

ENVIRONMENTAL ASSESSMENT

Project Name: Broken Leg Site
Proponent: John Dyer

Location: SE¼ SW¼ Section 6, T26N, R18W
County: Lake

Type and Purpose of Action: The applicant proposes to mine, crush, stockpile and transport 155,000 cubic yards of sand and gravel from a 10 acre pit located 3 miles southeast of the town of Ferndale. The pit was opened up across the road years ago and has already been reopened by the applicant. A temporary crusher will be used from time to time to crush material to be stockpiled for gradual use. Hours of operation for the crusher will be 7AM to 7PM, Monday through Friday. The reclaimed pit will result in a fairly flat pasture with graded slopes no steeper than 3:1, be topsoiled and re-seeded back to grass. Final reclamation is intended to be done by January, 2009.

N = Not present or No Impact will occur. Y = Impacts may occur (explain under Potential Impacts).

RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
<p>1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE: Are fragile, compactible or unstable soils present? Are there unusual geologic features? Are there special reclamation considerations?</p>	<p>[N] The proposed mine is located in the rolling foothills of the Swan Mountain Range. The deposit consists of stratified layers of glacial outwash sand and gravel that covers the deeper bedrock. The site is a wooded area, which is adjacent to a graveled forest road.</p> <p>Topsoil, which is 6 to 8 inches thick, will be salvaged and stockpiled away from the pit, road and facility area. Following mining, grading and ripping, the soils will be replaced, disked and seeded back to pasture. There are no fragile, compactible or unstable soils present, no unusual geologic features and no special reclamation considerations.</p>
<p>2. WATER QUALITY, QUANTITY AND DISTRIBUTION: Are important surface or groundwater resources present? Is there potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality?</p>	<p>[Y] There is no surface water within a half-mile of the site. The site would be mined with a dozer and excavator. There would be no water discharged from the pit area. There are 2 water wells registered in Section 6 and 11 wells in Section 7. The wells were drilled an average of 488 feet deep, have static water levels of 332 feet and yield 10 gallons per minute. The deep, poor nature of the local aquifer suggests there would be no deterioration of potable water as a result of this operation.</p> <p>All bulk fuel and lubricants will be kept outside the site. Portable equipment with fuel tanks such as dozers and trucks will be in various places within the facility.</p>
<p>3. AIR QUALITY: Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?</p>	<p>[Y] Air quality will be degraded and there will be an increase in particulate matter. Dozers, loaders, crushers and trucking equipment typically cause dusty conditions in disturbed soil sites. Dust will be controlled around the site by water truck or sprinklers. Crushers are regulated for emissions and the equipment used must be tested and approved. The site is not within a Class I airshed.</p>
<p>4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be permanently altered? Are any rare plants or cover types present?</p>	<p>[Y] There are no known rare or sensitive plants in the site area. Vegetation consists of forest cover including pine, larch, birch and fir trees. Vegetation covers 80% of the ground and will be removed and planted with species compatible with the proposed reclaimed use. There are no rare plants or cover types present.</p>
<p>5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: Is there substantial use of the</p>	<p>[N] Although the area is used primarily for timber and grazing, it also supports populations of whitetail deer, turkeys, rodents,</p>

