

ENVIRONMENTAL ASSESSMENT

On an Application for an OPENCUT MINING PERMIT

This Environmental Assessment (EA) is required under 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 hereunder 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.

APPLICANT: Big Horn Sand & Gravel

SITE NAME: Eagle Springs

LOCATION: Section 20, T2S, R33E

COUNTY: Big Horn

DATE: April 2010

PROPOSAL: The applicant proposes to permit a new long term gravel pit to mine, crush, screen, stockpile and transport approximately 170,000 cubic yards of gravel from a 19.4 acre site located 6 miles south of Hardin, Montana. The site currently consists of native pasture grass, located 700 feet north of Corporation Road. A reclamation bond would be held by DEQ to ensure the final reclamation use of grassland with two home sites would completed by January 2020.

This application contains all items required by the Opencut Act and 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 proposed mine is located on an alluvial terrace and consists of sedimentary deposits, with gravel ranging from pebble to boulder size. The country is hilly with deep erodible ravines. The soils consist of gravelly clays and the site receives approximately 11.7 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, soil, or special reclamation considerations that would prevent the reclamation from being successful.</p>
2. WATER QUALITY, QUANTITY AND DISTRIBUTION	<p>The site is located on a hillside and mining activities will not be occurring into the groundwater. Groundwater will be located well below the proposed mining depth. There are no wells in the near vicinity of this proposed site and suitable drinking water is difficult to</p>

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	<p>find. Water will be purchased from the city of Harding for use in dust control.</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>
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>The site vegetation consists of sparse native grass, cheat grass, field bindweed and a few shrubs.</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 deer, rodents, song birds, coyotes, foxes, raptors, insects 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 4 species of concern in the vicinity of the site.</p> <p>Sauger (<i>Sander canadensis</i>) is a fish native to Montana east of the Continental Divide. It inhabits both large rivers and reservoirs, but is mainly a river fish. In the spring, sauger broadcast their spawn over riffles in rivers. Sauger are a highly prized sport fish and in some areas outside Montana are also a commercially fished. Their major food items are insects and small fish.</p> <p>Preble's Shrew (<i>Sorex preblei</i>) is small, even for a shrew and has a long pointed snout and small eyes. Most Preble's Shrews in Montana have been captured in sagebrush-grassland habitats and tend to occupy arid and semi-arid habitats. The Preble's Shrew's diet consists of insects and other small invertebrates (worms, mollusks, centipedes, etc).</p> <p>Western Hog-nosed Snake (<i>Heterodon nasicus</i>) is a heavy bodied</p>

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
	<p>snake with a broad neck and dark blotches extending from the back of the head onto the tail. The snout is upturned, with an enlarged rostral scale that is spade-like and keeled. They prefer grassland-sagebrush habitat. This snake is carnivorous, preying on small reptiles and mammals.</p> <p>Merriam's Shrew (<i>Sorex merriami</i>) is a relatively small pale shrew. Merriam's Shrew differs from other members of the genus in Montana by the combination of small size, pale coloration, lack of a medial tine on I1, broad palate (maxillary breadth more than 5.0 millimeters), and U3 as large or larger than U4. Its habitat consists of mostly arid sagebrush-grassland. Its diet consists mainly of caterpillars, beetles, crickets, wasps and spiders.</p> <p><i>Impacts:</i> 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.</p>
7. HISTORICAL AND ARCHAEOLOGICAL SITES	<p>The Montana State Historic Preservation Office (SHPO) was notified of the application. It reported that no artifacts or historical items 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. SHPO does not feel that a recommendation for a cultural resource inventory is warranted at this time.</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, 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>This area is currently not zoned and there are no known or proposed locally adopted plans for this area. County zoning clearance has been obtained for this site.</p>
10. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING	<p>As seen on the aerial photo of the surrounding area, the proposed site is located in a rural area. There is one house located within 1,000 feet of the proposed site.</p> <p><i>Impact</i> This commercial pit is being sited in this area because of the location of the resource, and to service the gravel needs in this area of the county.</p>

IMPACTS ON THE HUMAN POPULATION	
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11. AESTHETICS	The proposed site is located in a relatively rural and arid 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 10 years to complete.
12. 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. <i>Impacts:</i> This is a relatively small operation and new employment opportunities would be limited.
13. INDUSTRIAL, COMMERCIAL, AGRICULTURAL ACTIVITIES AND PRODUCTION	The acreage listed in the proposal would be taken out of grazing use for a short period of time before being reclaimed back to grassland with two home sites. <i>Impacts:</i> Agricultural production would be reduced on the site for the life of the permit.
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 officials that are generally conducted in concert with other area activity would occur.
16. HUMAN HEALTH AND SAFETY	Any industrial activity will increase the opportunities for accidental injury. Other government agencies (e.g. MSHA, OSHA) require specific safety measures. As a result, there is no reason to believe that significant safety issues would be present.
17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES	This activity would not inhibit the use of the identified resources.
18. NATIVE CULTURAL CONCERNS	<i>Impacts:</i> None.

