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:

Mark G Owens, LBO Properties LP, and Flathead Village Greens LLC
500 Palmer Dr
Kalispell, MT 59901

2. TYPE OF ACTION:

Beneficial Water Use Permit for Groundwater Use No. 76LJ 30158865

3. WATER SOURCE NAME:

Groundwater – Flathead Deep Alluvial Aquifer

4. LOCATION AFFECTED BY PROJECT:

SE, S2N2, NWNE Section 14, and SWSWNW, W2NWSW Section 13, Township (T) 27N, Range (R) 21W, Flathead County, Montana.

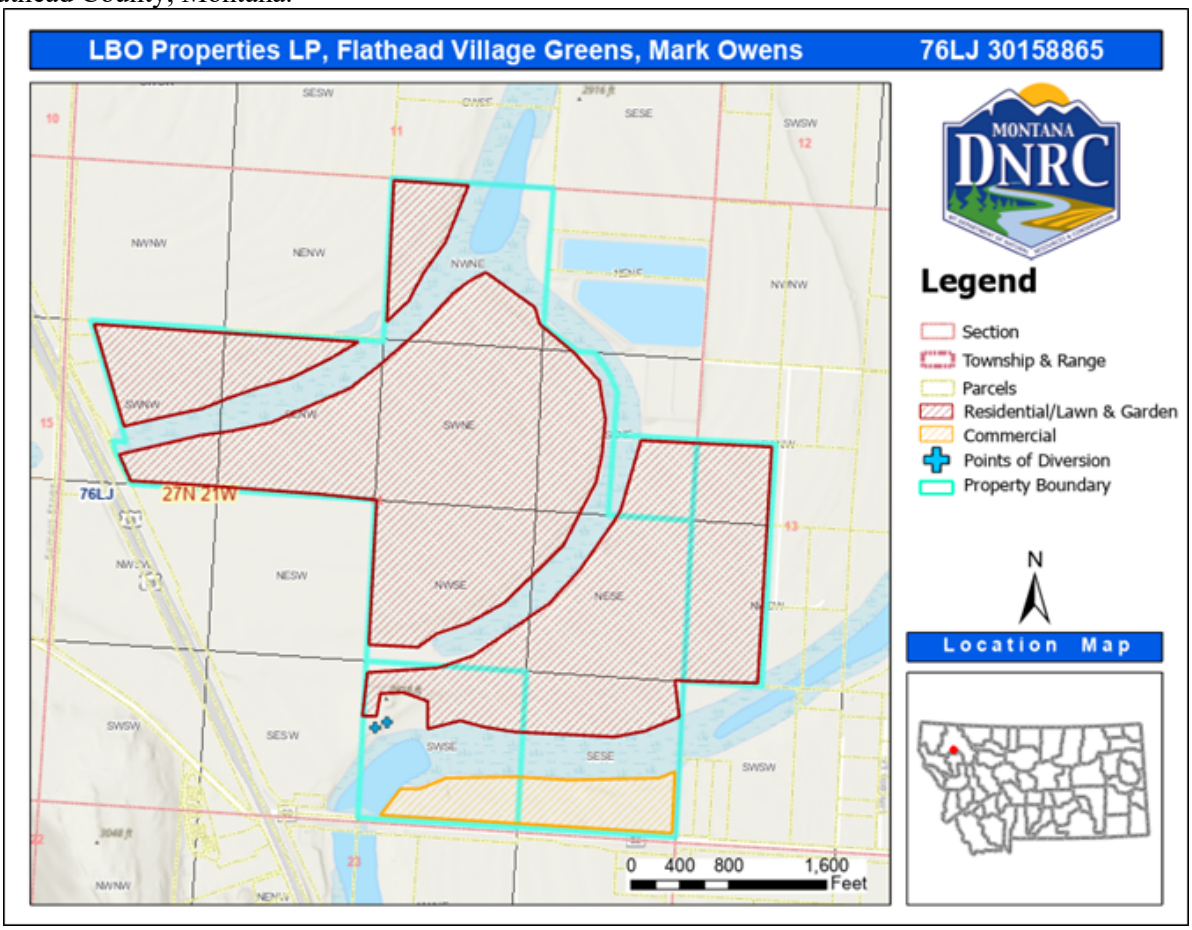

Figure 1. Map of the proposed place of use and point of diversion.

