BEFORE THE DEPARTMENT OF
NATURAL RESOURCES AND CONSERVATION
OF THE STATE OF MONTANA

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APPLICATION FOR BENEFICIAL WATER USE PERMIT NO. 76LJ 30150985 BY MEADOW LAKE INVESTMENTS, LLC	**)** **)** **)**	**PRELIMINARY DETERMINATION TO GRANT PERMIT**

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On January 6, 2021, Meadow Lake Investments, LLC (Applicant) submitted Application for Beneficial Water Use Permit No. 76LJ 30150985 to the Kalispell Water Resources Office of the Department of Natural Resources and Conservation (Department or DNRC) for 360 gallons per minute (GPM) up to 222.9 acre-feet (AF) diverted volume from groundwater for irrigation and commercial (water hazard) uses at the Meadow Lake Golf Course. The Department published receipt of the Application on its website. The Application was determined to be correct and complete as of June 28, 2021. An Environmental Assessment for this Application was completed on July 21, 2021.

INFORMATION

The Department considered the following information submitted by the Applicant, which is contained in the administrative record:

Application as filed:

- Groundwater Application for Beneficial Water Use Permit Form 600-GW
- Aquifer Testing Addendum Form 600-ATA
- Attachments
- Maps:
  - Site Vicinity Map

- Site Layout Map
- Aquifer Testing Map

Information Received after Application Filed

- Attachment G addendum, received January 25, 2021
- Revised page 2 of application, received February 26, 2021
- Aquifer Test Variance Request, received June 11, 2021

