

**ENVIRONMENTAL ASSESSMENT**

On an Application for an

**OPENCUT MINING PERMIT AMENDMENT**

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:** Missoula County Department of Public Works

**COUNTY:** Missoula

**DATE:** October 2010

**SITE NAME:** Seeley Lake #2

**APPROVED PERMIT #:** 758

**LOCATION:** Section 24, T16 N, R15 W

**PROPOSAL:** Missoula County has proposed an amendment to mine, crush, and screen approximately 6,000 cubic yards of material for a new permit total of 11,000 cubic yards. They propose to add 3.78 acres to their existing 4.62 acre permit for a new permit total of 8.4 acres. The site is an existing permitted gravel pit that has been mined for over 50 years. The 3.78 acre amendment area is an addition that encompasses the existing disturbed areas on the north, south, east and west sides. Mining has occurred outside of the permitted areas and the amendment would include all disturbed areas. The operation would continue to mine toward the northeast.

The site is located 4 miles south of Seeley Lake on the east side of MT Hwy 83. Missoula County would be liable to reclaim the site to the postmining land use of “multi-use woodland” by February 2014. 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.

<b>IMPACTS ON THE PHYSICAL ENVIRONMENT</b>	
<b>RESOURCE</b>	<b>POTENTIAL IMPACTS AND MITIGATION MEASURES</b>
<b>1. TOPOGRAPHY, GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:</b>	The site is located on a steep mountain hillside transitioning to flat valley floor near the Clear Water River at the base of the Swan Range. Soils in undisturbed areas are approximately 6” deep; however, no soil has been salvaged onsite. Mining has been occurring outside the permitted boundary and the currently disturbed area is approximately 8 acres. The proposed amendment would incorporate all disturbed areas into the permitted area. This area receives approximately 21” of precipitation per year. <i>Impacts:</i> An irreversible and irretrievable removal of gravel from the site has occurred. Due to the fact this site is being mined on a steep slope and no soil

IMPACTS ON THE PHYSICAL ENVIRONMENT	
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	has been salvaged, reclamation success will be dependent on the importation of soils, proper erosion control techniques, and the use of plant species adapted to this environment.
<b>2. WATER QUALITY, QUANTITY AND DISTRIBUTION</b>	<p>The Clear Water river is located approximately 500 feet to the west of the proposed permit boundary. Missoula County has one well located within the existing permit boundary. Mining has occurred and will continue to occur into the hillside, and will not be mined below the existing ground elevation of MT Hwy 83. The estimated water table ranges from 15 feet to 25 feet below the ground surface.</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> Cumulative impacts by the proposed action on resources would be negligible.</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>There is extensive spotted knapweed in the disturbed areas. The surrounding area consists of woodland tree species and various grass species.</p> <p><i>Impacts:</i> As the existing soils and vegetation within the permit area have already been heavily impacted, the operator will need to take appropriate measures to ensure reclamation success.</p>
<b>5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:</b>	<p>Although the area is used primarily for mining, it may also support 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 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 11 species of concern in the vicinity of the site:</p> <p><b>Common loon</b> (<i>Gavia immer</i>) is a large and mainly aquatic bird. The feet are located far back on the body and are large, webbed, and sweep to the side rather than forward under the belly. This trait makes it difficult for Common Loons to walk on land but allows more efficient swimming underwater. The sexes are indistinguishable based on plumage. Adults are primarily black with a broad patch of vertical white stripes on the side of the neck. The eye is red. In</p>

