

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

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

1. Applicant/Contact name and address: Knife River North Central
Attn: Ron Klinker
4787 Shadow Wood Drive NE
Sauk Rapids, MN 56379
2. Type of action: Application for Beneficial water user Permit No. 42M 30103504
3. Water source name: Groundwater
4. Location affected by project: S2SWNE Sec 13 T24N R59E
5. Narrative summary of the proposed project, purpose, action to be taken, and benefits:

The proposed project is a temporary aggregate washing operation located on County Road 134 approximately 1.3 miles west of Fairview, MT. The POD and POU are located in SWNE Section 13, T24N, R59E, Richland County. The applicant proposes to divert groundwater March 1 through December 31 at a rate of 35 GPM up to 31 AF annually for up to 10 years.

The project proposes to build a wash pond. The wash pond is designed large enough to capture and hold the wash water effluent long enough to allow the suspended sediment to settle out and thus allowing the water to be reutilized in the aggregate washing operation.

The DNRC shall issue a water use permit if an applicant proves the criteria in 85-2-311 MCA are met.

6. Agencies consulted during preparation of the Environmental Assessment:
 - o US Fish & Wildlife Service
 - o Montana Natural Heritage Program
 - o USDA NRCS Web Soil Survey
 - o Montana Department of Fish, Wildlife, & Parks
 - o Montana Department of Environmental Quality
 - o National Wetlands Inventory

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.

The proposed wells for Knife River are located within 0.5 miles, 1.7 miles, 2.3 miles, and 3.5 miles of Third Hay Creek, Second Hay Creek, First Hay Creek, and Yellowstone River, respectively. These streams are not incised into the source aquifer.

Data suggest that the Yellowstone River is incised to the source aquifer and is interpreted to be hydraulically connected to the source aquifer where it subcrops below the Yellowstone River alluvium downstream of Sidney, MT.

Depletion by pumping in the source aquifer primarily occurs through propagation of drawdown to where the Yellowstone River is incised to the source aquifer downstream of Sidney to the Montana-North Dakota state line. Because of the distance from the applicant's well to the potentially affected reach of the Yellowstone River, the applicant's pumping is expected to result in constant year-round depletion equal to consumption (Table 1).

Table 1: Net depletion by proposed groundwater pumping of the Knife River application # 42M 30103504

Month	Consumption (AF)	Depletion (AF)	Depletion (gmp)
January	0	1.10	19.0
February	0	1.10	19.0
March	1.47	1.10	19.0
April	1.47	1.10	19.0
May	1.47	1.10	19.0
June	1.47	1.10	19.0
July	1.47	1.10	19.0
August	1.47	1.10	19.0
September	1.47	1.10	19.0
October	1.47	1.10	19.0
November	1.47	1.10	19.0
December	0	1.10	19.0
Total	13.22	13.22	

This reach of the Yellowstone River downstream of Sidney to the Montana- North Dakota state line is not identified as a chronically or periodically dewatered stream by the Montana Department of Fish, Wildlife & Parks. The DFWP has a water reservation on this portion of the Yellowstone River that ranges from 2,670 CFS in August to 25,140 CFS in June to maintain instream flows.

This reach of the stream is not identified as being dewatered and a depletion rate of 19 GPM will likely not have an effect on the Yellowstone River.

Determination: No significant impact

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.*

The reach of Yellowstone River identified which will be depleted by groundwater pumping is listed as fully supporting agricultural uses, primary contact recreation, and use for drinking water. It is listed as not supporting aquatic life. Probable causes for impairment to aquatic life have been identified to include total dissolved solids, elevated levels of metal ions (Cr, Cu, Pb), sedimentation, pH, total nitrogen and phosphorus levels, and fish passage barriers. DEQ has identified that a TMDL is required to address these factors which are causing the impairment. It is unlikely that the surface water depletions caused by the proposed pumping of the Applicant's well will contribute to the identified causes of impairment.

Determination: No significant impact

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.*

Modeling analysis by DNRC hydrologists shows that there is groundwater physically and legally available for appropriation at the point of diversion requested by the Applicant. The proposed appropriation will not significantly impact the ground water quality or supply. The groundwater aquifer indicated in this application has been shown to be hydraulically connected to the Yellowstone River. It has been determined by DNRC hydrologists that there will be an annual net depletion of 1.10 AF and 19.0 GPM on the Yellowstone River.

Determination: No significant impact

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.*

A licensed water well contractor drilled and installed the wells in accordance to the mandatory water well construction standards set forth by the Board of Water Well Contractors.