19. 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.

20. Public Involvement, Agencies, Groups or Individuals contacted: Montana State Historic Preservation Office, Montana Natural Heritage Program. Local planning department, public response to notifications, local interest groups.

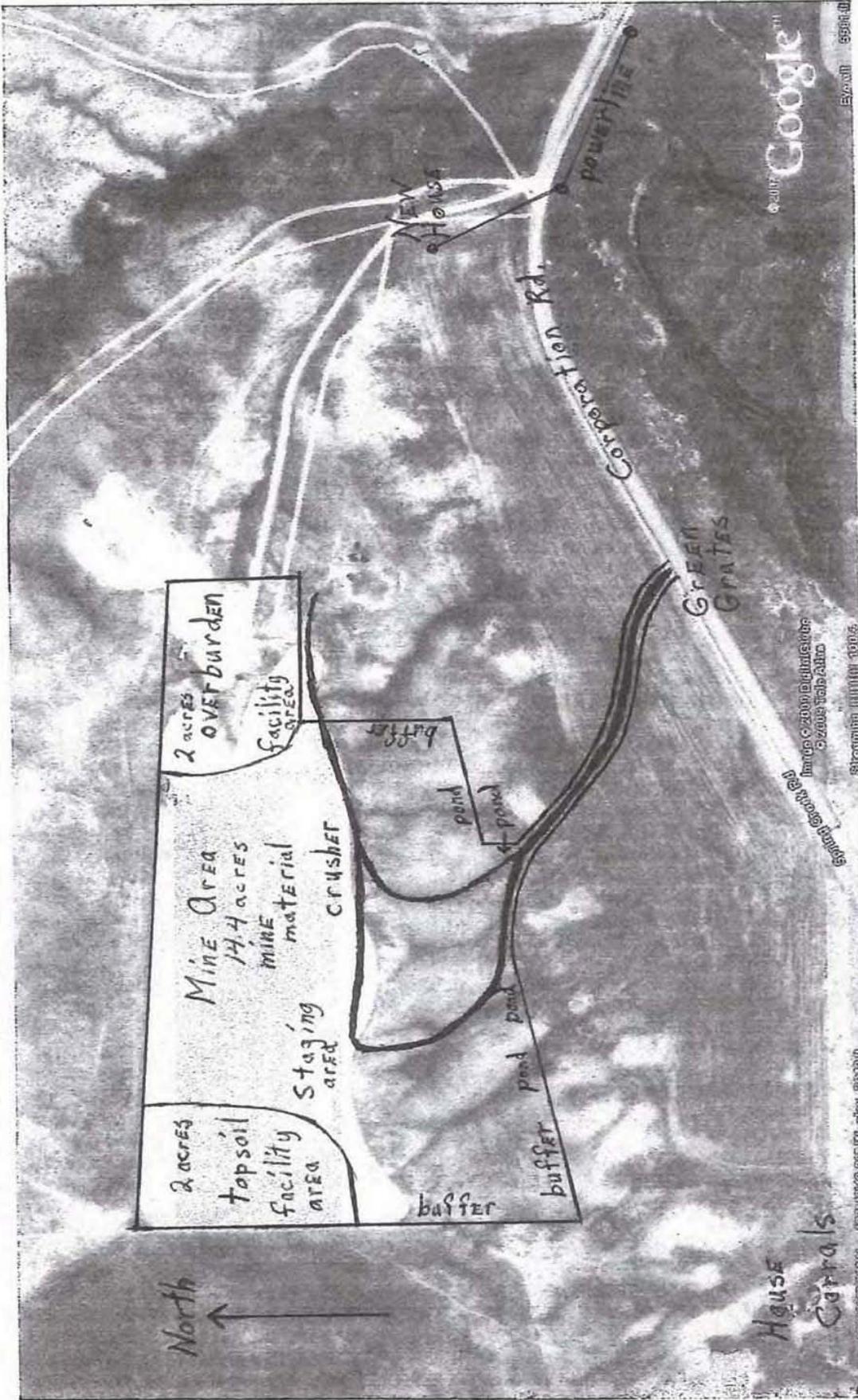
PRIVATE PROPERTY ASSESSMENT ACT (PPAA) CHECKLIST

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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 FEB 23 2010
 DEQ/IEMB

Big Horn Sand + Gravel, LLC
 Eagle Springs Pit
 SW⁴, NW⁴ Sec. 20, T 25, R 33E

Scale 1" = 290'
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 2-15-2010