

## ENVIRONMENTAL ASSESSMENT

On an Application for an

### OPENCUT MINING 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:** Columbia Falls Industrial Park

**COUNTY:** Flathead

**SITE NAME:** CFIP Pit #1

**DATE:** March 2016

**LOCATION:** Sections 4 & 9, T30 N, R20 W

**PROPOSAL:** The applicant proposes a short-term amendment to the current permit gravel pit to reclaim the 15-acre site located on the north side of Columbia Falls, Montana. The amendment would bring the permit into compliance with current state laws and rules, extend the reclamation deadline, change the post mining land uses, and allow for reclamation only of the site.

A reclamation bond would be held by DEQ to ensure that final reclamation of the site to an industrial/commercial use. Areas of the property would be reclaimed to rangeland/pasture and would eventually be landscaped as part of an industrial park. Areas would be reclaimed to gravel and/or paved surfaces, a building site, roadways, and a stormwater retention pond. Reclamation would be completed by December 2019. 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>	<p>The site is a relatively flat, highly disturbed, industrial location. The alluvial terrace or outwash fan slopes steeply to the north to Cedar Creek and more gradually toward the Flathead River to the south. The Whitefish Range is directly to the north and east, the Swan Range to the southeast, and the Flathead Valley stretches due south.</p> <p>The onsite soils of this highly disturbed site historically consisted most likely of gravelly loam and/or fine sandy loam. The operator would replace 8 inches of soil and 0 inches of overburden.</p> <p>The site receives approximately 12 to 17 inches of precipitation per year.</p>

<b>IMPACTS ON THE PHYSICAL ENVIRONMENT</b>	
<b>RESOURCE</b>	<b>POTENTIAL IMPACTS AND MITIGATION MEASURES</b>
	<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>
<b>2. WATER QUALITY, QUANTITY AND DISTRIBUTION</b>	<p>Cedar Creek and a large pond are located at a lower elevation, approximately 850 feet to the north. The Flathead River is located 1,020 feet to the southeast of the site. Water would be obtained from a well more than 300 feet from the permit boundary to be used for on-site 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> <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 are no known rare or sensitive plants or cover types present in the site area. Onsite vegetation consists of sage brush, smooth brome, mullein, orchard grass and various grasses; and provides approximately 70% cover in undisturbed areas. The vegetation would be removed as soil is stripped and the site would be replanted with plant species compatible with the proposed reclaimed 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 an Opencut operation and lumber yard it also supports populations of deer, rodents, song birds, coyotes, 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>
<b>6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:</b>	<p>The Montana Natural Heritage Program (MNHP) lists the following 8 animal and 10 plant species of concern in the vicinity of the site:</p> <p><b>Aloina moss</b> (<i>Aloina brevirostris</i>) Found on calcareous soil and on overturned tree bases. May also be a pioneer species on roadcuts and riverbanks.</p>

