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:

WARDEN HUTTERIAN BRETHREN
ATTN: PAUL WOLLMAN
1054 W HARDER RD
WARDEN, WA 98857-9650

2. TYPE OF ACTION:

Groundwater Application for Beneficial Water Use Permit 76LJ 30151310

3. WATER SOURCE NAME:

Groundwater

4. LOCATION AFFECTED BY PROJECT:

SE of Section 5, Township 28N, Range 20W, Flathead County, Montana (Figure 1).

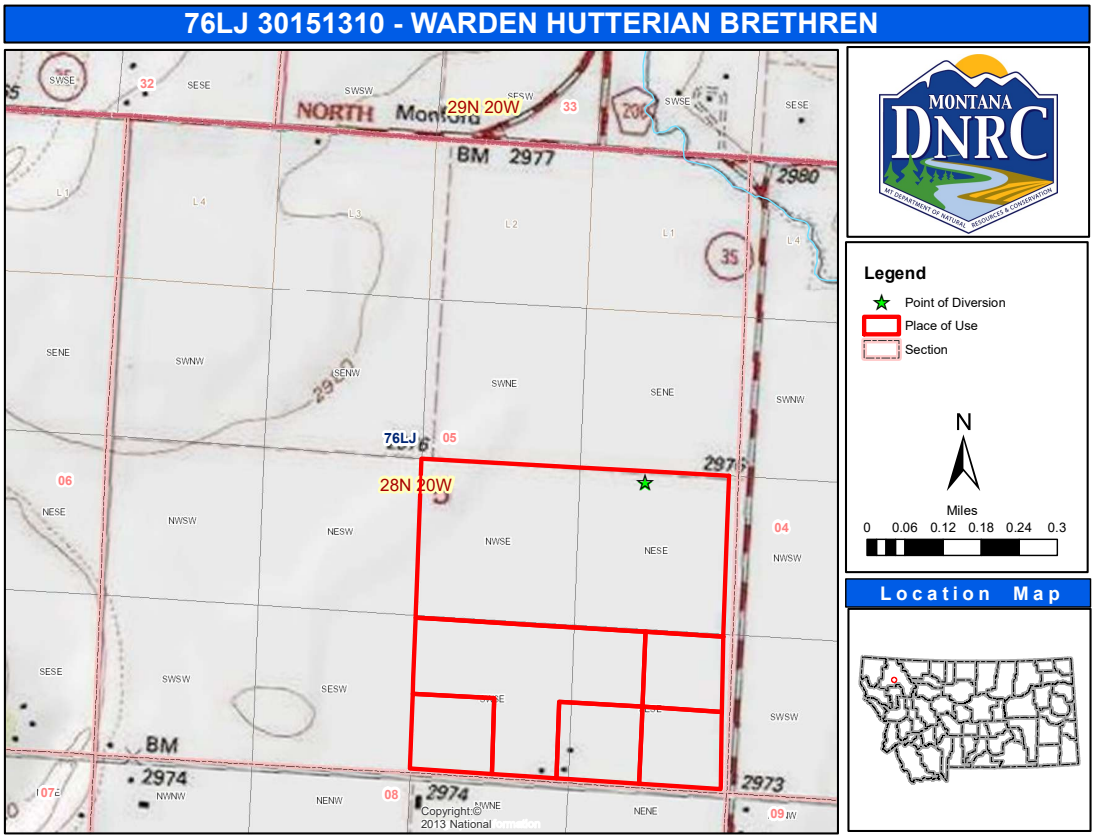

Figure 1. Map of the proposed place of use and point of diversion.

5. NARRATIVE SUMMARY OF THE PROPSED PROJECT, PURPOSE, ACTION TO BE TAKEN, AND BENEFITS:

The Applicant proposes to divert groundwater by means of a production well (GWIC ID: 313497; completed to 315-feet BGS) from April 15 – October 15 at 1.5 CFS (670.0 GPM) up to 261.0 AF/year for irrigation of 139.0 acres from April 15 – October 15.

The proposed POD is in the NWNESE of Section 5, Township 28N, Range 20W, Flathead County, Montana (Figure 1). The proposed place of use is in the SE of Section 5, Township 28N, Range 20W, Flathead County, Montana (Figure 1). The POD is located approximately 2.3 miles northwest of a perennial reach of Blaine Creek, 2.3 miles northwest of Mill Creek, and 2.5 miles northeast of the Flathead River (Egan Slough).

