

## 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:** LS Jensen Construction & Ready Mix

**COUNTY:** Ravalli

**SITE NAME:** Pioneer Log Homes Pit

**DATE:** February 2011

**LOCATION:** Section 19, Township 7 North, Range 20 West

**PROPOSAL:** The applicant proposed to permit a new, short-term gravel pit to mine, crush, screen, stockpile, and transport approximately 150,000 cubic yards of gravel from a 10.7 acre site. The site would also have an asphalt plant in the southwest corner of the permit. The site is located approximately 2.5 miles northwest of Corvallis. The northern 2/3<sup>rd</sup> of the site is currently pasture land while the southern 1/3<sup>rd</sup> of the site is used by the adjacent lumber yard for storage. Residences and commercial businesses are located to the north, west, and south of the site. Open pastureland and the Bitterroot River are located to the east. Groundwater is located within approximately 17.5 feet of the surface and the Operator has stated that they will maintain a minimum of 3 feet of fill above the high-water level for this site.

A reclamation bond would be held by DEQ to ensure that final reclamation of the site to pastureland would be completed by October 2015. 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 proposed mine is located in flat terrain approximately 2,000 feet west of the Bitterroot river. The deposit consists of alluvial gravels, sand, silt, and clay. The site contains approximately 12 inches sandy loam soil and 6 inches of overburden. The area receives approximately 12 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 reclamation success.</p>

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
<b>2. WATER QUALITY, QUANTITY AND DISTRIBUTION</b>	<p>The main channel of the Bitterroot river is located approximately 2,000 feet west of the proposed site, although seasonal backwater sloughs from the river are located as close as 800 feet from the site. Data from a nearby well indicates that groundwater is approximately 17.5 feet from the existing ground surface. The operator will mine the site in such a way as to ensure that at a minimum 3 feet of fill is maintained above the season high water table for final reclamation.</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> There should not be any cumulative impacts for this site.</p>
<b>3. AIR QUALITY</b>	<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>
<b>4. VEGETATION COVER, QUANTITY AND QUALITY</b>	<p>The site's vegetation currently consists of mainly weeds with very little grass. The main weedy species to be found onsite are spotted knapweed, kochia, and cheatgrass. The vegetation would be removed as soil is stripped and the site would be replanted with a plant species compatible with the proposed post-mining land use.</p> <p><i>Impacts:</i> No long term detrimental impacts to the vegetation would occur.</p>
<b>5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:</b>	<p>Although the area is used primarily for pasture, it also supports populations of deer, rodents, song birds, coyotes, foxes, raptors, insects and 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>
<b>6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:</b>	<p>The Montana Natural Heritage Program (MNHP) lists the following nine species of concern in the vicinity of the site:</p> <p><b>Bald eagle</b> (<i>Haliaeetus leucocephalus</i>) is a sea eagle that has two known subspecies and forms a species pair with the white-tailed eagle. Its range includes most of Canada and Alaska, all of the contiguous United States and northern Mexico. It is found near large bodies of open water with an abundant food supply and old-growth trees for nesting.</p> <p><b>Bobolink</b> (<i>Dolichonyx oryzivorus</i>) is a small new world blackbird and the only member of the genus <i>Dolichonyx</i>. These birds migrate to Argentina, Bolivia and Paraguay. Bobolinks forage near the ground, and mainly eat seeds and insects. They prefer tall prairie grass, but can also be found in hay fields.</p>

