

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.

SITE NAME: K&K Opsahl Pit Area 2

LOCATION: Section 4 and 5, T35N R52E

COUNTY: Sheridan

DATE: September 2010

PROPOSAL: Fisher Sand and Gravel proposes to mine 500,000 yards of gravel from a 65.3-acre site. Major equipment would include a crusher, pug mill, and asphalt plant. The site is in rural northeast Montana. Much of the material would be used for a Montana Department of Transportation (MDT) reconstruction project. The remainder would be used over time for local purposes. A reclamation bond would be held by DEQ to ensure that final reclamation of the site to dryland crops would be completed by October 2020.

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 a terrace about 20 feet above Big Muddy Creek. The material is a combination of glacial till and alluvial deposits. A small gravel pit on the west side was developed and successfully reclaimed in the past.</p> <p>Topsoils are loams and silty loams about a foot deep. The overburden varies but averages 18 inches. The site has been used for dryland cropping for about 100 years.</p> <p>Precipitation in the area is about 14 inches annually.</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.</p>

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
	All topsoil and overburden averaging 30 inches in depth would be replaced. As a result, reclamation for dryland crops would most probably be successful. There are no unusual topographic, geologic, soil, or special reclamation considerations that would prevent reclamation success.
2. WATER QUALITY, QUANTITY AND DISTRIBUTION	There are no water features on site. Big Muddy Creek runs northwest to southeast along the boundary of the permit area near the foot of the terrace. A temporary access road would be built across the creek to the south. Processing water would be furnished from the landowners well at the home ranch. <i>Impacts:</i> The proposed activities would not affect the quantity and quality of the surface and groundwater resources.
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. <i>Impacts:</i> 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	A small portion of the site on the west side is vegetated with wheatgrasses, yucca, and some sagebrush. The rest of the site is growing a very lush wheat crop. No noxious weeds were observed. <i>Impacts:</i> The native vegetation would be left as a 75-foot wide buffer between the site and Big Muddy Creek. The cropland should produce good crops after reclamation because all soil materials would be replaced. 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, 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. <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.
6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:	The Montana Natural Heritage Program (MNHP) lists 7 species of concern in the vicinity of the site - three fish and four birds. The Northern Redbelly and Pearl Dace are minnow-sized fish. They reside in Big Muddy Creek but the site itself has no open water habitat for these species.

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
	<p>The ferruginous hawk could use the entire site as hunting grounds. The loggerhead Shrike, Baird's Sparrow and Grasshopper Sparrow all live in native grasslands and sagebrush habitats. This site is mainly in cropland and is not particularly suitable for these three species.</p> <p><i>Impacts:</i> None of the listed species has been found on this site. This cropland is not very suitable habitat for any of the species. Similar or identical habitat surrounds the site so these animals could easily move to those areas. Reclamation would be to identical use. The possible impact to these species would be minimal.</p>
7. HISTORICAL AND ARCHAEOLOGICAL SITES	<p>The Montana State Historic Preservation Office (SHPO) was notified of the application. It reported no sites 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><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	<p>Zoning compliance has been confirmed.</p>
10. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING	<p>No homes are near this site.</p> <p><i>Impact:</i> This pit is being sited in this area because of the reconstruction of nearby Highway 5. In addition, the county and local citizens need a close source for road maintenance or other projects.</p>
11. AESTHETICS	<p>No aesthetic mitigation has been proposed.</p>
12. QUANTITY/ DISTRIBUTION OF EMPLOYMENT	<p><i>Impacts:</i> New employment opportunities would be limited. Employees permanently work for the construction companies.</p>
13. INDUSTRIAL, COMMERCIAL, AGRICULTURAL ACTIVITIES AND PRODUCTION	<p>Range pasture and cropland would be limited on this site until reclamation was reestablished.</p> <p><i>Impacts:</i> Agricultural production would be reduced on the site for the life of the permit.</p>
14. LOCAL, STATE TAX BASE AND TAX REVENUES, PERSONAL AND COMMUNITY INCOME	<p>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</p>

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.