

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: Helena Sand and Gravel, Inc.

COUNTY: Broadwater

SITE NAME: Marks

DATE: February 2012

LOCATION: Section 2, T7 N, R2 E

PROPOSAL: The applicant proposes to permit a new, short-term gravel pit to mine, crush, screen, stockpile and transport approximately 40,000 cubic yards of gravel from a 8.0-acre site located 8 miles northeast of Townsend. The operator would also have an asphalt plant that would be used intermittently throughout the year. A power line transects the northern proposed permit boundary. Helena Sand and Gravel would maintain a 30 foot buffer on each side of the power line. The site had been previously mined and soil was not salvaged appropriately. Approximately one inch of soil remains to be salvaged and used for reclamation. Spotted knapweed is now prevalent throughout the site. As a result, Broadwater County Weed District is requiring the operator to strip and replace the top one inch of soil and 6 inches of overburden so that weeds are not transported off site.

A reclamation bond would be held by DEQ to ensure that final reclamation of the site to a hay storage area and a landowner material stockpile area would be completed by December 2014. The hay storage area would not require any soil to be replaced. All soil would be placed on the graded side slopes. 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:	The site is located on a stream terrace with 0 to 2% slopes approximately 2 miles east of Canyon Ferry Reservoir. The site has been previously disturbed by mining activities and is currently used as a hay storage area. The elevation of the site is approximately 8 to 10 feet lower than the surrounding area due to previous mining activities. A reclaimed pit area is present on the east side of the site.

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
	<p>The onsite soils consist of cobbly loam. The operator would replace 1 inch of soil on the graded slopes and 6 inches of overburden throughout the site. The site receives approximately 11 inches of precipitation per year.</p> <p><i>Impacts:</i> An irreversible and irretrievable removal of soil and gravel from the site has occurred. The site would be reclaimed to a hay storage area and therefore soil would not be replaced on the pit floor. All available soil would be replaced on the graded slopes and they would be seeded to an approved seed mix.</p>
2. WATER QUALITY, QUANTITY AND DISTRIBUTION	<p>An irrigation ditch is located just east of the proposed permit boundary. Water would be obtained from the irrigation ditch, stored onsite and used for onsite dust control and use in the asphalt plant.</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 of the proposed action on resources would be negligible.</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 pasture grasses including smooth brome, various wheat grasses, Poa spp., and green needle grass. The site is very weedy; weeds include cheatgrass, woolly mullein, and Spotted knapweed. Cover in reclaimed and less weedy areas is approximately 75%. The vegetation would be removed as soil and overburden is stripped. The graded side slopes 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 hay storage, 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 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>

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
<p>6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:</p>	<p>The Montana Natural Heritage Program (MNHP) lists the following five species of concern in the vicinity of the site:</p> <p>Great Blue Heron (<i>Ardea herodias</i>) is the largest heron in North America, 60 cm tall and 97 to 135 cm long. Its upper parts are gray, and the fore-neck is streaked with white, black, and rust-brown. Great Blue Herons breed from southern Alaska southeast across central Canada to Nova Scotia and south to Guatemala, Belize, and the Galapagos Islands. Most Montana nesting colonies are in cottonwoods along major rivers and lakes; a smaller number occur in riparian ponderosa pines and on islands in prairie wetlands. Great Blue Herons eat mostly fish but also amphibians, invertebrates, reptiles, mammals, and birds. Disturbance by humans and loss of protected colony sites are major threats.</p> <p>Long-billed curlew (<i>Numenius americanus</i>) is a large North American shorebird. Adults have a very long bill curved downwards, a long neck and small head. The bird usually feeds in flocks, with food consisting of crabs and various other small invertebrates.</p> <p>Clark's Nutcracker (<i>Nucifraga columbiana</i>) is a jay-sized corvid that is crowlike in build and flight, with moderate sexual size dimorphism. The bird is light to medium gray with varying amounts of white around the eyes, on forehead and on chin; white around vent and at base of tail; wings and tail glossy black. The bird has a long, pointed, black bill with short nasal bristles and makes a distinctive grating call audible at great distance.</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>Westslope Cutthroat Trout (<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><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>
<p>7. HISTORICAL AND ARCHAEOLOGICAL SITES</p>	<p>The Montana State Historic Preservation Office (SHPO) reported that one site has been discovered previously on this property (Historic Broadwater Missouri Canal System 24BW0499). In addition, there have been a few previously conducted cultural resource inventories done in the area. 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. As long as there will be no disturbance or alteration to the canal system, SHPO feels that there is a low likelihood cultural properties would be impacted and therefore feel that a recommendation for a cultural resource inventory is unwarranted 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>

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
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	County zoning clearance has been obtained.
10. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING	<p>As seen on the aerial photo of the surrounding area, there are a few nearby residences, only one of which is located within 1,000 feet of the proposed permit area. Hours of operation would be restricted to 7 am to 7 pm, Monday through Saturday.</p> <p><i>Impact:</i> This commercial pit is being sited in this area because of the location of the resource, and to provide resources for an MDT project.</p>
11. AESTHETICS	<p>The site is located in a hay storage 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 two years to complete.</p> <p>Due to the lower elevation of the site, nearby residents would be buffered from noise.</p>
12. QUANTITY/ DISTRIBUTION OF EMPLOYMENT	<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>
13. INDUSTRIAL, COMMERCIAL, AGRICULTURAL ACTIVITIES AND PRODUCTION	<p>The acreage listed in the proposal would be taken out of hay storage use. Upon completion of mining, the land would be reclaimed to a hay storage area, a landowner stockpile area, and graded side slopes would be seeded to a grazing/pasture mix.</p> <p><i>Impacts:</i> Hay storage 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 hay storage activities would cease.</p>
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 specific safety measures are in place. If followed there is no reason to believe that significant safety issues would be present.

