

FINAL ENVIRONMENTAL ASSESSMENT
June 6, 2000

Project Name: Carlson gravel pit site amendment
Proponent: Carlson Sand & Gravel, LLC

Proposed Implementation Date: June 15, 2000

Type and Purpose of Action: The proponent has applied for an amendment to his Mined Land Reclamation (gravel mining) Permit that, if approved, would result in the expansion of his existing mining, crushing, stockpiling, and hauling operation. The amendment would increase the volume to be removed from approximately 2 million cubic yards of sand and gravel or related products to approximately 7 million, would increase the total area to be disturbed over the life of the mine from 28 to 77 acres, would increase the depth to be mined to a maximum depth of 3,018 feet MSL, would change the date when final reclamation will be finished from the year 2010 to 2020, and will increase the performance bond from \$28,630 to \$153,476. The proponent would continue to operate a crusher and a screen as in the past, would add a wash plant, buildings and a scale, and would continue to allow temporary contractors to crush and batch asphalt in response to periodic highway and other projects. The proposed site is located five miles southeast of Whitefish, along the Whitefish Stage Road. The mine would continue to operate year-round, generally from 7:00 a.m. to 7:00 p.m. from Monday to Friday during the summer and sometimes quiet for days at a time during the winter. During special projects, the pit may operate 24 hours a day, 7 days a week for up to 15 consecutive days and the public will be notified 30 days prior to any such special projects. The reclaimed use would be a large flat-bottomed pasture with side slopes graded to angles of at least 3:1 or flatter. The site will be topsoiled and seeded back to grass.

Location: Parts of Sections 16, 17, 21 and 22 of T30N, R20W

County: Flathead

N = Not present or No Impact will occur.

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

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE: Are fragile, compactable or unstable soils present? Are there unusual geologic features? Are there special reclamation considerations?	<p>[N] Topsoil consists of a six-inch dark, organic layer of silty sandy loam and 12 inches of silt and clay overburden, all of which would be stripped and stockpiled. All of the overburden will be sold as a product. Soil in the general area tends to thicken and thin around the site. The topsoil stockpiles will be seeded with grasses using the approved seed mixture and rate. Following mining and re-grading, topsoil would be replaced, disked and seeded to pasture grass.</p> <p>There are no fragile, compactable or unstable soils or unusual geologic features. The sandy soils may be susceptible to wind erosion at times. Topsoil stockpiles will be seeded with grass and trees to prevent erosion and for dust control (see Plan of Operations for dates). The reclamation of the site poses no special reclamation considerations.</p>
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?	<p>[Y] The nearest surface water is the Whitefish River located ¼ mile to the east of the pit. The River would not be affected by mining.</p> <p>The site will be mined to a maximum depth of 3018 feet MSL, but will stay above the groundwater, estimated to be 50 feet below the surface in the proposed pit area at approximately 2968 feet MSL (as seen in FVGS Well #B2 near the Svec residence). The depth of mining will be 70 feet as measured from the highest morphological point (FVGS Well #B2, 3088 feet MSL) to the bottom of the finished pit floor. The highwalls will be no higher than 40 feet at any one time since the pit will be dug in lifts. The average highwall height may be 20 to 30 feet over the entire pit.</p> <p>Mining will remain at least 3 feet above the high water table. The Montana Bureau of Mines has installed two monitoring wells at the south end of the site and two others are in place south and northeast of the pit. The Bureau has monitored the wells for the last three years and the deep potable aquifer is stable at 240 feet below the surface near the wells.</p>

