

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: MK Weeden Construction, Inc.

COUNTY: Wheatland

SITE NAME: Taber

DATE: October 2015

LOCATION: Section 31, T7 N, R18 E

PROPOSAL: The applicant proposes to permit a new, short-term gravel pit to mine, screen, crush, mill, stockpile, and transport 15,000 cubic yards of gravel from a 25-acre site located 1.5 miles south and east of Shawmut, Montana.

A reclamation bond would be held by DEQ to ensure that final reclamation of the site to rangeland/pasture would be completed by November 2020.

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 site occupies a terrace above the Musselshell River. The site is flat to slightly rolling on the terrace margins.</p> <p>The onsite soils consist of Verson loam, 0 to 4 percent slopes, and Sixbeacon-Orinco complex, 8 to 35 percent slopes. The operator would replace 12 inches of soil and 0 inches of overburden.</p> <p>The site receives approximately 10-14 inches of precipitation per 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
2. WATER QUALITY, QUANTITY AND DISTRIBUTION	<p>The site is located within 1,000 feet of the Musselshell River to the north and a reservoir to the southeast. An irrigation canal parallels the northern boundary below the terrace front. Water would be used onsite for dust control, and would be obtained as-needed from the reservoir.</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> The proposed activities would likely have a minimal cumulative 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>There are no known rare or sensitive plants or cover types present in the site area. Onsite vegetation consists of heavily grazed grasses largely made up of crested wheatgrass, sagebrush, and some foxtail barley in depressions; and provides approximately 70-80% cover. 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>
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 would temporarily displace some species, but the site would likely 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 the following species of concern in the vicinity of the site: Spiny Softshell Turtle (<i>Apalone spinifera</i>) is primarily a riverine species, occupying large rivers and river impoundments, but it also occurs in lakes, ponds along rivers, pools along intermittent streams, bayous, irrigation canals, and oxbows. It usually is found in areas with open sandy or mud banks, a soft bottom, and submerged brush and other debris. Adult females can reach 52 centimeters in carapace length, but much less in adult males (which average about 10 centimeters shorter). The shell of the spiny softshell is flattened (pancake-like), with flexible edges and covered with leathery skin; the snout is tubular; the tail is thick and long.</p>

IMPACTS ON THE PHYSICAL ENVIRONMENT

RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
	<p>Black-tailed Prairie Dog (<i>Cynomys ludovicianus</i>) is the largest of the prairie dog species. In Montana, its range includes the eastern and central portions of the state, plus some intermountain valleys. This species is not known to migrate. Prairie dog colonies are found on flat, open grasslands and shrub/grasslands with low, relatively sparse vegetation.</p> <p>Northern Redbelly Dace (<i>Phoxinus eos</i>) is a Montana small minnow. Its maximum size is about 3 inches. The Northern Redbelly Dace is olive to dark brown above; the lower side and belly are yellow or silvery except on adult males during summer when the lower side is red. Northern Redbelly Dace are found in clear, cool, slow-flowing creeks, ponds and lakes with aquatic vegetation, including filamentous algae, and sandy or gravelly bottoms interspersed with silt. As with many small native stream fishes, Northern Redbelly Dace could be adversely affected by stream channelization, reductions to discharge, changes in water quality and temperature, and introductions of non-native predatory fishes.</p> <p>Evening Grosbeak (<i>Coccothraustes vespertinus</i>) is a large, robust finch with a massive, conical greenish-yellow bill. Although gregarious in winter, this species is secretive during the breeding season and little is known about its breeding biology. The Evening Grosbeak breeds in mixed coniferous and spruce-fir forests of western Montana. In fall and winter, this species is irruptive and is much more widespread, occurring throughout the state. This species feeds upon invertebrates, larvae, and a wide variety of seeds and fruits.</p> <p>Bobolink (<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 and other open areas with dense grass, but can also be found in hay fields.</p> <p>Brewer's sparrow (<i>Spizella breweri</i>) is a songbird strongly associated with sagebrush over most of its range. In summer it is found across Montana. This species migrates to the southwestern U.S. and northern Mexico for winter. Brewer's sparrows are closely associated with sagebrush, preferring dense stands broken up with grassy areas.</p> <p>Loggerhead shrike (<i>Lanius ludovicianus</i>) is a medium-sized songbird. Its summer range includes all of Montana. It winters from very southern Oregon, southern Kansas, Tennessee, and Virginia southward to southern Mexico. Nests are found in sagebrush, bitterbush, and greasewood, and are equally successful in all three.</p> <p>Sage Thrasher (<i>Oreoscoptes montanus</i>) is a medium-sized, long-tailed songbird. Its summer range includes all but north central and northwest Montana. This bird winters in the southwestern states and northern Mexico. It is considered a sagebrush obligate in Montana. Its abundance is generally positively correlated with the amount of sage cover and negatively correlated with grass cover.</p> <p>Veery (<i>Catharus fuscescens</i>) is an 18-cm long bird with reddish brown dorsum, white belly, gray flanks, and a straight slim bill. They are a summer resident in Montana and inhabit damp, deciduous forests and riparian habitat. The Veery is primarily a ground forager, with a diet including insects and fruit.</p>