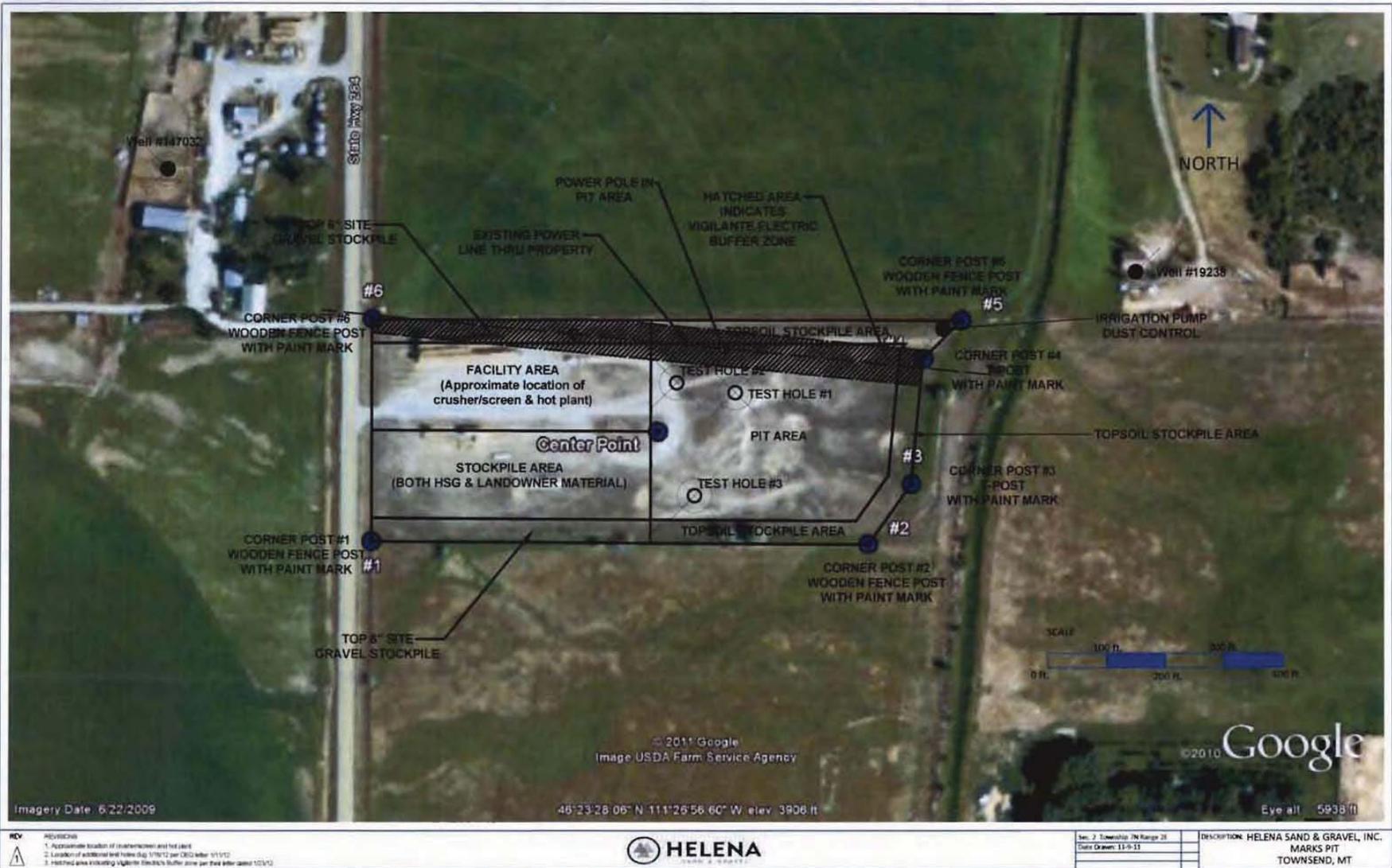
PRIVATE PROPERTY ASSESSMENT ACT (PPAA) CHECKLIST

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.



- NOTES:**
1. Approximate location of construction and test pits
 2. Location of additional test holes (up 1/16" per CEO letter 11/1/12)
 3. Hatched area including vigilante electric buffer zone per test letter dated 10/1/12



Rev. 2	Drawn by: TN Range 28	DESCRIPTION: HELENA SAND & GRAVEL, INC.
	Date Drawn: 11-9-12	MARKS PIT
		TOWNSEND, MT

RECEIVED JAN 25 2012