Information within the Department's Possession/Knowledge

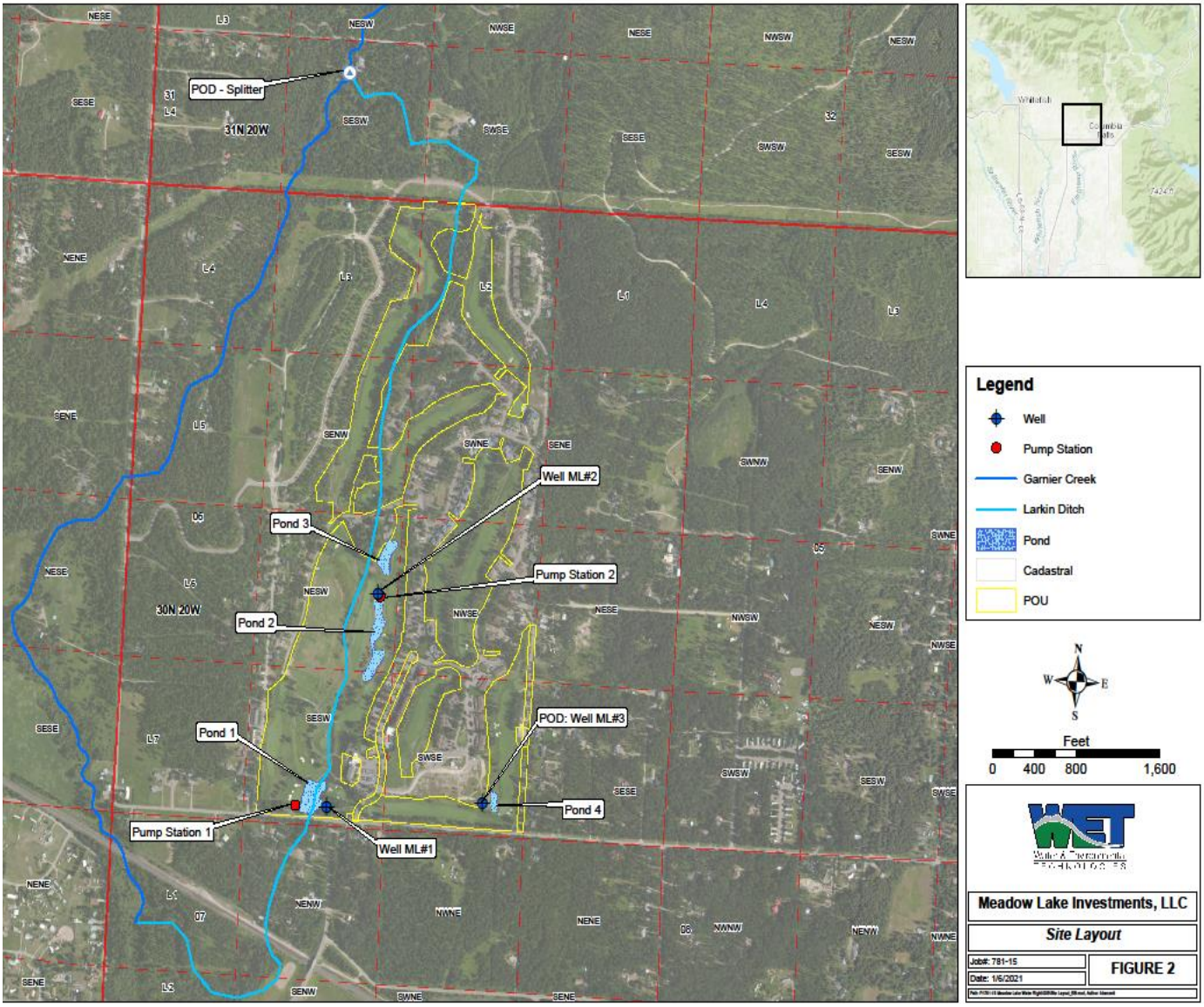
- Aquifer Test Report by DNRC Water Management Bureau Groundwater Hydrologist Attila Folnagy, dated May 28, 2021.
- Depletion Report by DNRC Water Management Bureau Groundwater Hydrologist Attila Folnagy, dated May 28, 2021.
- Mean monthly stream flow data for the Flathead River from the USGS Gaging Station #12363000 at Columbia Falls, MT (period of record October 1951 – September 2020) used for physical/legal availability analysis.
- Mean monthly stream flow data for the Flathead River (Flathead Lake) from the USGS Gaging Station #12372000 near Polson, MT (period of record October 1938 – September 2020) used for physical/legal availability analysis.
- List of existing surface water rights on the Flathead River from USGS Gage #12363000 at Columbia Falls, MT to the inlet of Flathead Lake used to quantify physical/legal availability.
- List of existing surface water rights on Flathead Lake from the inlet of Flathead Lake to USGS gage #12372000 near Polson, MT used to quantify physical/legal availability.

The following information is routinely considered by the Department. It is not included in the administrative file for this application but is available upon request. Please contact the Kalispell Regional Office at 406-752-2288 to request copies of the following documents:

- Technical Memorandum: Legal Availability of Groundwater in the Flathead Deep Aquifer (2019)
- Technical Memorandum: Pond and Wetland Evaporation/Evapotranspiration (2019)

- Technical Memorandum: DNRC Consumptive Use Methodology – Turf Grass, dated March 23, 2010

The Department has fully reviewed and considered the evidence and argument submitted in this Application and preliminarily determines the following pursuant to the Montana Water Use Act (Title 85, chapter 2, part 3, MCA).



PROPOSED APPROPRIATION

FINDINGS OF FACT

1. The Applicant proposes to divert water from a 500-foot deep well (GWIC #288602), for irrigation of 114.4 acres and commercial use (water hazards) associated with operation of the Meadow Lake Golf Course. The well is completed in the Deep Alluvial Aquifer of the Flathead Valley. The proposed point of diversion is in the SESWSE Section 6, Township 30N, Range 20W, Flathead County. The proposed period of diversion is March 1-October 31. The proposed period of use for irrigation use is April 20-October 10, and the proposed period of use for commercial use is March 1-October 31. The place of use is the E2W2 and W2E2 Section 6, Township 30N, Range 20W, Flathead County.