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
	<p><b>Amblyodon moss</b> (<i>Amblyodon dealbatus</i>) Found in fens, wetlands, often calcareous.</p> <p><b>Callicladium moss</b> (<i>Callicladium haldanianum</i>) Found on rotten wood and soil.</p> <p><b>Black Golf Club Moss</b> (<i>Catoscopium nigratum</i>) is found in rich, calcareous fens. Upright, reddish-black stems up to 6 cm, forked with many rhizoids.</p> <p><b>Latah Tule Pea</b> (<i>Lathyrus bijugatus</i>) an herbaceous perennial with erect stems from slender rhizomes. Foliage is glabrous to sparsely short-hairy. Flowers pea-like in groups of 2-3. Found in open ponderosa pine and western larch forests in the valley and lower montane zones.</p> <p><b>Yellow-staining Collomia</b> (<i>Collomia tinctoria</i>) is an annual with branched stems reaching up to 15 cm high. Foliage is glandular and hairy and the plant has 2-5 short-stalked flowers clustered in the leaf axils or where the branches diverge. The plant flowers June through August.</p> <p><b>Northern Buttercup</b> (<i>Ranunculus pedatifidus</i>) an herbaceous perennial with fibrous roots and 1 to several erect stems. The few stem leaves have 5-7 linear lobes and become sessile upward. Foliage is sparsely to densely covered with long hair. The 1 to several long-stalked flowers have 5 spreading, hairy sepals that are 5-6 mm long, and the 5 yellow petals are 8-10 mm long. Found in moist meadows and open woodlands in the montane to alpine zones.</p> <p><b>Deer Indian Paintbrush</b> (<i>Castilleja cervina</i>) a perennial, hemiparasitic herb with clustered, erect, branched stems that are 3-6 dm high and which arise from a branched rootcrown. The lower leaves are linear and entire-margined, while the upper leaves have a pair of spreading lobes. Foliage is glabrous or has minute, curled hairs. Flowers are borne in a spike at the top of the stems. Each flower is subtended by a 3-5-lobed leaf-like bract, which is broader than the leaves with yellowish tips. Found in Southern BC, adjacent northern ID and WA and northwest MT. Regional endemic.</p> <p><b>Small Yellow Lady's-slipper</b> (<i>Cypripedium parviflorum</i>) is a perennial with leafy stems 15-40 cm tall, which arise from short rhizomes. One petal is strongly pouch-shaped and often purple-dotted; the other 2 petals are united into one that is similar to the sepals but slightly longer. The fruit is an elliptic capsule bearing thousands of tiny seeds. Its range extends from Alaska to Nova Scotia, south to Nebraska and Georgia. Habitat includes Fens, damp mossy woods, seepage areas, and moist forest-meadow ecotones in the valley to lower montane zones.</p> <p><b>Maidenhair Spleenwort</b> (<i>Asplenium trichomanes</i>) a perennial with short rhizomes and glabrous, evergreen fronds clustered from the base of the plant. Each frond is 7-35 cm long, and is pinnately divided into numerous pinnae that are arranged alternately on the shiny, reddish-brown central axis (rachis) of the frond. Spores are borne in 1-4 clusters arranged along the veins on the undersides of the pinnae; the spores are partially enfolded by a thin, white tissue, the indusium. Found in moist rock crevices and talus slopes in the montane zone.</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</p>

**IMPACTS ON THE PHYSICAL ENVIRONMENT**

<b>RESOURCE</b>	<b>POTENTIAL IMPACTS AND MITIGATION MEASURES</b>
	<p>patch of vertical white stripes on the side of the neck. The eye is red. In 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>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>Pygmy Whitefish</b> (<i>Prosopium coulteri</i>) are a native salmonid in northwestern Montana. They seldom exceed 15.2 to 20.3 cm (6 to 8 in.) in length. Their overall appearance is silvery or white, except for an olive-brown back. In late November and December large numbers move from the deep water of Flathead Lake and congregate at the mouths of the Swan and Flathead rivers before they enter the river systems to spawn. Their habitat includes deep cold-water lakes and their associated tributaries. Diet of Pygmy Whitefish includes aquatic invertebrates and fish eggs. They are preyed upon by trout and other game fish. The species is short-lived; in Montana few male Pygmy Whitefish live beyond their third growing year whereas some females reach their fifth growing year.</p> <p><b>Bull trout</b> (<i>Salvelinus confluentus</i>) is a threatened species of fish that can be found in the Clark Fork and Flathead drainages of western Montana. Sub-adult and adult fluvial bull trout reside in larger streams and rivers and spawn in smaller tributary streams, whereas adfluvial bull trout reside in lakes and spawn in tributaries. Bull trout can grow to lengths of 37 inches and weights of 20+ pounds.</p> <p><b>Little Brown Myotis</b> (<i>Myotis lucifugus</i>), also known as Little Brown Bat, has a cinnamon-buff to dark brown color above, and buffy to pale gray below. This species is resident year-round in Montana, but may be partially migratory because known winter aggregations are much smaller than the apparent size of summer populations. They are found in a variety of habitats across a large elevation gradient. They commonly forage over water and mostly feed on insects. They roost in attics, barns, bridges, snags, loose bark, and bat houses. These bats can live more than 30 years. Females have one young per year.</p> <p><b>Townsend’s Big-eared Bat</b> (<i>Corynorhinus townsendii</i>) is a 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>Grizzly Bear</b> (<i>Ursus arctos</i>) has a massive head with a prominent nose, rounded inconspicuous ears, small eyes, short tail a large, powerful body, and a noticeable hump above the shoulders. No true migration occurs, although Grizzly Bears often exhibit discrete elevational movements from spring to fall, following seasonal food availability. In Montana, Grizzly Bears primarily use meadows, seeps, riparian zones, mixed shrub fields, closed timber, open timber,</p>