The Applicant proposes to irrigate 139.0 acres using three center pivot sprinkler systems. Two of the sprinkler systems are similarly sized and require 501.4 GPM and 507.1 GPM (1.1 CFS and 1.1 CFS, respectively). The third system is smaller and requires 168.5 GPM (0.4 CFS). The 501.4 GPM and the 168.5 GPM systems may operate simultaneously at the maximum requested flow rate. The 507.1 GPM system may only be operated individually. The Applicant intends to irrigate various crops on the agricultural property and may alternate crops from year to year. Irrigation is proposed to occur on portions of five parcels. The property owned by the Applicant encompasses a total of 79.1 acres. Four additional parcels will be irrigated through land use agreements between each owner and the Applicant.

The POD is in the Flathead River Basin (to and including Flathead Lake) (76LJ) in an area that is not subject to water right basin closures or controlled groundwater area restrictions.

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:

- U.S. Fish and Wildlife Service (USFWS): National Wetlands Inventory Wetlands Mapper
- Montana Natural Heritage Program: Endangered, Threatened Species, and Species of Special Concern
- Montana Department of Fish Wildlife & Parks (DFWP): Dewatered Stream Information
- Montana Department of Environmental Quality (MDEQ): Clean Water Act Information Center
- U.S. Natural Resource Conservation Service (NRCS): Web Soil Survey

Part II. Environmental Review

1. ENVIRONMENTAL IMPACT CHECKLIST:

PHYSICAL ENVIRONMENT

1.1 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.*

Net depletions to hydraulically connected surface water sources by pumping in the source aquifer primarily occur through propagation of drawdown through the overlying intertongued semi-confining layer. The DNRC identified three potentially hydraulically connected surface water sources: Blaine Creek, Mill Creek, and the Flathead River (including Flathead Lake). Depletion effects are expected to be dampened resulting in a constant year-round rate of depletion of 127.9 GPM (0.3 CFS) (equivalent to the total consumed volume of 206.3 AF). These depletions will manifest in Blaine Creek, Mill Creek, and the Flathead River at the locations and in the proportions identified in the table below. The Flathead River (including Flathead Lake), and Mill Creek are not on the MTDFWP list of chronically or periodically dewatered streams. Blaine Creek is listed, but the periodically dewatered reach is upstream of the hydraulically connected perennial reach.

Upstream Location and Apportionment of Net Depletions to Potentially Affected Surface Water Sources						
Source	**¼ ¼ Section**	**Section**	**Township**	**Range**	**Distance from POD (miles)**	**% of Total Net Depletion**
Blaine Creek	NW SW	15	28N	20W	2.3	35
Mill Creek	SW SE	10	28N	20W	2.3	35
Flathead River	NE SE	18	28N	20W	2.5	30

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.*

Flathead River: MDEQ Clean Water Act Information Center's 2020 Water Quality Information report lists the Flathead River as:

i. Water Quality Category 3: Waters for which there is insufficient data to assess the use support of any applicable beneficial use, so no use support determinations have been made;

ii. Use Class B-1: Waters classified as suitable for drinking, culinary, and food processing purposes after conventional treatment; bathing, swimming and recreation; growth and propagation of salmonid fishes and associated aquatic life, waterfowl and furbearers; and agricultural and industrial water supply.

Flathead Lake: MDEQ Clean Water Act Information Center's 2020 Water Quality Information report lists Flathead Lake as:

i. Water Quality Category 5: Waters here one or more applicable beneficial uses have been assessed as being impaired or threatened, and a TMDL is required to address the factors causing the impairment or threat;

ii. Use Class A-1: Waters classified as suitable for drinking, culinary and food processing purposes after conventional treatment for removal of naturally present impurities;

iii. "Fully supporting" for: primary contact recreation, agriculture, and drinking water; and,

iv. "Not fully supporting," for: aquatic life with probable causes for these designations being Mercury, Polychlorinated Biphenyls, Total Nitrogen, and Total Phosphorus.

The potential surface water depletions that may result from the proposed project are not anticipated to significantly affect water quality in these sources.

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.*

The proposed well (GWIC ID: 313497) is completed to 315-feet below ground surface (bgs) in the Flathead Deep Aquifer.