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	<p><b>Westslope Cutthroat Trout</b> (<i>Oncorhynchus clarkii lewisi</i>) is one of two subspecies of native cutthroat found in the state. It has been designated as Montana's state fish. Westslope cutthroat trout require cold water and seek out gravel substrates in riffles and pool crests for spawning habitat.</p> <p><b>Fringed Myotis</b> (<i>Myotis thysanodes</i>) is a bat with well-developed fringe of hairs on the posterior margin of the uropatagium. The bats habitat consists of desert shrublands, sagebrush-grassland, and woodland habitats. The bats primary food source is moths, but it also eats other smaller insects.</p> <p><b>Gray wolf</b> (<i>Canus lupus</i>) is the largest of the wild dogs. In Montana, its range is predominately the western mountainous portion of the state. This species is not migratory but may move seasonally following migrating ungulates within its territory. The gray wolf exhibits no particular habitat preference except for the presence of native ungulates within its territory on a year round basis.</p> <p><b>Townsend's big-eared bat</b> (<i>Corynorhinus townsendii</i>) is bat with very large ears joined at the base, prominent lumps on the nose, absence of large white spots in the pelage and a dorsal pelage that is darker at the tips than the base. The bat lives year-round in Montana. Habitat consists of caves, abandoned mines, abandoned buildings, etc. and it feeds on various nocturnal flying insects found near the foliage of trees and shrubs.</p> <p><b>Western Skink</b> (<i>Eumeces skiltonianus</i>) is a small lizard with a shiny appearance. The body is covered in smooth, shiny, rounded scales. The lizard is an invertivore. The lizard prefers southwest aspects and sites with gentle rolling to steep terrain with rocky areas containing ponderosa pine and Douglas-fir.</p> <p><b>Northern Alligator Lizard</b> (<i>Elgaria coerulea</i>) has an elongated body with short legs. The lizard is found in western Montana and prefers the grassy, grown-over areas at the margins of woodlands, clearcuts, sagebrush habitats, rocky habitats and streams. Very little is known about this lizard in Montana.</p> <p><b>Toothcup</b> (<i>Rotala ramosior</i>) is a rare plant in Montana. It is a small, glabrous annual with simple or branched, erect to prostrate stems that are up to 10 cm high. The tiny, solitary flowers are sessile in the axils of upper leaves. Flowering occurs in late July-August. Its habitat consists of open, wet, gravelly soil around ponds and sloughs in the valley zone.</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>
<b>7. HISTORICAL AND ARCHAEOLOGICAL SITES</b>	<p>The Montana State Historic Preservation Office (SHPO) was notified of the application. It reported that there has been one previously recorded site within the designated search locale for 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 soil test pits. Due to the low likelihood that cultural properties would be impacted, SHPO did not recommend a cultural resource inventory be conducted.</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>

<b>IMPACTS ON THE PHYSICAL ENVIRONMENT</b>	
<b>RESOURCE</b>	<b>POTENTIAL IMPACTS AND MITIGATION MEASURES</b>
<b>8. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY</b>	<i>Impacts:</i> Negligible impacts to land, water, air, or energy would occur.

<b>IMPACTS ON THE HUMAN POPULATION</b>	
<b>RESOURCE</b>	<b>POTENTIAL IMPACTS AND MITIGATION MEASURES</b>
<b>9. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS</b>	The site is not zoned.
<b>10. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING</b>	As seen on the aerial photo of the surrounding area, there are several residences and commercial businesses near the site. <i>Impact:</i> This commercial pit is being sited in this area because of the location of the resource, and to service an MDT project near this site.
<b>11. AESTHETICS</b>	The site is located in a commercial/residential 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.
<b>12. QUANTITY/ DISTRIBUTION OF EMPLOYMENT</b>	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> New employment opportunities would be limited.
<b>13. INDUSTRIAL, COMMERCIAL, AGRICULTURAL ACTIVITIES AND PRODUCTION</b>	The acreage listed in the proposal would be taken out of pastureland/lumber storage use and put into industrial/commercial use. Upon completion of mining, the land would be reclaimed to pastureland. <i>Impacts:</i> Pastureland 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 pastureland activities would cease.
<b>14. LOCAL, STATE TAX BASE AND TAX REVENUES, PERSONAL AND COMMUNITY INCOME</b>	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.
<b>15. DEMAND FOR GOVERNMENT SERVICES</b>	Limited oversight by DEQ Opencut Program personnel would be conducted in concert with other area activity when in the vicinity.
<b>16. HUMAN HEALTH AND SAFETY</b>	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.
<b>17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES</b>	This activity would not inhibit the use of the identified resources.
<b>18. NATIVE CULTURAL CONCERNS</b>	<i>Impacts:</i> None identified.



## 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?

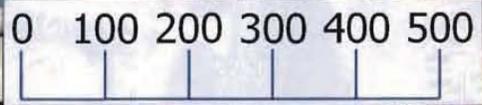
Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b.

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.



Main Permit Area  
Mine Area

LS Jensen Construction & Ready Mix  
Pioneer Log Homes Pit  
S 19 T07N R20W  
Revised 1-10-2011  
Scale 1" = 200'



Imagery Date: Oct 14, 2006

lat 46.344934 lon -114.148314 elev 3449 ft

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