

ENVIRONMENTAL ASSESSMENT

On an Application for an

OPENCUT MINING PERMIT for the

Verlin Hale Site

Riverside sand and Gravel, Inc.

This Environmental Assessment (EA) is required under 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 hereunder place operational guidance and limitations on a project during its lifetime, and provides 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, the Rules adopted hereunder, and local laws and regulations.

SITE NAME: Verlin Hale APPLICANT: Riverside Sand and Gravel, Inc

LOCATION: Multiple sections, mainly Sec 21 and 28, T1S R24E COUNTY: Yellowstone

PROPOSED ACTION: Riverside Sand and Gravel proposes to open a large commercial operation several miles north of Laurel off Buffalo Trail Road. The company would mine 10,000,000 cubic yards of gravel from a table-top, 691-acre site. The map depicts the first ten years of development and the general trend to the north after that. About 120 acres around the base of the site would probably not be developed. The permit requests a crusher, asphalt plant, wash plant, concrete plant, and other equipment. The product would be used for general commercial jobs in the west Billings / Laurel area and highway construction projects.

The site is on a high, flat, dry mesa several miles north of Laurel. There are no residences within a half mile. Because of the remote but strategic site location there would be several access roads. The South Access Road off Buffalo Trail Road is the main route to Laurel and vicinity. Two access road options could be constructed out to the east to reach the west and north Billings area and the interstate. Another access road out to the north might be constructed in the future if the county develops its road system in that area.

The reclamation bond for the early stages would be \$275,235. Reclamation would be completed to rangeland by January of 2028.

A: Significant Unavoidable Impacts B: Insignificant as a result of conditioned mitigation C: Insignificant as proposed

LT: Long Term Impact ST: Short Term Impact

	POTENTIAL IMPACTS					EXPLANATION
	A	B	C	LT	ST	
PHYSICAL ENVIRONMENT						
1. <u>TOPOGRAPHY</u>			X	X		The site lies on top of a triangular-shaped terrace 150 feet above the valley floor. The highest elevation is 3,745 feet above mean sea level. The side slopes are quite steep. Mining would remove up to 17 feet of gravel from the

				POTENTIAL IMPACTS		
	A	B	C	LT	ST	EXPLANATION
						entire terrace top.
2. <u>GEOLOGY</u> ; Stability			X	X		The gravels, up to 20 feet deep, were deposited recently, possibly a million years ago. The terrace top is a remnant of these gravel deposits that used to cover the Yellowstone Valley. Sandstones and mudstones are below the gravels. No stability issues are expected since mining would be on the flat top of the terrace
3. <u>SOILS</u> ; Quality, Distribution			X		X	<p>The site has Toluca Series soils which are generally deep and well drained. Soil is a clay loam. The surface has about 12 inches of topsoil with up to 6 feet of overburden, although gravel is generally encountered at 3 feet. Soil salvage should be easily accomplished.</p> <p>Average annual precipitation is about 12 inches. As a result, a grassland community can be reestablished.</p>
4. <u>WATER</u> ; Quality; Quantity; Distribution			X		X	<p>The landowner drilled a dry hole 140 feet deep near the south access road. Only three wells are listed in the GWIC system within a mile of the site: the dry hole on top of the terrace, and two wells on the valley floor. The static water level is 6 and 18 feet in those two wells. Because mining would not be more than about 20 feet from the top of the terrace, the water table would not be contacted and no impact to groundwater would occur.</p> <p>Two ditches are in the valley bottom. Cove Irrigation Ditch circles the terrace to the east and north about a half mile away. The High Ditch is about a mile to the east.</p> <p>Riverside has an agreement to purchase water from the High Ditch Company for the majority of their uses. The company will provide water only when there is sufficient supply to provide adequate water to all shareholders on the High Ditch. Riverside would pump the water up from the east. When the High Ditch cannot supply water or does not flow, Riverside would haul water to the site in water trucks.</p> <p>The greatest use of water would be for the wash plant which would only operate seasonally when the High Ditch could supply water. The Plan includes guidelines for wash plant operations. Because the site is so high and dry, infiltration from any of the operations would not impact groundwater.</p> <p>Trucked water would be used for dust suppression or general uses during the other seasons.</p> <p>There are no signs of springs near the site. Riverside is applying for a stormwater permit for the site. The main site would contain all precipitation. Sedimentation fences or other devices would be used to control runoff from the access roads.</p>