**IMPACTS ON THE PHYSICAL ENVIRONMENT**

<b>RESOURCE</b>	<b>POTENTIAL IMPACTS AND MITIGATION MEASURES</b>
	<p>Montana, spring migration begins in early to mid-March. Fall migration starts in late August and may continue through October in Montana. Common Loons will not generally nest on lakes less than about 13 acres in size or over 5000 feet in elevation. Successful nesting requires both nesting sites and nursery areas. Generally, Common Loons dive from the surface and feed mainly on fishes but are opportunistic and will eat any suitable prey they can readily see and capture including amphibians and various invertebrates.</p> <p><b>Bald eagle</b> (<i>Haliaeetus leucocephalus</i>) is a bird of prey found in North America that is most recognizable as the national bird and symbol of the United States of America. This sea eagle has two known sub-species 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>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>Gray wolf</b> (<i>Canis 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>Fisher</b> (<i>Martes pennanti</i>) is a medium-sized mammal with a long, low stocky body and relatively long and heavily furred tail. The fisher occupies dense coniferous or mixed forests and tends to reside in tree hollows, under logs, in ground or rocky crevices or in the branches of conifers. The fisher’s diet consists of small mammals, birds and fruit.</p> <p><b>Wolverine</b> (<i>Gulo gulo</i>) is a bear-like mustelid with massive limbs and long, dense, dark brown pelage, paler on the head, with two broad yellowish stripes extending from the shoulders and joining on the rump. Wolverines are limited to alpine tundra, and boreal and mountain forests in the western mountains. They feed on a variety of roots, berries, small mammals, birds’ eggs and young, fledglings, and fish. They may attack moose, caribou, and deer hampered by deep snow.</p> <p><b>Canada Lynx</b> (<i>Lynx Canadensis</i>) is a medium sized cat with silver-gray to grayish-brown upperparts and a white belly and throat. Lynx have long legs and a relatively short, compact body. Lynx inhabit subalpine forests and avoid large openings, but often hunt along edges in areas of dense cover. The Lynx’s primary food consists of the snowshoe hare, although they also diet on squirrels and other small mammals.</p> <p><b>Freshwater Sponge</b> (<i>Ephydatia cooperensis</i>) is a light tan color and grows as a hard, disc-shaped encrustation on the undersides of rocks and logs. Rangewide, Ephydatia cooperensis is currently known from 3 lakes in the northern Rocky Mountains of Montana. Sponges feed by a coordinated filter feeding mechanism of waving cilia together to cause a current where they derive and ingest particles or organisms such as algae, diatoms or microorganisms.</p> <p><b>Howell’s Gumweed</b> (<i>Grindelia howellii</i>) is a short-lived perennial in the sunflower family with stems up to 90 cm in length that are woody at the base and clustered on a taproot. Habitats include Vernally moist, lightly disturbed</p>

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	<p>soil adjacent to ponds and marshes, as well as similar human-created habitats, such as roadsides and grazed pastures.</p> <p><b>Beck Water-marigold</b> (<i>Bidens beckii</i>) is an aquatic perennial herb with lower stems that are submerged and upper portions usually emergent. Flowering occurs in late August-September. Habitat includes still or slow-moving water of lakes, rivers, and sloughs in the valleys, 0.1-3 m deep.</p> <p><b>Pygmy Water-lily</b> (<i>Nymphaea leibergii</i>) is an herbaceous perennial with submergent stems and floating leaves arising from a thick rhizome. The leaves have a long, slender petiole attached to the base of a long, v-shaped notch in the elliptic blades that are 7-10 cm long. The bowl-shaped flowers have long, slender stalks and float on the surface of the water. Flowering occurs in late July-August. The preferred habitat includes quiet, fresh water lakes and backwater sloughs in the valleys.</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 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. SHPO feels there is a low likelihood cultural properties will be impacted and therefore do not recommend a cultural resource inventory 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>
<b>8. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY</b>	<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
<b>9. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS</b>	<p>This site is not zoned.</p>
<b>10. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING</b>	<p>As seen on the aerial photo of the surrounding area, there is minimal population density near the site.</p> <p><i>Impact:</i> This project was sited in this area because of the location of the resource, and to service the roads and small projects in this area of the county.</p>
<b>11. AESTHETICS</b>	<p>Mining operations at this site are intermittent and will predominantly occur between the hours of 6 am and 4 pm, Monday through Friday. The surrounding woodland and topography of the land act as a natural visual and noise buffer. The site is located in a timbered area. There is a temporary alteration of aesthetics while mining is under way. However, reclamation should return the</p>

IMPACTS ON THE HUMAN POPULATION	
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	area to a visually acceptable landscape. This site has been in operation for over 50 years; however, mining is expected to be completed in 3 years.
<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 amendment application has been taken out of timber use. Upon completion of mining, the land would be reclaimed to multi-use woodlands. <i>Impacts:</i> The entire site is currently opened up for mining and mine-related activities.
<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.

**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.

**21. Other Governmental Agencies which May Have Overlapping or Sole Jurisdiction include, but may not be limited to:** Missoula County Commission or County Planning Department (zoning), Missoula 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).

**22. 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.



## 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.

Missoula County Department of Public Works  
Seeley Lake #2 Site  
SW 1/4 Section 24,  
T. 16 N., R. 15 W., P.M.,M.  
Missoula County  
October 8, 2010  
Existing Permit Area = 4.62 Acres  
Amended Permit Area = 8.4 Acres



Aerial Photo  
2009 NAIP Imagery

Clearwater River

HIGHWAY 43



- Legend**
- o Permit Corner Marker
  - ★ Well
  - Access Roads
  - Existing Facility Buildings
  - Existing Permit Boundary
  - Amended Permit Boundary

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