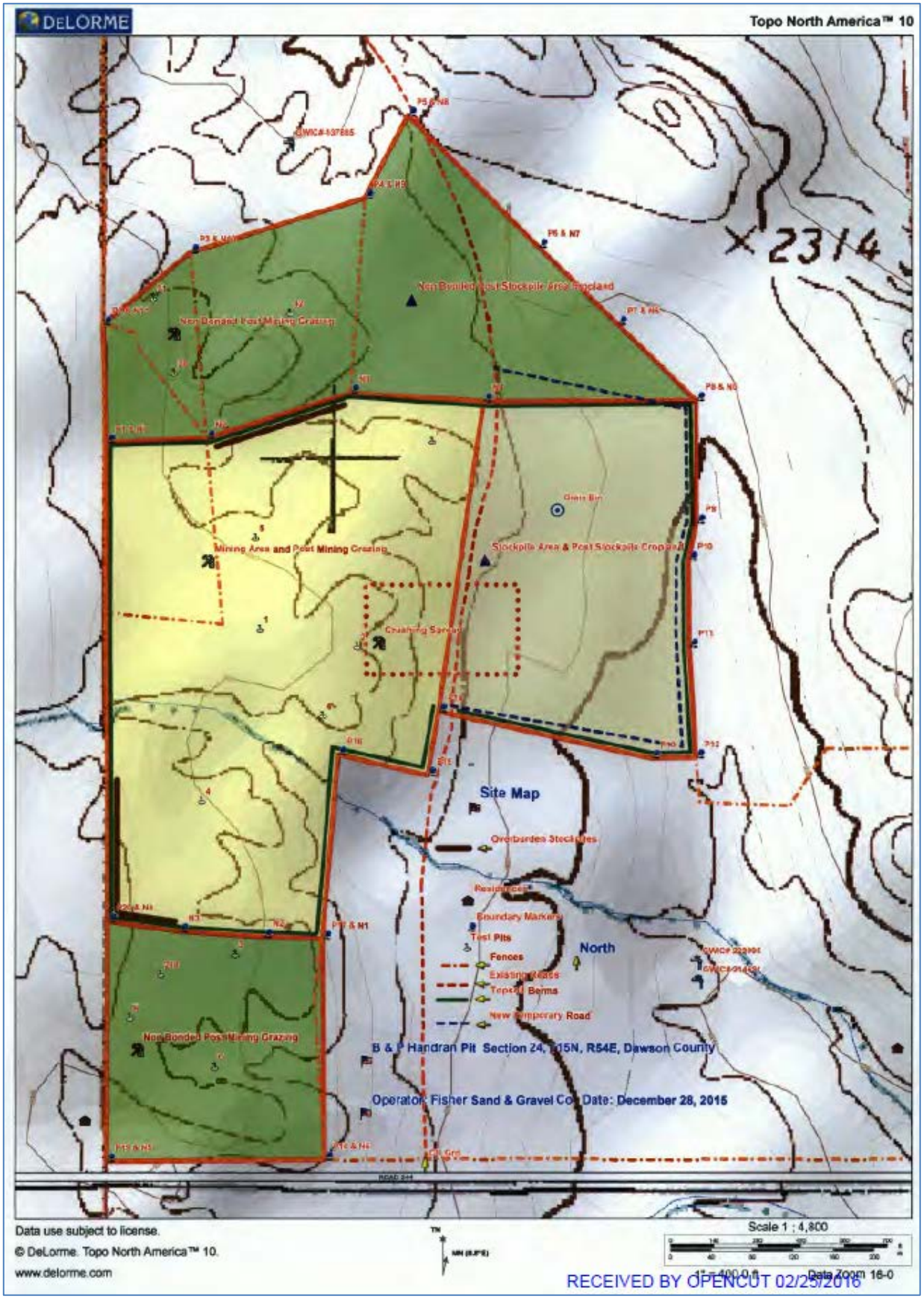
PRIVATE PROPERTY ASSESSMENT ACT (PPAA) CHECKLIST

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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