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

The Applicant proposes to divert groundwater at 300 gallons per minute (GPM) and up to 331.80 acre-feet (AF) annually by means of two public water supply (PWS) wells (CF-1 GWIC ID: 318895, and CF-2 GWIC ID: 319285). The purposes of this permit application are multiple domestic for 700 equivalent dwelling units (EDU's) at 191.00 AF for year-round use. Seventy acres of lawn and garden irrigation at 135.80 AF from April 15 – October 15. Commercial at 5.00 AF for year-round use.

The proposed appropriation and project will be constructed within 363.32 acres, however the irrigated acreage applied for is 70 acres as shown below. The multiple domestic, lawn and garden, and commercial purposes associated with this application are in Flathead County, Montana, within the following legally described locations (Figure 1):

- 63 acres in the SE, S2N2, NWNE Section 14, T 27N, R 21W.
- 7 acres in the SWSWNW, W2NWSW Section 13, T 27N, R 21W.

This Application seeks to permit water to serve the water needs of the Cooper Farms Subdivision at full build-out. The two proposed PWS wells are completed to 304-ft (CF-1) and 320-ft (CF-2) below ground surface (BGS) in the Flathead Deep Alluvial Aquifer. The proposed water system will be a registered public water supply regulated by the Montana Department of Environmental Quality (DEQ) after all DNRC and DEQ approvals are obtained.

The project is in the Flathead River (to and including Flathead Lake) Basin (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 85-20-401 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
- U.S. National Park Service (NPS) Water Rights Branch
- U.S. Geological Survey (USGS)
- Montana Department of Transportation (MDOT): Erosion and Sediment Control Best Management Practices Manual
- Montana Department of Commerce: Census and Economic Information Center

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.*

The Applicant proposes to divert groundwater from two PWS wells that are approximately 22,800-feet southwest of the Flathead River, and 7,200-feet north of Flathead Lake. The proposed appropriation will pump at 300 GPM to obtain an annual volume of 331.80 AF. DNRC Water Rights Bureau calculations of physically available water have shown that there is sufficient water available in the Deep Aquifer to supply this appropriation in consideration of existing water rights. Methods and calculations are available in the Preliminary Determination document for this Beneficial Water Use Permit.

The Flathead River and Flathead Lake are hydraulically connected to the Deep Aquifer but are not identified by FWP as chronically or periodically dewatered.

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 Applicant proposes to divert and use groundwater. The reach of the Flathead River which may be depleted by groundwater pumping is listed as Not Assessed for all beneficial uses. Flathead Lake which may be depleted by groundwater pumping is listed as Fully Supporting of agriculture, drinking water, and recreational uses. Flathead Lake is listed as Not Fully Supporting of aquatic life due to mercury, polychlorinated biphenyls, nitrogen, and phosphorus found in the Lake.

Discharge generated from the multiple domestic and commercial uses will be piped to Lakeside Water and Sewer Districts' spray irrigation system. The water will be treated, and land applied by the Lakeside Water and Sewer District. This treatment facility is currently in place and practicing land application of treated wastewater; no new impacts from this project are expected. The lawn and garden irrigation excess discharge will return to the subsurface as return flow to the shallow groundwater. Excessive irrigation may cause soluble pesticides and nutrients to leach into the shallow groundwater. The soils that comprise 82% of the project area are Cd and Kv (**Table 2**) which have depths to the water table of 36-60 inches and >80 inches, respectively. However, if occurring, would be minimal due to the scale of the project.

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.*

Drawdown greater than or equal to one foot occurs within ~19,000 ft of the production wells. There are 236 wells with active water rights and total depths greater than 100 ft that are located within the one-foot drawdown contour. The maximum drawdown predicted is 42-feet in wells that are located nearest to the production wells. DNRC Water Science Bureau analysis and aquifer modeling (using applicant supplied 72-hour aquifer testing data) predicts that the wells located in the one-foot drawdown will have adequate water column remaining.