<b>IMPACTS ON THE PHYSICAL ENVIRONMENT</b>	
<b>RESOURCE</b>	<b>POTENTIAL IMPACTS AND MITIGATION MEASURES</b>
	<p>sidehill parks, snow chutes, and alpine slabrock habitats. Grizzly Bears are opportunistic and adaptable omnivores.</p> <p><b>Bat Roost</b> Confirmed areas of occupancy based on the documented presence of adults or juveniles of any bat species at natural roost sites (e.g. caves, rock outcrops, trees), below ground human created roost sites (e.g. mines), and above ground human created roost sites on public lands (e.g. bridges, buildings).</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 within the designated search locale. 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 cultural resource inventory is warranted at this site 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>There are no unusual demands on land, water, air or energy anticipated as a result of this project.</p> <p><i>Impacts:</i> Negligible impacts to land, water, air, or energy would occur.</p>

<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>	<p>City of Columbia Falls zoning clearance has been obtained.</p> <p>The site is zoned as CI-1 (Light Industrial) and CI-2 (Heavy Industrial). The proposed operations comply with local zoning regulations and a local license or permit is not required.</p>
<b>10. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING</b>	<p>As seen on the aerial photo of the surrounding area, there are several residences located to the north of the site, as well as neighborhoods to the east and south across Railroad Street and the North Fork Road.</p> <p><i>Impact:</i> This commercial pit has been located in this area because of the location of the resource, and will be reclaimed to an industrial park.</p>
<b>11. AESTHETICS</b>	<p>The site is located in a common rangeland and industrial 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 four years to complete.</p> <p>Hours of operation would be from 7 a.m. to 7 p.m., Monday through Friday.</p>
<b>12. QUANTITY/ DISTRIBUTION OF EMPLOYMENT</b>	<p>Existing employees would mainly be utilized for this operation. There is low potential that this project would create a significant number of new jobs.</p> <p><i>Impacts:</i> New employment opportunities would be limited.</p>

IMPACTS ON THE HUMAN POPULATION	
RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
<b>13. INDUSTRIAL, COMMERCIAL, AGRICULTURAL ACTIVITIES AND PRODUCTION</b>	The acreage listed in the proposal would be taken out of the current industrial and opencut operation use. Upon completion of mining, the land would be reclaimed to an industrial/commercial use. <i>Impacts:</i> Industrial and opencut operation production would be reduced as soil reclamation progress across the site. Industrial and opencut operations would cease but a productive commercial/industrial use will be restored as the site is reclaimed.
<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 would increase the opportunities for accidental injury. There are agencies that require the Operator to implement specific safety measures. 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:** City of Columbia Falls (zoning), Flathead 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.

**23. Magnitude and Significance of Potential Impacts:** This proposal is not likely to create impacts of significance due to mitigation, restrictions, and oversight mandated by the Opencut Mining Act and pursuant rules and the Montana Clean Air Act.



C:\A-G\Columbia Falls Industrial Park\11+-560+490 - CFIP Opencut Permit 1118120-GISMXD\SiteMap.mxd



**Site Map**  
**Columbia Falls Industrial Park**  
**CFIP Pit #1**  
**Flathead County**  
**T30N, R20W, S4&9**  
**February 2016**

RECEIVED BY OPENCUT 02/08/2016

D:\A-GIS\Columbia Falls Industrial Park\114-560-490 - CFIP Opencut Permit 11181120-GIS\MXD\AreaMap.mxd



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroX, Geomapping, AeroGrid, IGN, ISP, Swisstopo, and the GIS User Community



**Area Map**  
**Columbia Falls Industrial Park**  
**CFIP Pit #1**  
**Flathead County**  
**T30N, R20W, S4&9**  
**February 2016**

RECEIVED BY OPENCUT 02/08/2016