**DRAFT ENVIRONMENTAL ASSESSMENT**

**Project Name:** Helena Gun Club **Proposed Implementation Date:** March 97
**Proponent:** Helena Sand and Gravel
**Type and Purpose of Action:** The proponent proposes to mine, crush, stockpile and transport 20,000 cubic yards of gravel and sand from a 16.5 acre site for a Montana Dept. of Transportation highway overlay project on Interstate 15. The site would be reclaimed by recontouring the slopes to 3:1 with a portion of the west slope day lighting into the existing pit, respreading the overburden and topsoil and reseeding the site with grasses. There will be an asphalt plant involved with the project. Final reclamation would be completed by May 5, 1998.
**Location:** SE 1/4 NW 1/4, Sec.5, T10N, R3W **County:** Lewis and Clark

**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** |
| **1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:** Are fragile, compactible or unstable soils present? Are there unusual geologic features? Are there special reclamation considerations? | **[N]** The proposed operation is located in sands and gravels of an alluvial nature. The site is located just west of Interstate 15 and approximately 1,200 feet south of Rossiter School. The topography slopes gently to the north and east. The soil is a Nippt-Attewan complex on 0 to 4 percent slopes. (70% of the soil is the Nippt series and 20% is the Attewan series) Field observations found that the soil fits the Nippt series. In a typical profile of the Nippt soil the surface layer is a light brownish gray gravelly loam 3 inches thick. The subsoil is brown gravelly clay loam 6 inches thick. The substratum is light gray extremely gravelly loam to 15 inches. Below this is gravelly sand. The proponent will salvage and stockpile the upper 9 inches of the soil with the upper 3 inches being stripped and salvaged separately from the lower 6 inches. Upon regrading of the site the lower 6 inches of the soil will be evenly replaced followed by the upper 3 inches. Microorganisms should reinvade the soil. |

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| **2. WATER QUALITY, QUANTITY AND DISTRIBUTION:** 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? | **[N]** There are two small ponds on the east end of the existing gravel pit. These ponds should not be impacted by the proposed operation. The elevation of the ponds as of February 20, 1997 was approximately 15 feet below the existing ground elevation of the area of the proposed pit. There are 6 water wells within 1,000 feet of the site. The static water level in these wells varies from 9 feet to 13 feet. There are also two monitoring wells located within 2,000 feet to the north and northwest of the site and the high ground water in these wells averages between 8 feet to 10 feet below the ground surface during the period of high ground water. The proponent proposes to mine to a maximum depth of 8 feet, but will backfill with reject such that the site will be 3 feet above the projected high water table. Any fuel storage tanks would be lined and bermed and be of sufficient size to contain any leaks or spills, but the proponent proposes to not have any fuel storage tanks but to fuel equipment from fuel trucks. Any accidental spills or leaks from equipment would be immediately excavated and the contaminated material disposed of according to all applicable federal and state regulations. The design of the proposed operation is such that any runoff would drain into an old unreclaimed pit to the west thus avoiding any off site sedimentation or erosion. During the early 1980's and in 1996 flooding occurred in the area and flood waters filled the existing pit. The depression from the proponent mining the site would fill with water from overland flow during similar flood events. |
| **3. AIR QUALITY:** Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)? | **[Y]** Air quality would be degraded and there will be an increase in particulate matter with the crushing and asphalt plant operations. Scrapers, loaders and trucking equipment typically cause dusty conditions in disturbed soil sites. If dusty conditions occur all disturbed areas will have dust suppressents applied to control the dust.<br><br>The crusher will operate from 4:30 AM to 10:00 PM Monday through Friday for two weeks. The crusher will have an output of between 300 to 350 tons/hr. Approximately 150 tons/hr. will be rejected.<br><br>The asphalt plant will operate from 8:30 AM to 6:00 PM Monday through Friday for a period of two weeks during late spring 1997. The asphalt plant will produce approximately 3,500 ton/day of product.<br><br>An Air Quality Permit is required from the Montana Dept. of Environmental Quality and the conditions as set forth in the permit must be abided by.. |

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| **4. VEGETATION COVER, QUANTITY AND QUALITY:** Will vegetative communities be permanently altered? Are any rare plants or cover types present? | **[Y]** The site has been altered by previous agricultural and mining activities. The vegetation consists of crested wheatgrass on the site. The pond area has willows, cottonwood trees, cattails and various other wetland species and knapweed. Native grass species will be seeded onto the site upon recontouring and retopsoiling. A literature search was done by the Montana National Heritage Program and no rare plants or cover types were noted and none were identified during a ground search. |
| **5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:** Is there substantial use of the area by important wildlife, birds or fish? | **[N]** The presence of the noise generated by the gun club probably contributes to the absence of substantial use by wildlife. |
| **6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:** Are any federally listed threatened or endangered species or identified habitat present? Any wetlands? Species of special concern? | **[N]** A ground and literature search were conducted and no threatened or endangered species or identified habitats were found on the site. There are two small ponds created by past mining in the old pit area. The ponds will not be impacted by the proposed operation. |
| **7. HISTORICAL AND ARCHAEOLOGICAL SITES:** Are any historical, archaeological or paleontological resources present? | **[N]** A cultural survey was done by Steve Platt of the Montana Dept. of Transportation and no cultural resources were found. If the operator of the proposed operation discovers any additional cultural resources the operation must be routed around the site of discovery for a reasonable amount of time until salvage can be made. The State Historical Preservation Office must be promptly notified. |

