

# ENVIRONMENTAL ASSESSMENT

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**Project Name:** Corneliussen

**Proposed Implementation Date:** July 20, 2000

**Proponent:** Empire Sand & Gravel Co.

**Type and Purpose of Action:** The company proposes to operate a complete gravel operation including mining, crushing, screening and washing 600,000 cubic yards of gravel from a 59 acre site. An asphalt plant also may be used. The products would be used for a MDOT highway project and possibly other local jobs. The site would be reclaimed by June, 2010 as pasture and/or hayland.

**Location:** S½ Sec 4 and the N½ of Sec 9 T15N R55E

**County:** Dawson

**N = Not present or No Impact will occur.**

**Y = Impacts may occur (explain under Potential Impacts).**

| IMPACTS ON THE PHYSICAL ENVIRONMENT   |  |
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| RESOURCE  | [Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES  |
| <p><b>1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:</b> Are fragile, compactible or unstable soils present? Are there unusual geologic features? Are there special reclamation considerations?</p>   | <p>[ N ] The site is located on an alluvial finger ridge adjacent to a side channel of the Yellowstone River on the east side and an unnamed creek on the west. The flat top of the ridge averages 525 feet wide, and the distance between the creek and river averages 1,000 feet. Elevation above the river ranges from about 10 feet to 75 feet.</p> <p>An irrigation dam has been constructed across the creek 500 feet north of the section line. Water from this dam is often diverted into the “crossover ditch,” which bisects the middle of the site from east to west. The water is collected and transported under the Yellowstone via pipeline, and is used to irrigate a large island to the east. The crossover ditch is depicted on the topographic map published in 1967.</p> <p>The soils are of the “Turner-Beaverton” series, consisting of 6 to 18 inches of loam overlying sandy gravel. In some places the gravels are at the surface. Annual precipitation is 12 inches to 14 inches, most of which falls during May, June and July.</p> <p>The soils south of the crossover ditch are loamy and produce good irrigated alfalfa crops. The dryland pasture in the north half has been extensively grazed, and has gravel outcroppings. The plan of operations states that overburden and soil would be replaced evenly over the site. The site would either daylight or slope at 5:1 or flatter with drainage flowing to the north. The even replacement of overburden and topsoil and the fairly level slopes would allow good revegetation and stabilization of the site.</p> |
| <p><b>2. WATER QUALITY, QUANTITY AND DISTRIBUTION:</b> Are important surface or groundwater resources present? Is there potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality?</p> | <p>[ Y ] The site is bounded on the east by a side channel of the Yellowstone and on the west by an unnamed creek and associated wetlands. The plan of operations states that no disturbance would occur within 50 feet of the Yellowstone, and that if disturbance occurred within 50 feet of the creek, that silt fences would be used to help protect the creek. In addition, a 1 foot high berm would be built on the east and west sides to impede runoff from leaving the site. The company has filed for a stormwater permit from the Water Protection Bureau of MtDEQ.</p> <p>The haulroad creek crossing at the middle of the site would need improvements. The company is working with the Army Corps of Engineers and the Dawson County Conservation District to design the new crossing to limit impacts to the creek and wetlands.</p> <p>This operation would have no impact on surface waters.</p>  |