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.*

As proposed, the Cooper Farms Subdivision PWS system will consist of:

- CF-1 (GWIC ID: 318895; completed to a depth of 304.0 feet BGS by O'Keefe Drilling Company (WWD-718) on January 25, 2022, in the Deep Aquifer);
- CF-2 (GWIC ID: 319285; completed to a depth of 320.0 feet BGS by O'Keefe Drilling Company (WWD-718) on March 4, 2022, in the Deep Aquifer);
- CF-1 and CF-2 are proposed to have a Gould's model 275 H30 submersible pump with a 30-horsepower motor controlled by an integral variable frequency drive (VFD).
- Bolted steel 423,000-gallon storage tank;
- Booster pump station with heat, lights, ventilation, and a floor drain consisting of:
    - Five (5) Grundfos vertical multiple stage centrifugal pumps, two (2) Model CR32-2-1 with 10 horsepower motors, and three (3) Model CR95-3-2 with 40 horsepower motors;
    - VFD for each pump;
    - Well-X-Trol Model 250 hydropneumatic tank;

- An insert magnetic flowmeter;
- Silent check valves on the discharge side of each pump;
- Pressure gauges on the suction and discharge sides;
- A smooth-nosed sample cock; and,
- All necessary pipes, valves, and fittings.

- A 250-kW generator for backup power to the well pumps and booster pumps;
- Approximately 26,000 lineal feet of 8", 10", and 12" water mains with proper valving, hydrants, and controls; and,
- Each lot will be serviced with HDPE, SIDR 7 water lines, curb stop, and a meter box.

The means of diversion (wells) have already been constructed. Since this is a groundwater appropriation, there will be no channel impacts, flow modifications, barriers, dams, or riparian impacts to the Flathead River or Flathead Lake.

The two PWS wells have been drilled and constructed by O'Keefe Drilling (WWC-718) and the water system is being designed by licensed engineers from Carver Engineering. The diversion works will comply with ARM 36.21.6 as well as appurtenant DEQ PWS and Flathead County laws, rules, and regulations.

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 Township 27N, Range 21W that could be impacted by the proposed project. Fourteen animal species of concern (**Table 1**) were identified within the township and range where the project is located. Of these species, the Grizzly Bear *(Ursus arctos)* is listed as threatened by the USFWS. The project area was previously utilized as agricultural land, at least since 1979 via aerial photos. The habitat for the Grizzly Bear has previously been altered and/or fragmented; further disruption is not likely. The migratory birds observed in this area may experience minimal impact due to the expected noise pollution and human presence around the wetland habitat and nesting grounds. Water quality associated with the migratory bird habitat has likely been impacted previously by agriculture run-off into the sloughs and no added impacts are predicted. The project area lies perpendicular to two major roadways; added vehicles to the area is not likely to impact the listed species of concern.

Table 1. Species of Concern in and around Section 13 and 14, Township 27N, Range 21W.

Common Name	Scientific Name	USFWS – Status of a taxon under the federal Endangered Species Act of 1973
American Bittern	Botaurus lentiginosus	MBTA
Bobolink	Dolichonyx oryzivorus	MBTA; BCC10; BCC11; BCC17
Brewer's Sparrow	Spizella breweri	MBTA
Brown Creeper	Certhia americana	MBTA
Cassin's Finch	Haemorhous cassinii	MBTA; BCC10
Columbia Water-meal	Wolffia columbiana	
Common Tern	Sterna hirundo	MBTA
Fisher	Pekania pennanti	
Great Blue Heron	Ardea herodias	MBTA
Grizzly Bear	Ursus arctos	LT
Oblique Ambersnail	Oxyloma nuttallianum	
Pileated Woodpecker	Dryocopus pileatus	MBTA
Trumpeter Swan	Cygnus buccinator	MBTA
Veery	Catharus fuscescens	MBTA