<p>area by important wildlife, birds or fish?</p>	<p>song birds, coyotes, foxes, raptors, insects and various other animal species. Population numbers for these species are not known. The proposed mine is not expected to significantly degrade wildlife populations.</p>
<p>6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES: Are any federally listed threatened or endangered species or identified habitat present? Any wetlands? Species of special concern?</p>	<p>[N] The Natural Heritage Program and site evaluations have not revealed any endangered or threatened plant or animal species that would be directly affected. The area is potential habitat for the lynx, bald eagle and grizzly bear, as well as sensitive plants such as the wavy and mountain moonwort.</p>
<p>7. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?</p>	<p>[N] Although there are cultural values in the general area, this site has been logged and previously disturbed by modern man, thus destroying the integrity of resources that may have existed. A surface reconnaissance did not discover any cultural, historical or archeological resources. The operator will give appropriate protection to any values or artifacts discovered in the affected area. If significant resources are found, the operation will be routed around the site of discovery for a reasonable time until salvage can be conducted. The State Historic Preservation Office will be promptly notified.</p>
<p>8. AESTHETICS: Is the project on a prominent topographic feature? Will it be visible from populated or scenic areas? Will there be excessive noise or light?</p>	<p>[Y] The site is located in a scenic, but not unique area. There will be a temporary deterioration of aesthetics while the operation is under way. However, reclamation will return the area to a visually acceptable landscape.</p> <p>The site is visible by homes in the local area and to traffic along the gravel road. Hours of operation for the crusher are 7:00 AM to 7:00 PM, Monday through Friday.</p> <p>Noise levels generated by operating equipment at the pit are generally within the range of 60 to 90 decibels measured on-site, decreasing with distance. As a comparison, sound levels for ordinary activities such as close conversation at 60 decibels and music from a radio at 70 decibels are considered to be moderate. Levels above 90 decibels are severe, and prolonged exposure can lead to hearing loss. There is also noise from loaders and truck traffic hauling to various projects. These impacts are intermittent and of relatively short duration.</p>
<p>9. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY: Will the project use resources that are limited in the area? Are there other activities nearby that will affect the project?</p>	<p>[N]</p>
<p>10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES: Are there other studies, plans or projects on this tract?</p>	<p>[N]</p>
<p>11. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area?</p>	<p>[Y] Heavy equipment and facilities including dozes, trucks and crushers will create hazards, but the operator must comply with all MSHA and OSHA regulations. The operator must employ proper precautions to avoid accidents.</p> <p>Excessive and prolonged noise and light could increase stress for nearby residents and induce difficulty sleeping, but ongoing operations are not planned for nighttimes. Both of these effects may be considered harmful to human health if the activities are continuous. This proposed operation should not significantly affect human health.</p>

12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?	[Y] The acreage listed in the Type and purpose of Action will be taken out of timber/grazing and put into industrial/commercial use. Upon completion of mining, the land will be returned to grazing.
13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT: Will the project create, move or eliminate jobs? If so, estimated number.	[N]
14. LOCAL AND STATE TAX BASE AND TAX REVENUES: Will the project create or eliminate tax revenue?	[N]
15. DEMAND FOR GOVERNMENT SERVICES: Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc) be needed?	[Y] The operation will require periodic site evaluations by DEQ staff until such time as the site is successfully reclaimed to the required post-mining use. However, these evaluations are usually performed in conjunction with other area operations.
16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?	[Y] City/County zoning clearance has been obtained.
17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES: Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract?	[N]
18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING: Will the project add to the population and require additional housing?	[N]
19. SOCIAL STRUCTURES AND MORES: Is some disruption of native or traditional lifestyles or communities possible?	[Y] The area has generally been forest and ranching/residential in the recent past. Locals will notice a temporary change in the site as gravel is extracted. They will notice equipment working and truck traffic coming and going. Upon reclamation, the site will be reclaimed to pasture.
20. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area?	[N]
21. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:	[N]

ALTERNATIVES CONSIDERED: The Department would deny an incomplete application or one that does not comply with the Act and Rules. The proponent could then submit a modified application or submit an application for another site.

PUBLIC INVOLVEMENT: Agencies and individuals involved in the process included the Montana Natural Heritage Program, State Historic Preservation Office, local zoning authority, county weed control board, and landowner.

OTHER GROUPS OR AGENCIES CONTACTED OR WHICH MAY HAVE OVERLAPPING JURISDICTION: DEQ's Air Resources Management Bureau regarding air quality, DEQ's Water Protection Bureau regarding water discharge, DNRC's Water Rights Bureau regarding water rights, and MSHA and OSHA regarding mine safety.

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.

RECOMMENDATION FOR FURTHER ENVIRONMENTAL ANALYSIS: NO FURTHER ANALYSIS
INDIVIDUALS OR GROUPS CONTRIBUTING TO THIS EA: NONE

Approved By: _____ Date: _____
(Signature)

Prepared By: Rod Samdahl