	<p>The deeper sands and gravels in this area display high permeability in confined layers of water-bearing gravels. There are approximately 43 water wells within Sections 21 and 28 that are drilled an average depth of 161 feet deep, that yield an average of 21 gallons per minute and have average static water levels of 129 feet.</p> <p>New monitoring wells will be installed and a monitoring program will be implemented to gain baseline data on groundwater quantity and quality within the shallower aquifer, and annual tests will provide a method of detecting contamination or changes in the static water levels of this aquifer. The wells will be installed and tested before September 1, 2000.</p> <p>The Wash plant will operate up to twelve hours per day, five days per week. It may operate more in the summer, sometimes on Saturday, and is shut down completely for months in the winter. It uses the equivalent amount of water as a typical irrigation sprinkler, about 10 gallons per minute at its peak flow. Water is pumped from the Whitefish River under an approved water right. Discharge from the plant is contained in a 20 X 30 foot settling pond. Sediment from the settling pond is scooped out and sold as a product. No water leaves the pond, it all seeps into the ground. Only river water and natural silt and sand are contained in the pond, so no chemicals or other foreign material is introduced into the groundwater.</p> <p>Special precautions will be taken to minimize possible contamination of surface and groundwater. All bulk fuel and lubricants will be brought in daily to the site. If plans for fuel storage in the pit change in the future, a proper fuel containment structure would be engineered and plans submitted to the DEQ for approval, in advance of installation. Portable equipment with fuel tanks such as loaders, trucks, crusher, asphalt plant and screen would be operating in various places within the facility. Any accidental spills or leaks from equipment will be excavated and disposed of. Only clean fill will be buried at the site. With these precautions, the quality and quantity of the groundwater should not be adversely impacted. A stormwater permit will not be needed since any water collected or generated in the pit drains toward the interior. The Whitefish River is ½ mile to the east and will not be affected.</p>
<p>3. AIR QUALITY: Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?</p>	<p>[Y] The site is not located within a Class I Airshed. Air quality is currently degraded somewhat during operations and there is an allowable amount of particulate matter and odor generated from the site. Dozers, loaders, crushers and trucking equipment typically cause dusty conditions in disturbed soil sites and operating equipment typically emits odors that may be offensive to some people. However, crushers and asphalt plants are regulated for dust and smoke emissions, and the equipment used must be tested and approved by DEQ. Spray bars will be used on the crushers and transfer points, and water is applied within the site as needed to reduce dust. The main haul road has been paved where it enters the main highway.</p>
<p>4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be permanently altered? Are any rare plants or cover types present?</p>	<p>[N] There are no known rare or sensitive plants in the site area. Other than cropland, vegetation covers nearly 95% of the undisturbed ground and consists mainly of brome, bluegrass and quack grass. A ground survey and literature search by the Montana Natural Heritage Program did not reveal any rare plants or cover types.</p>
<p>5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: Is there substantial use of the area by important wildlife, birds or fish?</p>	<p>[N] Although the area is used primarily for pasture, crops and commercial gravel mining and aggregate processing, it also supports populations of large and small mammals, game and song birds, raptors, insects and various other animal species. Population numbers for these species is not known. There are rookeries of blue herons and nesting sites of ospreys and bald eagles along the Flathead River valley, but none were</p>

	<p>identified on or near the site.</p> <p>Human use of the area has intensified in the past three decades with increasing residential and commercial activity. The proposed mine is not expected to significantly degrade wildlife populations. Site evaluations and a literature search did not reveal any other plant or animal species on site that would be significantly impacted.</p>
<p>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?</p>	<p>[N] The Natural Heritage Program and site evaluations have not revealed any endangered or threatened plant or animal species that would be directly affected. There are no wetlands or species of special concern identified by inspection of the site or by a literature search by the Natural Heritage Program. There is a pond with wetlands located at the common corner of tracts 17, 18, 19 and 20. No activity will occur there and no activity will occur in the drainage that supplies surface water to the pond.</p>
<p>7. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?</p>	<p>[N] Although there are cultural values in the general area, none have been identified in the area to be disturbed. This site has been previously disturbed by modern man, thus destroying much of the integrity of resources that may have existed. The operator would give appropriate protection to any values or artifacts discovered in the affected area. If significant resources were found, the operation would be routed around the site of discovery for a reasonable time until salvage can be conducted. The State Historical Preservation Office will be promptly notified.</p>
<p>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?</p>	<p>[Y] There is an effect on aesthetics in the area while the operation is under way. The site is and has been visible to residences in the area and to traffic along Whitefish Stage Road for the past 40 years. Reclamation will return the area to a visually acceptable landscape when mining is completed in the future. A topsoiled, grassed berm with trees will be placed along the entire operation facing Whitefish Stage Road. The berm will be maintained to provide some sight and sound separation from the pit, and will dress up the front of the operation. Piles of dumped soils and debris along the highway will be removed over the first two years of the amendment. The remaining trash picked from the soil materials will be hauled off to an approved trash disposal site. The remaining clean fill will be used to construct berms and for fill in the pit. The date of completion of mining and final reclamation is the year 2020 unless an extension is requested before that time.</p> <p>Hours of operation for crushers and asphalt plants would continue to be year-round, generally from 7:00 a.m. to 7:00 p.m. from Monday to Friday during the summer and sometimes quiet for days at a time during the winter. During special projects, crushers and asphalt plants may operate 24 hours a day, 7 days a week up to 15 days at a time. Any special projects will be noticed in the newspaper at least 30 days prior to start-up. The amount of product made during a typical shift depends on the type of product. Other aspects of the operation including hauling from stockpiles or pit-run gravel from the pit could occur at any time.</p> <p>The permanent crusher, wash plant and screen will be located in the floor of the pit to mitigate visual and sound impacts to the nearby residential area. Mining is generally progressing toward the north and east. Mining to the north has increased visibility to homes along Whitefish Stage Road. As mining progresses easterly, it will move away from the residential areas and traffic along the highway. Stockpiles of waste, and unused vehicles and equipment will be kept down in the pit out of sight to most of the public. The dumps of fill dirt and waste material along the highway will be removed over a two year period. Progress will be made to backfill and reclaim the finished highwall on the south end of the pit. At least 100 feet of the highwall will be backfilled and graded before December, 2000. On-site noise levels generated by operating equipment at the pit are</p>