A Department analysis of Applicant supplied data from an 8-hour yield and drawdown test performed at 800.0 GPM on the production well, and aquifer properties generated using existing neighboring aquifer test data, concluded that there is a sufficient supply of groundwater in the source aquifer to satisfy the proposed appropriation.

A physical and legal availability analysis of the hydraulically connected surface water sources (Flathead River, Flathead Lake, Blaine Creek, and Mill Creek) concluded that there is a sufficient supply of water in those sources to satisfy existing legal demands and the anticipated depletions from groundwater pumping.

Determination: No significant impact.

1.2 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.*

The Applicant supplied data from an 8-hour yield and drawdown test performed at 800.0 GPM on the production well. Aquifer properties were generated using existing neighboring aquifer test data. The proposed system consists of:

i. Production well (GWIC ID: 313497) completed to a depth of 315.0 feet BGS by O'Keefe Drilling Co. (WWD-126) on October 8, 2020 in the Deep Aquifer. The well is screened between 275.0 and 315.0 feet BGS.
   a. Equipped with a 150-HP Goulds Model 9RCHC submersible turbine pump (or equivalent) controlled by a VFD;

ii. Pump house with system controls;

iii. Buried eight-inch PVC distribution piping; and,

iv. Three center-pivot sprinkler systems with end guns and hour meters:
   a. "West 8 Tower" system (eight support towers) which will operate at 507.1 GPM;
   b. "East 8 Tower" system (eight support towers) which will operate at 501.4 GPM;
   c. "North 3 Tower Mini" system (three support towers) which will operate at 168.5 GPM.

The Applicant will pump water from the well to the center-pivot systems through buried eight-inch water mains. The mains convey water to the three systems along four water main sections. Main Section 1 conveys water from the well to the East 8 Tower system located on the eastern side of the place of use. Main Section 2 conveys water from the well to a splitting tee. Main Section 3 conveys water from the tee to the North 3 Tower Mini system located on the northern end of the place of use. Main Section 4 conveys water from the tee to the West 8 Tower system located on the western side of the place of use. The Applicant will divert water as needed to meet crop demand throughout the irrigation season.

The VFD controlling the well pump will allow the water system to be operated over a variety of conditions, including the "West 8 Tower" system by itself (referred to as Scenario 1 by Applicant; 507.1 GPM) and the "East 8 Tower" and the "North 2 Tower Mini" systems simultaneously (referred to as Scenario 2 by Applicant; 1.5 CFS (670.0 GPM). The water system is designed to provide a minimum inlet pressure of 55 PSI (127 feet of head) at the "North 3 Tower Mini" and "East 8 Tower" systems and a minimum inlet pressure of 25 PSI (57.8 feet of head) at the "West 8 Tower," as indicated in the pivot sprinkler system specifications provided by the vendor and included with the application. During operation of the water system, friction losses within the water lines utilized to convey water to the "North 3 Tower Mini" and "East 8 Tower" systems (Main Sections 1 – 3) are estimated to range from 0.5 to 6.3 feet of head. Operating pressure at the control point near the wellhead will be set to maintain a minimum pressure of 58 PSI.

The Applicant calculated the following TDH conditions for operating Scenarios 1 and 2 based on anticipated operation and the system specifications: Scenario 1: 507.1 GPM at 276-feet TDH; and, Scenario 2: 670.0 GPM (the maximum requested volume of 1.5 CFS) at 312-feet TDH.

The selected pump can produce up to 1,177.0 GPM at a maximum TDH of 402-feet and at the lower flow rates utilizing the VFD. This pump was selected because the Applicant may seek additional water rights in the future for the maximum diversion rate which would enable them to operate all three pivot systems simultaneously. The Applicant provided a copy of the pump curve for the submersible turbine pump and the friction loss calculations for the different operating scenarios.

This project diverts from groundwater. It will not create any channel impacts, barriers, dams, or riparian impacts to surface waters. Any surface water depletions are physically and legally available. Existing wells in the source aquifer will still have sufficient water column from which to draw water.

Determination: No significant impact.

1.3 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, 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."*

The Montana Natural Heritage Program website was reviewed to determine if there are any threatened or endangered fish, wildlife, plants, aquatic species, or any "species of special concern" in the project area that could be impacted by the proposed project. Seven animal and one plant species of concern (Table 1) were identified within the project area. Of these species, the Grizzly Bear (Ursus arctos) is listed as threatened by the USFWS. This general area has been in agriculture for many years, and it is not anticipated that any species of concern will be further impacted by the proposed project.

