

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

Applicant/Contact name and address: Karl J Birky
1220 Central Ave W
Great Falls, MT 59404

1. *Type of action:* Application for Beneficial Water Use Permit No. 41QJ 30124432
2. *Water source name:* Groundwater
3. *Location affected by project:* NENW Sec 34, T20N, R3E, Cascade County
4. *Narrative summary of the proposed project, purpose, action to be taken, and benefits:*
The application is for a groundwater appropriation of 228 GPM up to 23.4 Acre-Feet (AF) of water for the irrigation of 7 acres of lawn and garden and 14 multiple domestic lots annually from January 1st to December 31st. There will be 13 points of diversion. The points of diversion and places of use are located in:

POD ID #	Block & Lot	QTR Sec	Sec	TWP	RGE	County	Subdivision
1	B1 L1	NENW	34	20N	3E	Cascade	Peace Park
2	B1 L2	NENW	34	20N	3E	Cascade	Peace Park
3	B1 L3	NENW	34	20N	3E	Cascade	Peace Park
4	B1 L4	NENW	34	20N	3E	Cascade	Peace Park
5	B1 L5	NENW	34	20N	3E	Cascade	Peace Park
6	B1 L6	NENW	34	20N	3E	Cascade	Peace Park
7	B2 L1	NENW	34	20N	3E	Cascade	Peace Park
8	B2 L2	NENW	34	20N	3E	Cascade	Peace Park
9	B2 L3	NENW	34	20N	3E	Cascade	Peace Park
10	B2 L4	NENW	34	20N	3E	Cascade	Peace Park
11	B2 L5	NENW	34	20N	3E	Cascade	Peace Park
12	B2 L6	NENW	34	20N	3E	Cascade	Peace Park
13	B2 L8	NENW	34	20N	3E	Cascade	Peace Park

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

6. *Agencies consulted during preparation of the Environmental Assessment:
(include agencies with overlapping jurisdiction)*

Montana Department of Environmental Quality – Web site
Montana Department of Fish, Wildlife & Parks – Web site
National Wetlands Inventory – Web site
Montana Natural Heritage Program – Web site
USDA Web Soil Survey – Web site

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 Department determined that the zone of influence for these wells intersects the Missouri River. The Department determined that this groundwater appropriation will deplete a reach of water from the Big Bend to just downstream of the mouth of Sand Coulee Creek (1.8 miles away), springs in its channel between Black Eagle Dam and Rainbow dam, and at Giant Springs (7.8 miles away). The Depletion Report identified a potential maximum depletion of 8.5 GPM (0.02 cfs) in each month to the Missouri River. The identified reach of the Missouri River that is included in the zone of influence 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 Missouri River for 3,327 CFS to maintain instream flows and a Statement of Claim for 3,000 CFS.

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 Missouri River (Sheep Creek to Sun River) is listed on the 2018 Montana 303(d) list as fully supporting drinking water, agriculture and primary contact recreation, while only partially supporting aquatic life. Causes of impairment for aquatic life are sedimentation-siltation.

The Missouri River (Sun River to Rainbow Dam) is listed on the 2018 Montana 303(d) list as fully supporting agriculture and primary contact recreation, while only partially supporting aquatic life and drinking water. Probable causes of impairment for aquatic life are chromium, mercury, selenium, polychlorinated biphenyls (PCBs), physical substrate habitat alterations and

sedimentation-siltation. The only probable cause for drinking water is chromium. All probably sources are industrial in nature.

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.*

Determination: The project will consist of 13 wells. There are currently two wells drilled. Both wells were drilled in December of 2018. The Applicant conducted a 72-hour aquifer test at a pumping rate of 48 GPM on GWIC# 300085 from March 18, 2018 through March 21, 2018. GWIC# 300079 was evaluated with an 8-hour drawdown and yield test.

Modeling analysis by the Department shows that there is groundwater physically and legally available for appropriation in the amount requested during the period of diversion requested. Modeling also predicts that drawdown in excess of 1 foot would occur within 120 feet of the proposed well. There are no water rights in the source aquifer that are predicted to experience drawdown greater than 1 foot. The Department has also determined that hydraulically connected surface water of the Missouri River is physically available in the amount in which depletions will occur. The Applicant proposes to mitigate the total net depletion by purchasing a water service contract from the U.S. Bureau of Reclamation for an equal volume of water. The consumed volume needed to be mitigated is 12.64 AF. Based on these findings, there will be no significant impact to the groundwater aquifer or hydraulically connected surface waters.