Determination: No significant impact

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."*

Based on a report from the Montana Natural Heritage Program, four animal species were identified as “species of concern”. The species identified are the Bobolink, Northern Redbelly Dace, Iowa Darter, and Whooping Crane within the general area of the project. One bird species Whooping Crane is listed as “endangered” by the US Fish & Wildlife Service and was identified by the Montana Natural Heritage Program. Whooping cranes are non-residents of Montana and only migrate through the state. There has been no observation of nesting pairs in the state. It is highly unlikely that this project would have any significant effect on migrating whooping cranes. There were no plant species identified as “endangered” or “threatened” within the project area.

Determination: No significant impact

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

There are no wetlands identified within the project area.

Determination: No significant impact

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

There are no current ponds identified within the project area. The project proposes to build a wash pond to allow the suspended sediment to settle out allowing the water to be reutilized in the aggregate washing operation.

Determination: No significant impact

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.*

Topsoil will be excavated and stockpiled to access gravel deposits for excavation. Topsoil will be reapplied and reseeded back to vegetation upon completion of gravel extraction. The soil types identified in the project area are Vida clay loam, Vida-Zahill complex, and Williams loam. All three of the soil types contain nonsaline to very slightly saline.

Determination: No significant impact

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.*

The proposed project will impact the existing vegetative cover; however the project area will be reclaimed upon the completion of the gravel excavation. Management of noxious weeds will be the responsibility of the Applicant.

Determination: No significant impact

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

There could be some increased dust in the air due to the project, but it is not expected to have any lasting negative impacts.

Determination: No significant impact

HISTORICAL AND ARCHEOLOGICAL SITES - Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project if it is on State or Federal Lands. If it is not on State or Federal Lands simply state NA-project not located on State or Federal Lands.

Determination: Not applicable, project not located on State or Federal lands.

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: No other potential impacts have been identified.

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS - Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.

Determination: No known environmental plans or goals will be impacted by this project.

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES - Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.

Determination: No access or recreational activities will be significantly impacted by this project.

HUMAN HEALTH - Assess whether the proposed project impacts on human health.

Determination: The proposed project will have no significant impact on human health.

PRIVATE PROPERTY - Assess whether there are any government regulatory impacts on private property rights.

Yes ___ No X ___ If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.

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 significant impacts identified
- (b) Local and state tax base and tax revenues? No significant impacts identified
- (c) Existing land uses? No significant impacts identified
- (d) Quantity and distribution of employment? No significant impacts identified
- (e) Distribution and density of population and housing? No significant impacts identified
- (f) Demands for government services? No significant impacts identified
- (g) Industrial and commercial activity? No significant impacts identified
- (h) Utilities? No significant impacts identified
- (i) Transportation? No significant impacts identified
- (j) Safety? No significant impacts identified
- (k) Other appropriate social and economic circumstances? No significant impacts identified

2. Secondary and cumulative impacts on the physical environment and human population:

Secondary Impacts: No significant impacts identified

Cumulative Impacts: No significant impacts identified

Cumulative Impacts Cumulative Impacts of pending or recently permitted rights impacting the Yellowstone River have been examined. The area of examination includes the Lower Yellowstone River from Glendive down to where the river enters North Dakota. The following table shows pending or recently permitted rights and the expected depletion (AF) to surface water on the Yellowstone River.

WR Number	Name	GW or SW	Annual Depletion (AF)
30062767	Montana H2O	GW	585
30064201	Ames/Bell	SW	645
30064191	Thiel	GW	23.2
30064941	Wick	GW	50
30065439	Exploration Drilling	GW	617.2

30066962	Bradley	GW	272
30066963	CR 126 Water	GW	322
30066151	Main Street Water	GW	367.8
30068052	IAP Worldwide Services	GW	66.9
30103504	Knife River	GW	13.2
		Total Depletion	2962

Based on an annual depletion of 2962 AF, the average depletion from the Yellowstone River for pending or unperfected permits is 4.10 CFS. Since physical and legal availability of surface water can be shown for the Yellowstone River during all months of the year in excess of the combined depletion of 4.10 CFS for pending and unperfected permits, the Department finds the cumulative impacts of pending or unperfected permits will have no significant impact on the water of the Yellowstone River.

3. ***Describe any mitigation/stipulation measures:*** None identified
4. ***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:***

The only other alternative would be a no action alternative.

PART III. Conclusion

1. ***Preferred Alternative***
Issue a beneficial water use permit if the applicant proves the criteria in 85.2.302, MCA are met.
2. ***Comments and Responses*** None
3. ***Finding:***
Yes___ No X *Based on the significance criteria evaluated in this EA, is an EIS required?*

If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action:

No significant impacts identified

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

Name: Robert Legare
Title: Water Resources Specialist
Date: December 7, 2015