Table 1. Species of Concern

Species Group	Common Name	Scientific Name
Mammals	Grizzly Bear	*Ursus arctos*
Birds	Bobolink	*Dolichonyx oryzivorus*
Birds	Brown Creeper	*Certhia americana*
Birds	Evening Grosbeak	*Coccothraustes vespertinus*
Birds	Great Blue Heron	*Ardea herodias*
Birds	Great Gray Owl	*Strix nebulosa*
Birds	Pileated Woodpecker	*Dryocopus pileatus*
Bryophytes	Warnstorfia Moss	*Sarmentypnum exannulatum*

Determination: No significant impact.

Wetlands and Ponds - *Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted. For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.*

Determination: N/A, project does not involve wetlands or ponds.

1.4 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.*

The proposed multiple domestic, commercial, and lawn and garden uses will not negatively impact the soil quality, stability, or moisture content. The soil types in the project area are:

i. Creston silt loam, 0 to 3 percent slopes. Moderately high to high capacity to transmit water. Nonsaline to very slightly saline.

ii. Yeoman stony loam, 0 to 7 percent slopes. Moderately high to high capacity to transmit water. Nonsaline to very slightly saline.

iii. Flathead very fine sandy loam, 0 to 3 percent slopes. Moderately high to high capacity to transmit water. Nonsaline to very slightly saline.

Determination: No significant impact.

1.5 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.*

This area is already agriculturally developed. Any existing native vegetation has likely already been disturbed. It is not anticipated that issuance of a water use permit will contribute to the establishment or spread of noxious weeds in the project area. Noxious weed prevention and control will be the responsibility of the landowners, who must follow local noxious weed regulations.

Determination: No significant impact.

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

There will be no impact to air quality associated with issuance of the proposed permit for beneficial use of groundwater.

Determination: No significant impact.

1.7 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: N/A, project not located on State or Federal Lands.

1.8 DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - *Assess any other impacts on environmental resources of land, water, and energy not already addressed.*

All impacts to land, water, and energy have been identified and no further impacts are anticipated.

Determination: No significant impact.

HUMAN ENVIRONMENT

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

The project is consistent with planned land uses.

Determination: No significant impact.

1.10 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.*

The proposed project will not inhibit, alter, or impair access to present recreational opportunities in the area. The project is not expected to create any significant pollution, noise, or traffic congestion in the area that may alter the quality of recreational opportunities. The proposed place of use and diversion do not exist on land designated as wilderness.

Determination: No significant impact.

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

This proposed use will not adversely impact human health.

Determination: No significant impact.

1.12 PRIVATE PROPERTY - *Assess whether there are any government regulatory impacts on private property rights. If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights*.

No government regulatory impacts on private property rights.

Determination: No impact.

1.13 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?* None identified.

(*b)* *Local and state tax base and tax revenues?* None identified.

(c) *Existing land uses?* None identified.

(*d)* *Quantity and distribution of employment?* None identified.

(e) *Distribution and density of population and housing?* None identified.

(f) *Demands for government services?* None identified.

(g) *Industrial and commercial activity?* None identified.

(h) *Utilities?* None identified.

(i) *Transportation?* None identified.

(j) *Safety?* None identified.

(k) *Other appropriate social and economic circumstances?* None identified.

2. SECONDARY AND CUMULATIVE IMPACTS ON THE PHYSICAL ENVIRONMENT AND HUMAN POPULATION:

Secondary Impacts: None identified.

Cumulative Impacts: None identified.

3. DESCRIBE ANY MITIGATION/STIPULATION MEASURES:

None.

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 alternative to the proposed action would be the no action alternative. The no action alternative would not authorize the diversion of groundwater at this location.

Part III. Conclusion

1. PREFFERED ALTERNATIVE:

Issue a water use permit if the Applicant proves the criteria in 85-2-311 MCA are met.

2. COMMENTS AND RESPONSES:

None.

3. FINDING:

Based on the significance criteria evaluated in this EA, is an EIS required? **___Yes _X_No**

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

No significant impacts related to the proposed project have been identified.

4. NAME OF PERSON(S) RESPONSIBLE FOR PREPARATION OF EA:

Name: Travis Wilson
Title: Water Resource Specialist
Date: April 12, 2024