2. The total proposed appropriation is for 360 GPM flow up to 222.9 AF diverted volume per annum. The requested flow rate is based on the well pumping at full capacity. The irrigation purpose will use up to 189.5 AF and commercial use will use up to 36.6 AF for filling and maintenance of four water hazards. The sum of the volume for both purposes exceeds the requested volume, but due to the plan of operation and limitations on divertible volume during the months of July and August due to the pumping rate, the combined amount will be limited to 222.9 AF. The total consumptive use of the proposed appropriation for the purpose of analyzing legal availability and adverse effect is calculated to be 167 AF per annum. This amount is calculated based on the assumption of 100% consumptive use of 36.6 AF for the commercial purpose and 70% consumptive use of the remaining permitted amount (186.3 AF) for the irrigation purpose.

3. There are seven existing water rights which are supplemental to the proposed groundwater permit. This permit is being requested to supplement the existing rights because they are not adequate to supply all the needed water and are unreliable sources of water. Table 1 lists the existing water rights.

Table 1. Existing water rights for Meadow Lake Golf Course

Water Right No.	Priority Date	Source	Flow Rate	Volume (AF)
76LJ 131493-00	10/1/1914	Garnier Creek	1.25 CFS	158.4

76LJ 26716-00	11/13/1979	Groundwater Pit	N/A	30
76LJ 26723-00	1/2/1980	Garnier Creek	1.25 CFS	16.5
76LJ 74002-00	2/23/1990	Garnier Creek	100 GPM	6
76LJ 83787-00	9/24/1992	UT Garnier Creek	N/A	7.5
76LJ 71015-00	2/24/1989	Groundwater	320 GPM	29.2
76LJ 8080-00	4/19/1976	Groundwater	45 GPM	16

4. Provisional permits 76LJ 26716-00, 76LJ 26723-00, and 76LJ 74002-00 have inconsistencies with them related to operation at the golf course and the Applicant is proposing to withdraw these permits upon issuance of Provisional Permit 76LJ 30150985 and Change Application 76LJ 30150982.

5. Groundwater Certificate 76LJ 8080-00 appears to never have been put to use per information provided to past DNRC employees by the owner of the golf course at the time. The Applicant has agreed to withdraw this certificate upon issuance of Provisional Permit 76LJ 30150985 and Change Application 76LJ 30150982.

6. Provisional Permit 76LJ 83787-00 is for the collection of surface water runoff entering into Pond #4. It is a passive water collection system and will continue to be operated in the same manner as historically operated. The proposed permit (76LJ 30150985) and/or change application 76LJ 30150982 will be used as needed to supplement this water right and keep Pond #4 full during the golf course operating season by offsetting evaporation or refilling the pond if it is drained.

7. Statement of Claim 76LJ 131493-00 was originally filed for flood irrigation of a field where the Meadow Lake Golf Course now sits. The claim is concurrently being changed to reflect surface water diversion from Garnier Creek in conjunction with the groundwater appropriation of this proposed permit. This permit and the existing claim will supplement each other once authorized.

8. Provisional Permit 76LJ 71015-00 is for groundwater from two wells used primarily by the Meadow Lake Water & Sewer District's public water supply system. The wells are only available for use by the golf course if there is additional water available above that required by

the public water system, which is rare in summer making it an unreliable source of water for the golf course. The wells are completed in the same aquifer (deep aquifer) as the proposed permit. The verified volume for this existing permit is 29.2 AF per annum and the verified flow rate is 320 GPM. In total, the use from the existing permit and the proposed permit cannot exceed 242 AF per annum, which is the maximum beneficial use for all water needs the Applicant can show for golf course operation.

