Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

# ENVIRONMENTAL ASSESSMENT
**For Routine Actions with Limited Environmental Impact**

Revised 11-00

## Part I. Proposed Action Description

**1. Applicant/Contact name and address:** Duane & Kathleen Carlson
4405 Whitefish Stage
Whitefish, MT 59937

**2. Type of action:** Authorization to Change Appropriation Water Right No. 76LJ-G(P)007482-00

**3. Water source name:** Whitefish River

**4. Location affected by action:** SWNENE, Section 21, T30N, R21W, Flathead County

5. **Narrative summary of the proposed project and action to be taken:** The DNRC shall issue a change authorization if the applicant proves the criteria in 85-2-311, MCA are met. This environmental assessment will address the diversion and the water usage portion of the project in reference to the physical and human environment.
The applicant has an existing gravel mining operation in the center of the project location (Section 21, Township 30N, Range 21W). He wishes to increase the area that is mined and to wash the gravel. Gravel mining operations will not increase from their current use. The increased land to be mined is 72.5 acres. Those acres will be taken out of irrigation.
The applicant proposes to change a portion of his irrigation water right to an industrial gravel washing operation. The changed portion is for 700 gpm up to 135 acre-feet per year. The flow rate will not change as the diversion works are not being changed. The period of use will also remain the same.
The original permit is for irrigating 274 acres from April 15 to October 1, inclusive of each year. The places of use are in sections 16 and 21 of township 30N, range 21W. The water diverted is not to exceed 1800 gpm up to 510 acre-feet per year. The means of diversion consists of two pumps converging into one system. Irrigation will account for 1100 gpm and 375 acre-feet from the total amount of water diverted under this permit.
Other than irrigating and gravel mining, Mr. Carlson's past land use activities are not within the scope of this environmental assessment.

**6. Agencies consulted during preparation of the Environmental Assessment:**
Montana Natural Heritage Program (NHP)
State Historical Preservation Office (SHPO)
Montana Department of Environmental Quality (DEQ)
Department of Fish, Wildlife & Parks (DFWP)
Department of Natural Resources & Conservation (DNRC)
Site Visit (October 6, 2000)

## Part II. Environmental Review

**1. Environmental Impact Checklist:**

### PHYSICAL ENVIRONMENT

**Water quantity, quality and distribution**

Water quantity: Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.

Determination: The source of supply is not a chronically or periodically dewatered river according to the DFWP. The proposed project is to change the purpose of a portion of a water right. There will not be an increase in the amount of water historically used. The proposed project will not adversely affect water quantity or availability. The gravel washing project location is not within the Whitefish River floodplain. Therefore, the proposed use will not impact the natural floodplain or drainage patterns in the area.

Water quality: Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.

Determination: The Whitefish River fully supports water quality standards for drinking, agriculture, and industrial uses. It is listed on DEQ's 303(d) list as being threatened or impaired because it partially supports water quality standards for aquatic life and cold-water fish. However, the degree of impairment is not severe.
All water diverted for the proposed use will be discharged into a series of two settling ponds approximately one half mile from the river. There, the fines will settle out as the water seeps into the gravel bed below.
Additional information concerning the proposed project's affects on water quality is contained in the environmental assessment conducted by the DEQ dated June 6, 2000. The DEQ determined that the proposed use would not adversely affect water quality in the area.

Groundwater: Assess if the proposed project impacts ground water quality or supply.
If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.

Determination: The proposed use is not for a groundwater appropriation. The shallow aquifer may be somewhat recharged with the discharge water of the proposed use. The water quality of the shallow aquifer would not be adversely affected by this activity since the diverted water is able to fully support drinking water uses according to DEQ.
A monitoring program will be started to ensure that groundwater quality and quantity are not affected by mining or related processes. There will be three monitoring wells located north, south and east of the pit that will be pumped and tested yearly. The tests will measure static water levels and will check for hydrocarbons. All results will be kept and sent to the DEQ of Kalispell. Additional information on the Observation Well Program is available in the Carlson file at the Kalispell DEQ.
Additional information concerning impacts to groundwater is contained in the environmental assessment conducted by the DEQ dated June 6, 2000.

**Diversion works**

Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.

Determination: The diversion system for the proposed project exists. There will not be any alterations or modifications to the current irrigation diversion or conveyance system. The proposed project will not impact any of the above referenced items.

**Unique, endangered, fragile or limited environmental resources**

Endangered and threatened species: Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any “species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or “species of special concern.”