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|   | <p>Elevation of the high point of the site is 2106 feet. Test pits did not encounter groundwater, but it is estimated, based upon elevations of the creek and river, that the groundwater level on the west side is at 2080 feet elevation, and on the river or east side is at 2050 elevation. Mining is anticipated to reach a depth of 2092 feet.</p> <p>An asphalt plant may be used but no man-made wastes or asphalt would be buried on-site.</p> <p>No groundwater impacts are expected to occur.</p>  |
| <p><b>3. AIR QUALITY:</b> Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?</p>  | <p>[ N ] No designated Class I or Class II airsheds exist in the area. Crusher emissions are regulated by the Air and Waste Management Bureau of DEQ. The crusher is equipped with spray nozzles to suppress dust, and a water truck would be available for dust control on-site and on the haul road. No impacts would occur to air quality.</p>   |
| <p><b>4. VEGETATION COVER, QUANTITY AND QUALITY:</b> Will vegetative communities be permanently altered? Are any rare plants or cover types present?</p>  | <p>[ N ] The southern portion of the site is presently used as irrigated pasture, and has been farmed and planted to domestic forage plants. The northern portion is native rangeland. Many plant species growing on the ridge top are xeric, such as yucca, prickly pear, sagewort, sage, green needle grass, and ground-covering mosses. No rare species or cover types were found during a field inspection.</p>   |
| <p><b>5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:</b> Is there substantial use of the area by important wildlife, birds or fish?</p>   | <p>[ Y ] The site is about a half mile upstream from Glendive, adjacent to the Yellowstone River and its floodplain, and to wetlands along the creek. Many species of wildlife utilize the floodplain habitat, but because the creek is fairly well incised, its attendant wetlands are very narrow and sinuous. The area upstream from the irrigation dam has silted in over time and has grown in with cattails. Wildlife use of the site is more for traversing along the river than for lingering time. However, beaver have harvested several trees in the crossover ditch.</p> <p>The plan of operations indicates, simply stated, that if it is green it is not to be disturbed. This leaves a natural vegetated buffer by the creek, crossover ditch, and the gully next to Phase II. The plan also states that no disturbance would occur within 50 feet of the river. Thus, native corridors would remain around and through the site. Little impact to wildlife is expected.</p> |
| <p><b>6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:</b> Are any federally listed threatened or endangered species or identified habitat present? Any wetlands? Species of special concern?</p> | <p>[ Y ] The Montana Natural Heritage Program has no listings of threatened or endangered species, or species of concern for the site.</p> <p>As stated above in Sections 2 and 5, the wetlands would not be impacted by the operation except, possibly, as regulated and approved by the Water Protection Bureau under stormwater regulations, and/or by the Army Corps of Engineers and Dawson Natural Resources District's stream crossing regulations.</p>  |
| <p><b>7. HISTORICAL AND ARCHAEOLOGICAL SITES:</b> Are any historical, archaeological or paleontological resources present?</p>  | <p>[ N ] The State Historical Preservation Office has no listings for this area. A field inspection showed that the site has been heavily disturbed. No resources or artifacts were found either on the surface, or in ditches or other disturbed areas. However, if a resource were discovered, operations would be shifted to another area for a reasonable period of time to allow for assessment of the find.</p>   |
| <p><b>8. AESTHETICS:</b> Is the project on a prominent topographic feature? Will it be visible from populated or scenic areas? Will there be excessive noise or light?</p>  | <p>[ Y ] The site lies about a half mile from Glendive along a side channel of the Yellowstone River. The side channel usually dries up in the summer and becomes active during spring runoff. Persons recreating on the main Yellowstone would be from ¼ to ½ mile from the river and would get an obstructed view across a vegetated island. The site would also be visible from the county road more than ¼ mile to the west. Visual impacts would be slight.</p> <p>Noise from the operation could be heard from both the river and homes across the county road, but at these distances would be slight. Noise from trucks on the county road would have the most impact.</p>  |

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| <b>9. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:</b> Will the project use resources that are limited in the area? Are there other activities nearby that will affect the project?  | [ N ]  |
| <b>10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES:</b> Are there other studies, plans or projects on this tract?  | [ N ]  |
| <b>IMPACTS ON THE HUMAN POPULATION</b>  |  |
| <b>RESOURCE</b>   | <b>POTENTIAL IMPACTS AND MITIGATION MEASURES</b>   |
| <b>11. HUMAN HEALTH AND SAFETY:</b> Will this project add to health and safety risks in the area?   | [ N ] The increased number of trucks on the county road might increase traffic hazards, but the road is designed to carry the number and size of these vehicles. The company is consulting with the county road division to revise the radius of the haulroad/county road intersection to allow safer turning.   |
| <b>12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION:</b> Will the project add to or alter these activities?  | [ N ] The irrigated alfalfa field would be out of production for the life of the project. At reclamation, the landowner intends to reinstall the irrigation system and expand it to cover the majority of the site. This would greatly increase the productivity of the site.  |
| <b>13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:</b> Will the project create, move or eliminate jobs? If so, estimated number.   | [ N ] Most of the product from this operation would be used on various road reconstruction projects in the area. Almost by definition this means that jobs would move in and out with the road work. Some secondary jobs might be created in local businesses.   |
| <b>14. LOCAL AND STATE TAX BASE AND TAX REVENUES:</b> Will the project create or eliminate tax revenue?   | [ N ] In that construction workers would move into the area for the duration of the job, local establishments such as restaurants, motels, gas stations and food stores would see an increase in sales.  |
| <b>15. DEMAND FOR GOVERNMENT SERVICES:</b> Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc) be needed?                                    | [ N ] Truck traffic generated by this project would impact local resident on the county road for a 2 to 3 month time period during peak construction activity. Then other jobs would increase traffic sporadically. During peak activity times truck traffic could be annoying to the public, but it would not be dangerous or overburden the county's infrastructure.                         |
| <b>16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:</b> Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?  | [ N ]  |
| <b>17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:</b> Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract? | [ N ] The recreational potential of this site is low because the side channel of the river dries up each summer, and because the land is above the high water mark and is private ground. However, with the Lewis and Clark bicentennial commemorations and activities, more people are expected to use the lower Yellowstone for rafting and camping activities. Impacts are not anticipated. |
| <b>18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:</b> Will the project add to the population and require additional housing?   | [ N ]  |
| <b>19. SOCIAL STRUCTURES AND MORES:</b> Is some disruption of native or traditional lifestyles or communities possible?   | [ N ]  |
| <b>20. CULTURAL UNIQUENESS AND DIVERSITY:</b> Will the action cause a shift in some unique quality of the area?   | [ N ]  |
| <b>21. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:</b>   | [ N ]  |

**22. Alternatives Considered:** Alternative 1: Denial. This alternative would result in denying the use of a resource to the landowner.