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.*

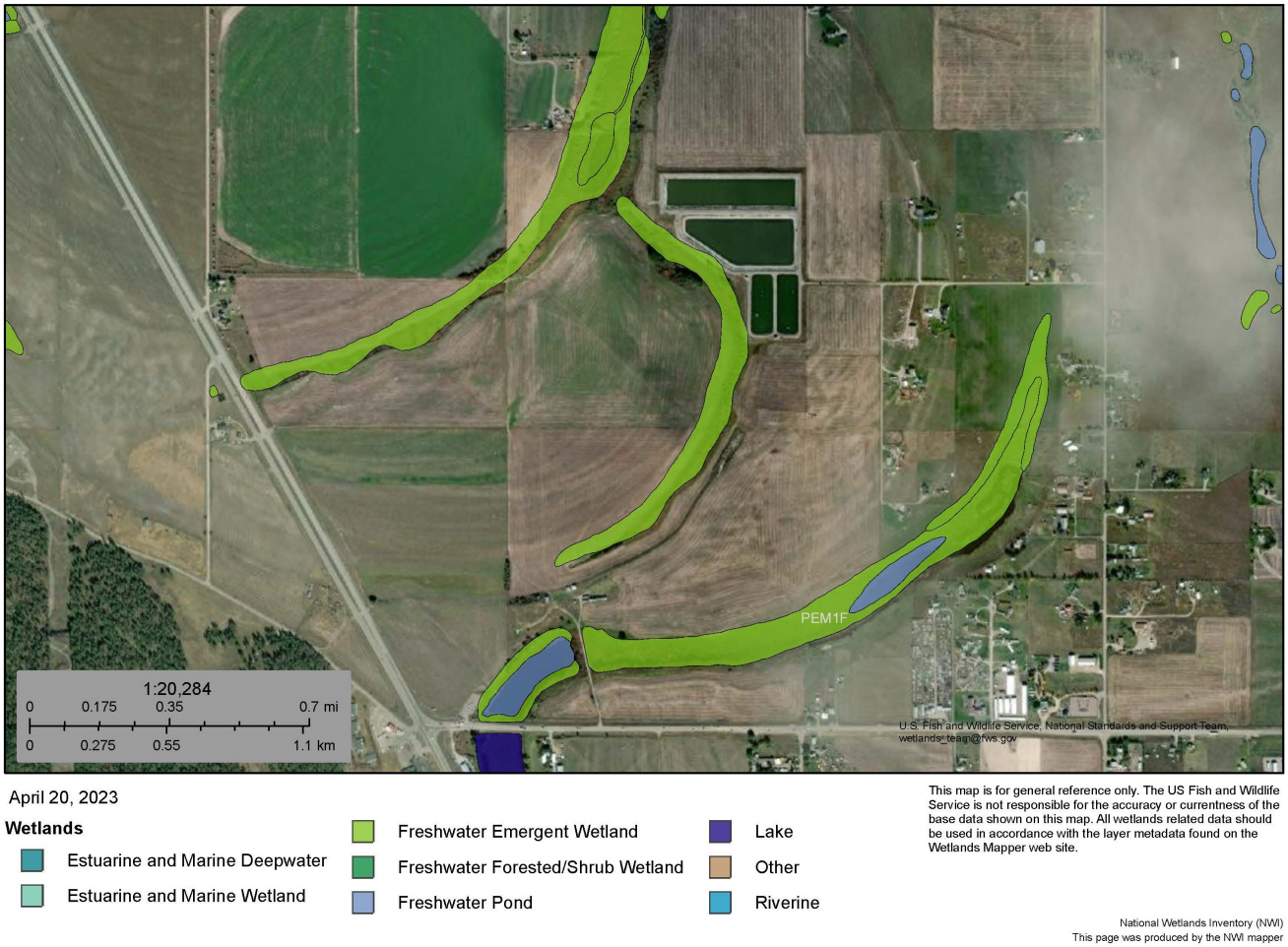

Figure 2. US FWS National Wetlands Inventory Map of project area.

There are three wetland areas within the project area, all classified as Freshwater Emergent Wetlands by the US FWS. As seen in **Figure 1**, the project development occurs around the wetlands and will not directly affect or disturb the wetland areas (**Figure 2**). There is a potential beneficial impact of the land use changing from

agricultural to domestic uses in that pollutants present in agricultural practices will no longer run off into the surrounding wetlands.

Determination: No significant impact.

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

Two Freshwater Ponds are present within the project area. The project development occurs around the ponds and will not directly affect or disturb the pond areas (**Figure 2**). There is a potential beneficial impact of the land use changing from agricultural to domestic uses in that pollutants present in agricultural practices will no longer run off into the surrounding ponds.