Determination: A query with NHP resulted in no known species of special concern at the project location. There is a pond located near the site however, no activity will occur near the pond.

Wetlands: Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.

Determination: Wetlands do not exist within the project area.

Ponds: For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.

Determination: The only ponds that exist within the project area are the settling ponds. These ponds are not always full and do not support fisheries, waterfowl or wildlife. There is a small, one-acre pond located 400 feet east of the proposed pit perimeter. It is centered on the common corner of tracts 17, 18, 19 and 20. The pond is formed in the bottom of a depression and has no outlet. It is recharged by surface runoff and is sealed with natural silts and clays. The pond serves as a habitat for several species of wildlife. According to DEQ, those species consist of deer, game and non-game birds and other small mammals. Neither the DEQ nor this environmental assessment found any potential impact to these ponds from this project. There may be a long-term net benefit to this pond from groundwater recharge.

**Geology/Soil quality, stability and moisture**

Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.

Determination: The topsoil consists of six inches of organic silty-sandy loam and 12 inches of silt and clay overburden. The thickness of the gravel around the site varies. Although there will be a short-term adverse impact to soil stability and moisture content during the operation, long-term reclamation plans dictated by the DEQ's gravel mining permit will assure that there is not a net long-term adverse impact. There is no evidence of heavy salts in the soil. Therefore, the proposed project will not cause saline seep.
The source of water, Whitefish River, is listed by DEQ as impaired for coldwater fisheries and aquatic life. However, the river fully supports drinking water, agriculture, and industrial uses. The use of this water will not degrade soil quality.
The water will not be returned directly to the source. It will go to a settling pond and then seep into the gravels. The water will be used to wash gravel. No known contaminants will be introduced to the soil from the diverted water. Since the water will not be used for irrigation at the site, the soil will not be exposed to fertilizers, pesticides, or herbicides. Once the site is reclaimed, there will be no further impacts to the soils. See description under "vegetation" for post mining reclamation plan.
Additional information is available in the environmental assessment conducted by DEQ on June 6, 2000.

**Vegetation cover, quantity and quality/Noxious weeds**

Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.

Determination: The project site is currently cropland. Surrounding vegetation that is not cropland consists of brome, bluegrass and quack grass. A query with the NHP resulted in no known plant species of special concern near the project.
The implementation of the proposed project will eliminate all vegetation at the site. A strong revegetation plan is proposed for reclamation after 7 million cubic yards of material are removed. The stripped topsoil will be placed where it will be protected from erosion and loss, and will be seeded with grass seed for stabilization. Berms will be installed along the west perimeter of the project. The berms will be top soiled then planted with native grasses and trees. Postmining reclamation will consist of replacing, harrowing, and reseeding the topsoil with timothy and orchardgrass. The owner will be responsible for all invader species during and post mining and it is not anticipated that the proposed project will result in the establishment of noxious weeds.

**Air quality**

Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.

Determination: The use of dozers, loaders, crushers and trucking equipment emits odors, dust, and noise pollution. According to DEQ, there is an allowable amount of particulate matter and odor generated from the site. The equipment is regulated for dust and smoke emissions and must be tested and approved by DEQ. A water truck will be used to control dust at the project location. There has been an existing gravel mining operation in this location for many years. It is not anticipated that this change authorization will be the cause for any additional impacts to air quality that have not been in existence.
Additional information concerning air quality issues has been addressed in the environmental assessment prepared by DEQ June 6, 2000.

**Historical and archeological sites**

Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project.

Determination: A query with SHPO resulted in no known historical or archeological sites near the proposed project. SHPO went on to say that if there were any historical or archeological sites identified, the past and current land uses have eliminated them by now. The proposed project will not adversely affect the historical or archeological significance of the site.

**Demands on environmental resources of land, water, and energy**

Assess any other impacts on environmental resources of land, water and energy not already addressed.

Determination: All impacts identified above are due to the proposed use and secondary to the diversion of the water. As this is only and expansion of an existing land use, there is not anticipated to be new or additional impacts to land, water, or energy resources.

**HUMAN ENVIRONMENT**

**Locally adopted environmental plans and goals**

Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.

Determination: The Flathead Planning Office granted approval on February 2, 1999 for the proposed project. Zoning clearance has been obtained by both the city and county. This business has been in existence in this location for many years. This area is suited to this regionally adopted land use.