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| **8. AESTHETICS:** Is the project on a prominent topographic feature? Will it be visible from populated or scenic areas? Will there be excessive noise or light? | **[Y]** The site is located just west of Interstate 15 and will be highly visible from the interstate. There are residences to the west and south from which the operation will be visible and could be affected by noise generated by the operation. Sierra Park is located immediately to the north of the proposed operation and will be affected both by noise and visually. Rossiter School is approximately 1,200 feet to the north and it will have the same impacts as the park. The topsoil and overburden stockpiles will be placed to the north to act as a visual and noise barrier.<br><br>Flood lights from dark period operations will increase visibility and awareness of the operation.<br><br>Noise levels are generally within the range of 60 to 90 decibels as measured onsite, decreasing with distance. As a comparison, sound levels for ordinary activities such as close conversation at 60 decibels and music from a radio at 70 decibels are considered moderate. Levels above 90 decibels are severe, and prolonged exposure can lead to hearing loss.<br><br>There is currently noise generated from shooting activities at the Helena Gun Club located immediately to the southwest of the proposed operation. The proposed operation would add to the noise already generated in the area by the gun club and traffic on the interstate highway and Montana Avenue traffic.<br><br>The operation is short term, with the crusher and hot plant operating at the site for a total of one month; and the site will be reclaimed to a visually acceptable landuse by May 20, 1998. |
| **9. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:** Will the project use resources that are limited in the area? Are there other activities nearby that will affect the project? | **[N]** |
| **10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES:** Are there other studies, plans or projects on this tract? | **[N]** |

| IMPACTS ON THE HUMAN POPULATION | |
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| **RESOURCE** | **POTENTIAL IMPACTS AND MITIGATION MEASURES** |
| **11. HUMAN HEALTH AND SAFETY:** Will this project add to health and safety risks in the area? | **[Y]** Heavy equipment and facilities including scrapers, trucks and loaders will create hazards, but the operator must comply with OSHA and MSHA regulations. The proponent will employ proper precautions to avoid accidents.<br><br>Excessive and prolonged noise and light could increase stress for nearby residents and the facility and students at Rossiter School. Dust and particulate matter could affect the health of locals. Excessive and prolonged noise could induce difficulty sleeping.<br><br>The proponent intends to operate the crusher from 4:30 AM to 10:00 PM Monday through Friday for 2 weeks. The asphalt plant will be set up for 2 weeks and will operate from 8:30 AM to 6:00 PM Monday through Friday. |
| **12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION:** Will the project add to or alter these activities? | **[N]** |
| **13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:** Will the project create, move or eliminate jobs? If so, estimated number. | **[N]** |
| **14. LOCAL AND STATE TAX BASE AND TAX REVENUES:** Will the project create or eliminate tax revenue? | **[N]** |
| **15. DEMAND FOR GOVERNMENT SERVICES:** Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc) be needed? | **[N]** The site will require periodic site evaluations, but these will be done in conjunction with other operations in the area. The product produced by the proposed operation will be hauled directly to Interstate 15 by a short haul and access road. |
| **16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:** Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect? | **[N]** County Zoning clearance has been obtained. |

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| **17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:** Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract? | **[N]** |
| **18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:** Will the project add to the population and require additional housing? | **[N]** |
| **19. SOCIAL STRUCTURES AND MORES:** Is some disruption of native or traditional lifestyles or communities possible? | **[N]** |
| **20. CULTURAL UNIQUENESS AND DIVERSITY:** Will the action cause a shift in some unique quality of the area? | **[N]** |
| **21. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:** | **[N]** |

**22. Alternatives Considered:**

Alternative # 1: Denial. The owner of the gravel resource would be denied full utilization of his property at this time.

Alternative # 2: Approval of the permit with mitigating conditions: The Plan of Operation has been written with mitigating conditions. Mitigation measures include water protection, fuel containment slope stability, placement of topsoil and overburden piles to help lessen noise from the operation, topsoil replacement and reseeding the site.

**23. Public Involvement, Agencies, Groups or Individuals contacted:** Montana Natural Heritage Program; Lewis and Clark County Weed Control District and Planning Department; Kelly Blake of the Lewis and Clark County Permitting Department; George Friez of Jim Gilman Excavating.

**24. Other Governmental Agencies with Jurisdiction, List of Permits Needed:** Mine Safety & Health - Administration for safety permit; Montana Department of Labor & Industry, Bureau of Safety for safety permit: Permitting & Compliance Division for crusher permit.

**25. Magnitude and Significance of Potential Impacts:** Impacts are unlikely to be significant on the general environment because of the short duration of the project.

**26. Regulatory Impact on Private Property:** The analysis conducted in response to the Private Property Assessment Act indicates no impact.

**Recommendation for Further Environmental Analysis:**

[ ] EIS [ ] More Detailed EA [ X ] No Further Analysis

EA Checklist Prepared By: Jerry Burke Title: Mine Reclamation Specialist

Approved By: Steve Welch Title: Industrial & Energy Minerals Bureau Chief

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Signature Date