						POTENTIAL IMPACTS					
						A	B	C	LT	ST	EXPLANATION
											<p>No permanent fuel sources would be installed at this time, but the plan includes the open-cut Fuel Guidelines. After initial development, the fuel site would be located and constructed according to the guidelines.</p> <p>This mining operation would not impact any surface or groundwater: and no adverse impact to water quality or quantity would occur from mining.</p>
5. <u>AIR</u> ; Quality								X		X	<p>Air quality standards are based upon the Clean Air Act of Montana and pursuant rules and is administered by the DEQ Air Resources Management Bureau. 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>Air quality standards as set by the federal government and enforced by the ARMB would allow minimal detrimental air impacts.</p>
6. <u>UNIQUE, ENDANGERED, FRAGILE, or LIMITED</u> environmental resources											The Natural Heritage Program has no records of threatened, endangered, or species of concern in the vicinity of this pit.
BIOLOGICAL ENVIRONMENT											
1. <u>TERRESTRIAL, AVIAN, and AQUATIC</u> ; species and habitats								X		X	Deer and antelope were seen on site during the inspection. Mining would have minimal impact because it is only mediocre habitat and there is no water on the site.
2. <u>VEGETATION</u> ; quantity, quality, species								X		X	Much of the site has been plowed. It has been used for dryland small grain farming and non-native grassland pasture. Areas near the edge of the site are in native grasses and a few shrubs. Mining would have a minor impact to vegetation because the area would be reclaimed to a dryland seed mix.
3. <u>AGRICULTURE</u> ; grazing, crops Production								X		X	Mining would result in a small, temporary reduction of dryland grain or grassland production.
HUMAN ENVIRONMENT											
1. <u>SOCIAL</u> ; structures and mores								X		X	No permanent impact to the social fabric of the area would occur because of mining. West Billings is a fast growing area with new subdivisions being approved and constructed.

						POTENTIAL IMPACTS
	A	B	C	LT	ST	EXPLANATION
2. <u>CULTURAL</u> uniqueness/diversity			X		X	None.
3. <u>POPULATION</u> ; quantity/diversity			X		X	There are no residences within a half mile of the site, and only two homes within a mile. One of the east access roads would pass some homes before connecting with county roads. The south access road does not pass any homes but would lie adjacent to the county landfill dumpster site.
4. <u>HOUSING</u> ; quantity/distribution			X		X	This pit is being requested because of the growth in this area. The growth is not a reaction to the pit.
5. <u>HUMAN HEALTH & SAFETY</u>			X		X	The public roads around the site are major traffic arteries for this end of the county.
6. <u>COMMUNITY & PERSONAL INCOME</u>			X		X	No consequential impact would occur.
7. <u>EMPLOYMENT</u> ; quantity, distribution			X		X	A minimal impact may occur as new employees may be required.
8. <u>TAX BASE</u> ; state/local tax revenue			X		X	A minimal, direct impact would occur as the land gets reclassified.
9. <u>GOVERNMENT SERVICES</u> ; demand			X		X	None.
10. <u>INDUSTRIAL, COMMERCIAL</u> and <u>AGRICULTURAL</u> activities			X		X	This site would convert land from agricultural use to industrial use.
11. <u>HISTORICAL</u> and <u>ARCHAEOLOGICAL</u>			X		X	<p>Most of the mining and facilities area has been plowed and used for dryland farming. Most of the access roads areas were in native vegetation or were disturbed by a two-track road.</p> <p>Riverside hired an archeological consultant to survey the area and write a cultural resources management report. The file search portion revealed Site Report 24 YL713 filed by Bob Peterson in 1974 which identified 4 prehistoric tipi ring occupations along the edges of the terrace. Gar Wood's pedestrian field transect discovered a singular quartzite core, 4 fire bricks and two rusted metal cans. None of these finds was collected or considered significant.</p> <p>If during operations cultural resources were to be discovered, activities would be halted and temporarily moved to another area until SHPO was contacted and the importance of the site was determined.</p>
12. <u>AESTHETICS</u>			X		X	<p>The proposed site is at least 140 feet above the surrounding valleys floor. The land next to this site has been used for years for gravel extraction by both private entities and Yellowstone County.</p> <p>Because the site is so high and removed from residences, It is unlikely that these operations would cause any visual</p>

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						disruption of the landscape. Noise impacts would be very limited. No specific mitigation has been proposed or is necessary for this site.
13. <u>ENVIRONMENTAL PLANS</u> and <u>GOALS</u> ; local and regional			X		X	There is no zoning in this area. The east access road would run along a county road easement and would be built to county standards.
14. <u>DEMANDS</u> on <u>ENVIRONMENTAL RESOURCES</u> of land, water, air and energy			X		X	None.
15. <u>TRANSPORTATION</u> ; networks and traffic flows			X		X	The northern route is not being requested at this time but information concerning it was requested by the DNRC and the county. Because of the large service area for this operation, several routes have been requested. The construction of these different routes would reduce traffic impacts in general because the trucks could take the most direct routes to their various destinations. The City of Laurel and Yellowstone County have approved of the several access routes and have signed landowner Consultation forms. This material would be used for construction and maintenance of area roads, and general commercial purposes.

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.

PUBLIC INVOLVEMENT: Landowners, Natural Heritage Program, State Historic Preservation Office, Resident Notification forms mailed to 10 persons,

OTHER GROUPS OR AGENCIES CONTACTED OR WHICH MAY HAVE OVERLAPPING JURISDICTION: Air Resources Management Bureau, Mining Safety and Health, MT Dept. of Transportation, Yellowstone County Commissioners, Yellowstone County Weed Board

ALTERNATIVES CONSIDERED: Denial

RECOMMENDATIONS CONCERNING PREPARATION OF AN EIS: Unnecessary, No Significant Impacts

APPROVED BY: _____ DATE: _____
Chris Cronin, Opencut Mining Section Supervisor

Prepared by Jo Stephen, July, 2009