**Access to and quality of recreational and wilderness activities**

Assess whether the proposed project will impact assess to or the quality of recreational and wilderness activities.

Determination: The project location is not near any wilderness or public recreational access. There is already a small gravel plant at the project area. Expanding the area mined will not impact public accesses to recreational or wilderness sites.

**Human health**

Assess whether the proposed project impacts on human health.

Determination: Gravel mining operations are common throughout the Flathead Valley. The proposed project is an expansion of an existing gravel mining plant. There will not be an increase of human health impacts (i.e. dust, mosquito breeding grounds, drinking water quality) due to the expansion.
The dust will be controlled with watering trucks. See explanation under "Air Quality" for additional information. The settling ponds are not located near any vegetation and they do not always have water in them. Therefore, they will not be mosquito breeding grounds. The water used to wash gravel is capable of fully supporting drinking water uses according to DEQ's 303d list. The water will then be used to wash the gravel. The mined gravel is contained in an area where there is no probability for contamination. No health impacts from water quality degradation are anticipated.

**Other human environmental issues**

For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.

Impacts on:

(a) Cultural uniqueness and diversity ? No

(b) Local and state tax base and tax revenues? Yes, There will be a net long-term positive impact to the local and state tax base from the business staying viable and paying taxes.

(c) Existing land uses. Yes, it will increase profitability and productivity of the applicant's property. Adjacent property values may be affected. However, real estate appraisal of the property would be needed to determine the degree if any. In addition, the project has been supported by local planning; it has been in existence prior to many of the local residences. Competition for land use in this area does exist but it is beyond the scope of the EA.

(d) Quantity and distribution of employment? No. The applicant does not intend to increase gravel export or employment due to the expansion of the area being mined.

(e) Distribution and density of population and housing? No. Since this is not a proposed subdivision, the affect on population density cannot be determined.

(f) Demands for government services? Unknown. Road maintenance may be increased if the applicant increases the amount of gravel sold. This is dependant on the demand for gravel in our economy. This cannot be assumed.

(g) Industrial and commercial activity? No. The same industrial and commercial activity will be conducted over a larger area of land.

(h) Utilities ? YES, the operation equipment will require fuel to run. The gas will not be stored onsite, but will be brought in as needed. If subcontractors intend to temporarily store fuels for special projects, they will do so within earthen bermed storage compounds constructed as specified in the DEQ guidelines. Any intent to store fuel will be noticed to the DEQ Kalispell office at least 30 days prior to installation.

(i) Transportation? There will be an increase of traffic to and from the site along Whitefish Stage Road if the demand for gravel increases within the Flathead Valley community.

(j) Safety? Unknown.

(k) Other appropriate social and economic circumstances No

**2. Secondary and cumulative impacts on the physical environment and human population:** All impacts identified throughout this environmental assessment are due to the proposed land use and secondary to the diversion of the water. The project location has been both an irrigated crop and a gravel mining operation in the past. The cumulative environmental impact from the proposed change in water right purpose is positive. There will no longer be a use of pesticides and herbicides on the soil. There will be no negative cumulative impacts to the environment. See the environmental assessment conducted by DEQ for more details.

**3. Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:**

1) Proceed with issuance of Change Authorization. Downstream water right holders will not notice a change in water quantity due to no change in diversion system or quantity historically used.
2) Deny the Change Authorization due to environmental impacts. The applicant could find another source of water (well) or they could recycle the discharge water through their gravel wash plant.
3) No action. The applicant is denied the change and the business does not expand. The applicant is denied the right to use his property for the proposed use.

## PART III. Conclusion

There will be no net long-term adverse impacts to the environment due to this change authorization. The water quantity use will not change and therefore there will not be a change in water quality in the source of supply. There is anticipated to be a net long-term benefit to soils and land practices in changing from irrigation to gravel washing from a decrease in pesticide and herbicide use that will mitigate the short-term impact from stock piling and storing the over burden. There will be a net long-term positive impact after the mining operation is reclaimed under the DEQ process.
There may be a net short-term adverse impact to the human environment from local increase in business traffic, but the impacts existed prior to the recent changes in land practice from agricultural to rural subdivision. There will be a net long-term positive impact to the human environment from the reclamation.

Based on the significant criteria evaluated in this EA, is an EIS required? No

If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action: Significant impacts have not been identified by changing the purpose of this water right.

Name of person(s) responsible for preparation of EA:

Name: Cristy Carter
Title: Water Resource Specialist
Date: 10/19/00