9. The combined maximum annual use of all water rights for the irrigation and commercial (water hazard) uses at the Meadow Lake Golf Course will be 242 AF. The combined irrigation of all rights for the golf course will be limited to a total applied volume of 205.4 AF and the combined use for the water hazard ponds will be limited to a total volume of 36.6 AF. It will be up to the water right owner to manage their system how they see fit to best achieve their maximum beneficial use each year. All water withdrawn from Pond #1 for irrigation or for filling of Ponds #2 through #4 will be measured. All surface water in the ditch will be measured prior to entering Pond #1.

10. The application will be subject to the following conditions, limitations or restrictions.

WATER USE MEASUREMENT

THE APPROPRIATOR SHALL INSTALL A DEPARTMENT APPROVED IN-LINE FLOW METER AT PUMP SITE #1 WHICH WILL MEASURE ALL DIVERSIONS FROM POND #1. THE APPROPRIATOR SHALL ALSO INSTALL AN IN-LINE FLOW METER BETWEEN WELL ML#3 AND POND #1. WATER MUST NOT BE DIVERTED UNTIL THE REQUIRED MEASURING DEVICES ARE IN PLACE AND OPERATING. ON A FORM PROVIDED BY THE DEPARTMENT, THE APPROPRIATOR SHALL KEEP A WRITTEN DAILY RECORD OF THE FLOW RATE AND VOLUME OF ALL WATER MEASURED EACH MEASURING DEVICE, INCLUDING THE PERIOD OF TIME. RECORDS SHALL BE SUBMITTED BY JANUARY 31 OF EACH YEAR AND UPON REQUEST AT OTHER TIMES DURING THE YEAR UNTIL THE PERMIT IS PERFECTED AND THE DEPARTMENT RECEIVES A PROJECT COMPLETION NOTICE. IN THE EVENT THAT AUTHORIZED FLOW RATES AND/OR VOLUMES HAVE BEEN EXCEEDED DURING PERFECTION OF THE PERMIT OR THE APPROPRIATOR FAILS TO SUBMIT ANNUAL REPORTS, THE DEPARTMENT MAY CONTINUE TO REQUIRE ANNUAL SUBMISSIONS OF MEASUREMENT RECORDS. FAILURE TO SUBMIT REPORTS MAY BE CAUSE FOR REVOCATION OF THE PERMIT. RECORDS MUST BE SENT TO THE KALISPELL WATER RESOURCES REGIONAL OFFICE. THE APPROPRIATOR SHALL MAINTAIN THE MEASURING DEVICES SO THEY ALWAYS OPERATE PROPERLY AND MEASURE FLOW RATE AND VOLUME ACCURATELY.

§ 85-2-311, MCA, BENEFICIAL WATER USE PERMIT CRITERIA

GENERAL CONCLUSIONS OF LAW

11. The Montana Constitution expressly recognizes in relevant part that:

> (1) All existing rights to the use of any waters for any useful or beneficial purpose are hereby recognized and confirmed.
> (2) The use of all water that is now or may hereafter be appropriated for sale, rent, distribution, or other beneficial use . . . shall be held to be a public use.
> (3) All surface, underground, flood, and atmospheric waters within the boundaries of the state are the property of the state for the use of its people and are subject to appropriation for beneficial uses as provided by law.

Mont. Const. Art. IX, §3. While the Montana Constitution recognizes the need to protect senior appropriators, it also recognizes a policy to promote the development and use of the waters of the state by the public. This policy is further expressly recognized in the water policy adopted by the Legislature codified at § 85-2-102, MCA, which states in relevant part:

> (1) Pursuant to Article IX of the Montana constitution, the legislature declares that any use of water is a public use and that the waters within the state are the property of the state for the use of its people and are subject to appropriation for beneficial uses as provided in this chapter. . . .
> (3) It is the policy of this state and a purpose of this chapter to encourage the wise use of the state's water resources by making them available for appropriation consistent with this chapter and to provide for the wise utilization, development, and conservation of the waters of the state for the maximum benefit of its people with the least possible degradation of the natural aquatic ecosystems. In pursuit of this policy, the state encourages the development of facilities that store and conserve waters for beneficial use, for the maximization of the use of those waters in Montana . . .