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.*

Water will be diverted from the ground via a thirteen individual pumping wells. The thirteen wells will be used for fourteen domestic lots and the irrigation of 7 acres of lawn and garden. One well will pump at 48 GPM and the other twelve wells will pump at 15 GPM. All thirteen wells will be completed to a in the Madison Limestone Aquifer. The wells will not be manifold. The 48 GPM well will use a Goulds 45GS50 17 stage submersible pump with a 5 hp motor. The twelve 15 GPM wells will use either a Goulds 13GS15 12 stage submersible pump with a 1.5 HP motor, a Goulds 13GS20 17 stage submersible pump with a 2 HP motor or comparable not to exceed 15 GPM. The appropriation will not divert more than 23.4 acre-feet per annum.

Two of the thirteen wells have been drilled and pump tested. The two existing diversions were drilled by AAAA Water Well Drilling INC of Clancy, MT. AAAA Water Well Drilling INC is a Montana licensed water well driller. These wells will have no channel impacts, will not create any significant flow modifications or barriers, or have any impact to riparian areas.

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.”

According to the Montana Natural Heritage Program website, only one animal in area of this project is listed as sensitive. The Bureau of Land Management, (BLM), lists Spiny Softshell as Sensitive.

According to the Montana Natural Heritage Program website, only one plant in area of this project is listed as sensitive. The United States Forest Service, (USFS), lists the Dwarf woolly-heads as Sensitive.

This is a groundwater development on an area that has been historically been used for agricultural purposes. This development well will not create a barrier to the migration or movement of fish or wildlife. The Depletion Report identified a potential maximum depletion of 8.5 GPM (0.02 CFS) in each month to the Missouri River. This will not have a significant impact on the flows of the river or the species dependent on it. Therefore, the Project will likely have no effect on endangered and threatened species.

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.

According to the national Wetlands Inventory (website) there are no wetlands in or near the proposed place of use or points of diversion.

Determination: No significant impact

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

Determination: Not applicable.

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.

According to USDA Web Soil Survey, the soils within the 31 acre place of use are predominately Ipano-Hillon complex, Abor-Yawdim clay loam and Kobar Silty clay loam. All three soils consists of deep, well drained soils on glaciated uplands. Permeability is moderately slow and available water capacity is high on the Kobar Silty clay loam and low on the other two. Surface runoff is slow to medium, depending on the slope. This soils are classified as nonsaline to very slightly saline (0.0 to 3.9 mmhos/cm). No permanent degradation to soil quality, stability or moisture content is anticipated.

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 irrigated land has been utilized as unirrigated cropland for at least 50 years. No vegetation was listed as endangered or threatened by the USFWS for the project area. The control of noxious weeds is the responsibility of the property owner.

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.*

Determination: There will be no deterioration of air quality as a result of this appropriation.

HISTORICAL AND ARCHEOLOGICAL SITES - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project.*

Determination: NA- 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 additional impacts on other environmental resources were 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: There are no known local environmental plans or goals in this area.

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: The project is located in a rural area that has historically been used for agricultural purposes and will not have an impact on recreation or wilderness activities.

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

Determination: This project will have no impact on human health.

PRIVATE PROPERTY - Assess whether there is 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.

Determination: There are no additional government regulatory impacts on private property rights associated with this application.

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

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

Secondary Impacts: This assessment does not indicate possible secondary impacts on the physical environment and/or the local human population.

Cumulative Impacts: This assessment does not indicate possible cumulative impacts on the physical environment and/or the local human population.

3. *Describe any mitigation/stipulation measures:* N/A

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:* An alternative analysis of the project identified a no action alternative to the

construction of the subdivision. The no-action alternative would not allow the Applicant to meet the purpose of and need for the project.

PART III. Conclusion

1. ***Preferred Alternative:*** Issue a water use permit if the applicant proves the criteria in 85-2-311, MCA are met.

2 ***Comments and Responses***

3. ***Finding:***
Based on the significance 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:

No significant impacts have been identified; therefore an EIS is not necessary.

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

Name: Todd Netto

Title: Water Resource Specialist

Date: April 7, 2020