Determination: No significant impact.

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 soil(s) is heavy in salts that could cause saline seep.*

There are ten soil types present in the project area identified in **Table 2**. Of these ten, Cd – Corvallis silty clay loam and Kv – Kalispell silt loam, moderately deep over sand, make up over 80% of the soils present.

Table 2. Soil Types Within the Project Area in Section 21, Township 35N, Range 21W.

Name	Percent of Project Area (%)	Maximum Salinity (mmhos/cm)	Drainage Class
Aa – Alluvial land	5.2	0.0 – 2.0	Poorly drained
Cd – Corvallis silty clay loam	29.0	0.0 – 3.5	Somewhat poorly drained
Ce – Creston silt loam	0.1	0.0 – 2.0	Well drained
Da – Demers-Kalispell silt loams (0-3% slopes)	5.3	2.0 – 8.0	Well drained
Dc – Demers-Kalispell silt loams (7-25% slopes)	0.4	2.0 – 8.0	Well drained
Ka – Kalispell fine sandy loam, moderately deep over sand	1.7	2.0 – 3.0	Well drained
Kt – Kalispell loam, moderately deep over sand	1.5	2.0 – 3.0	Well drained
Kv – Kalispell silt loam, moderately deep over sand	53.0	2.0 – 3.0	Well drained
Ms – Muck and peat	0.9	0.0 – 2.0	Very poorly drained
Se – Somers silt loam	0.2	0.0 – 3.0	Moderately well drained
W – Water	2.8	N/A	N/A

It is not anticipated that the proposed project will have a negative impact on the soil quality, stability, or moisture content. The current agriculture uses have likely contributed to loss of biodiversity, compaction, exhaustion of nutrients, erosion, and pollution. Further degradation of the soil is not expected.

The soils within the project area that contain the highest salinity are Da and Dc, with a salinity range of 2.0 – 8.0 mmhos/cm. This range is classified as "very slightly saline to moderately saline" by the NRCS Web Soil Survey. Soils Da and Dc make up approximately 5.7% of the total soil within the project area. The remaining soil types are classified as nonsaline to very slightly saline. Therefore, minimal seep is expected.

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.*

It is not anticipated that issuance of a water use permit will significantly contribute to the establishment or spread of noxious weeds in the project area. Noxious weed prevention and control will be the responsibility of the landowner, who must follow all applicable noxious weed regulations. Since the project area is currently used for agriculture, native vegetation has already been removed from the area.

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 on 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 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 wells are drilled on private property. 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 or noise 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. There may be increased traffic congestion in the area due to the proposed high number of dwelling units made available.

Determination: No significant impact.

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

No negative impact on human health is anticipated from this proposed use.

Determination: No 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?* The increase of residents to the area may alter the quantity of employment opportunities available.

(e) *Distribution and density of population and housing?* The project will provide more housing options to help with the increasing population growth of the Flathead Valley.

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

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

(h) *Utilities?* This project will require the installation and/or connection to utility services that may not be in place as of current. There may be impacts associated with the installation of said utilities.

(i) *Transportation?* There will be an increase of movements of people and change in current transportation patterns associated with this area that exist currently.

(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: Potential secondary impacts associated with this proposed appropriation include dust abatement, noise pollution, and soil erosion impacts during construction. According to the MDOT's Erosion and Sediment Control Best Management Practices Manual, construction activities can contribute more sediment to waterways than is naturally deposited naturally over several decades. Suspended sediment in storm water runoff is a leading cause of water quality impairment in Montana. During construction there will be an increase in large construction vehicles on roadways. The projected time requested for completion of the project is 35 years. This timeframe increases the likelihood of secondary impacts adversely affecting the physical and human environment.

Cumulative Impacts: A beneficial, cumulative impact resulting from this project is more housing options to account for population growth. Flathead County experienced a population increase of 14.8% from 2010 to 2020, while total housing units have only increased 6.2% from 2010 to 2020. The projected population growth for Flathead County from 2020 to 2040 is 19,489 individuals. The demand for housing is apparent in the greater project area.

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 85-20-401 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: Alexis Alderman
Title: Water Resource Specialist
Date: 11 August 2023