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	<p>Pinyon Jay (<i>Gymnorhinus cyanocephalus</i>) is a small blue crestless bird about 26-29 cm in total length. They are permanent residents in the state of Montana. Their habitat includes low-elevation ponderosa pine and limber pine-juniper woodlands. They are generally omnivorous, with pine seeds forming an important component of the diet. Juniper berries, wild fruits, agricultural grains, and animal matter are also eaten. Loss of ponderosa pine woodlands is probably the greatest threat to Pinyon Jays in Montana.</p> <p>Long-billed curlew (<i>Numenius americanus</i>) is a large North American shorebird. Adults have a very long bill (4.4–8.6 in) curved downwards, a long neck and small head. It is the largest nesting sandpiper in North America. Migration northward from wintering grounds is in March-April. Its summer breeding range includes all of Montana. Nests on the ground in dry prairies and moist meadows, usually in flat area with short grass. Fairly opportunistic feeding on various insects (grasshoppers, beetles, caterpillars, etc.) and some berries. During migration also feeds on crayfishes, crabs, snails, and toads.</p> <p>Greater Sage-Grouse (<i>Centrocercus urophasianus</i>) is the largest of Montana's grouse. Both sexes have relatively long, pointed tails, feathered legs, and mottled gray-brown, buff, and black plumage. In Montana, it ranges primarily in the southwestern and eastern portions of the state. This species does not migrate. Sagebrush is its preferred habitat.</p> <p>Golden Eagle (<i>Aquila chrysaetos</i>) is very large raptor with mostly brown plumage, a golden wash on the back of the head and neck, and a mostly horn-colored bill. Golden Eagles breed throughout western North America from the Arctic to central Mexico. Permanent resident, but migratory movements documented. Some Golden Eagles remain year-round, but vertical migration seen in spring and fall. Golden Eagles nest on cliffs and in large trees (occasionally on power poles), and hunt over prairie and open woodlands.</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 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. SHPO recommends that a cultural resource inventory be conducted at this site in order to determine whether or not sites exist and if they would be impacted.</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>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>

IMPACTS ON THE HUMAN POPULATION	
RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
9. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS	Wheatland County zoning clearance has been obtained. The site is not zoned.
10. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING	As seen on the aerial photo of the surrounding area, there are no nearby residences. <i>Impact:</i> This commercial pit is being sited in this area because of the location of the resource, and to service local projects.
11. AESTHETICS	The site is located in a common pastureland 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 5 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> New employment opportunities would be limited.
13. INDUSTRIAL, COMMERCIAL, AGRICULTURAL ACTIVITIES AND PRODUCTION	The acreage listed in the proposal would be taken out of pastureland use. Upon completion of mining, the land would be reclaimed to rangeland/pasture. <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, but would be restored as the site is reclaimed.
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 Opencut Program personnel would be conducted in concert with other area activity when in the vicinity.
16. HUMAN HEALTH AND SAFETY	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.
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 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.

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.