	generally within the range of 60 to 90 decibels, but decrease with distance. As a comparison, sound levels for ordinary activities such as close conversation and music from a radio are 60 decibels and 70 decibels and are considered moderate. Levels above 90 decibels are severe, and prolonged exposure can lead to hearing loss. There is also noise from loaders and truck traffic hauling to various projects.
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?	[Y] Whitefish City/County Master Plan. Montana Capital Partners is finished mining topsoil for the Iron Horse Golf Course from a 40 acre area 500 feet north of the nearest point in the Carlson Amendment. The two mining permits do not overlap and reclamation is nearly completed on the topsoil mine. An Environmental Assessment was written by DEQ for that operating permit in April, 1996 and was revised in January, 1998.
IMPACTS ON THE HUMAN POPULATION	
RESOURCE	[Y/N] 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 operating facilities including scrapers, trucks, loaders, hot plants and crushers create hazards, but the operator must comply with all MSHA and OSHA regulations. The operator must employ proper precautions to avoid accidents. All vehicles will come to a full stop before entering Whitefish Stage Road from the pit. This will cause truck traffic to enter the highway at slower speeds and it may be safer for oncoming, southbound traffic, but initial slow speeds may cause congestion and greater hazards for northbound traffic. The highway is a public thoroughfare open to all who use it as long as they abide by posted speed limits, load limits and other local restrictions. Excessive and prolonged noise could increase stress for nearby residents and induce difficulty sleeping. These effects may be considered harmful to human health if the activities are continuous. However, the limited hours of operation imposed upon the applicant should provide mitigation for adverse health effects.
12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?	[N] The 77 acres listed in the Type and purpose of Action will be gradually taken out of agricultural use as the mine expands. When significant portions of the site are no longer needed for mining or related activities, it will be returned to grazing.
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?	[Y] The operation would require periodic site evaluations by DEQ staff until such time as the site is successfully reclaimed to the required post-mining use. However, these evaluations are usually performed in conjunction with other area operations.

16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?	[Y] City/County zoning clearance has been obtained. The Flathead County Planning Office granted approval on February 2, 1999.
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] The area has generally been used as pasture, agriculture, rural/residential and commercial property including gravel extraction in the past. Locals would not notice a change in the daily operations at the site as topsoil is stripped into berms and gravel is extracted, except that the site will expand in size. They would not notice much change in equipment working and truck traffic coming and going. Noticeable changes in activity would typically correspond to large projects such as the paving of Highway 93, as in the past, rather than expansion of the permit into new areas. Upon reclamation, the site would be reclaimed and should maintain land values in the area.
20. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area?	[Y] The gravel mining and aggregate production from this site has gradually increased over the years. At the same time, more residences have been constructed in the area.
21. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:	[N]

22. Alternatives Considered:

- A. **Denial:** The pit would not be expanded but impacts from current mining would continue to occur at this location. The owner of the gravel resource would be denied full utilization of his property at this time. Gravel consumption is high in this area as a result of increasing population in general and in this part of the Flathead Valley specifically, and denial of this expansion would simply force impacts into other nearby gravel pit sources.
- B. **Approval of the application:** The Plan of Operation has been written with mitigating conditions including water and wetland protection, soil salvage, traffic control, hours of operation, visual screens and disposal of waste dumps along the highway.

23. Public Involvement, Agencies, Groups or Individuals contacted: State Historic Preservation Office, Montana Natural Heritage Program, County Weed Control District, Flathead Regional Development Office for zoning. The Draft Environmental Assessment was published and comments solicited, received and incorporated as applicable prior to decision making as part of Open-cut compliance with MEPA. A Public Notice for the Final Environmental Assessment will be placed in the Legal Notice Section of the Daily Interlake newspaper, and the public will have an opportunity to attend a public meeting to learn about the permit amendment and changes to the mining plan.

24. Other Governmental Agencies with Jurisdiction, List of Permits Needed: Montana Department of Environmental Quality for Air Quality (crusher and asphalt plants) Permit; Mine Safety and Health Administration for safety permit; Montana Department of Labor & Industry, Bureau of Safety for safety permit; Flathead County Planning Office for zoning.

25. Magnitude and Significance of Potential Impacts: Impacts will be noticeable but are unlikely to be significant on the general environment because of the historic use of this area for mining and the lack of significant or threatened wildlife or habitat, and because of the measures in the Plan of Operations and conditions placed on the proponent by DEQ. Impacts to surface and groundwater quantity, quality and distribution would be negligible because mining would not intercept the groundwater and any spills would be excavated and removed. Water used at the site is extracted from the Whitefish River and water rights have been obtained. Fuel and lubricants are brought in daily, not stored at the site. If plans are changed and they

wish to store onsite, all fuel and lubricants would be kept within a sealed storage area that must comply with applicable state and federal regulations. Cumulative impacts of the gravel mine, its expansion and the topsoil mine are not considered to be significant because the topsoil mine is a temporary activity that will be finished long before the gravel pit is depleted. Further, the gravel pit is not escalating the intensity of its operation above historic levels merely by expanding its acreage. Visual impacts and dust levels may increase as a result of this expansion, but dust levels must keep within state air quality guidelines.

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 No Further Analysis

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