12. Pursuant to § 85-2-302(1), MCA, except as provided in §§ 85-2-306 and 85-2-369, MCA, a person may not appropriate water or commence construction of diversion, impoundment, withdrawal, or related distribution works except by applying for and receiving a permit from the Department. See § 85-2-102(1), MCA. An applicant in a beneficial water use permit proceeding must affirmatively prove all of the applicable criteria in § 85-2-311, MCA. Section § 85-2-311(1) states in relevant part:

… the department shall issue a permit if the applicant proves by a preponderance of evidence that the following criteria are met:

(a) (i) there is water physically available at the proposed point of diversion in the amount that the applicant seeks to appropriate; and

(ii) water can reasonably be considered legally available during the period in which the applicant seeks to appropriate, in the amount requested, based on the records of the department and other evidence provided to the department. Legal availability is determined using an analysis involving the following factors:

(A) identification of physical water availability;

(B) identification of existing legal demands on the source of supply throughout the area of potential impact by the proposed use; and

(C) analysis of the evidence on physical water availability and the existing legal demands, including but not limited to a comparison of the physical water supply at the proposed point of diversion with the existing legal demands on the supply of water.

(b) the water rights of a prior appropriator under an existing water right, a certificate, a permit, or a state water reservation will not be adversely affected. In this subsection (1)(b), adverse effect must be determined based on a consideration of an applicant's plan for the exercise of the permit that demonstrates that the applicant's use of the water will be controlled so the water right of a prior appropriator will be satisfied;

(c) the proposed means of diversion, construction, and operation of the appropriation works are adequate;

(d) the proposed use of water is a beneficial use;

(e) the applicant has a possessory interest or the written consent of the person with the possessory interest in the property where the water is to be put to beneficial use, or if the proposed use has a point of diversion, conveyance, or place of use on national forest system lands, the applicant has any written special use authorization required by federal law to occupy, use, or traverse national forest system lands for the purpose of diversion, impoundment, storage, transportation, withdrawal, use, or distribution of water under the permit;

(f) the water quality of a prior appropriator will not be adversely affected;

(g) the proposed use will be substantially in accordance with the classification of water set for the source of supply pursuant to 75-5-301(1); and

(h) the ability of a discharge permit holder to satisfy effluent limitations of a permit issued in accordance with Title 75, chapter 5, part 4, will not be adversely affected.

(2) The applicant is required to prove that the criteria in subsections (1)(f) through (1)(h) have been met only if a valid objection is filed. A valid objection must contain substantial credible information establishing to the satisfaction of the department that the criteria in subsection (1)(f), (1)(g), or (1)(h), as applicable, may not be met. For the criteria set forth in subsection (1)(g), only the department of environmental quality or a local water quality district established under Title 7, chapter 13, part 45, may file a valid objection.

To meet the preponderance of evidence standard, "the applicant, in addition to other evidence demonstrating that the criteria of subsection (1) have been met, shall submit hydrologic or other

evidence, including but not limited to water supply data, field reports, and other information developed by the applicant, the department, the U.S. geological survey, or the U.S. natural resources conservation service and other specific field studies." § 85-2-311(5), MCA (emphasis added). The determination of whether an application has satisfied the § 85-2-311, MCA criteria is committed to the discretion of the Department. Bostwick Properties, Inc. v. Montana Dept. of Natural Resources and Conservation, 2009 MT 181, ¶ 21. The Department is required grant a permit only if the § 85-2-311, MCA, criteria are proven by the applicant by a preponderance of the evidence. Id. A preponderance of evidence is "more probably than not." Hohenlohe v. DNRC, 2010 MT 203, ¶¶33, 35.

13. Pursuant to § 85-2-312, MCA, the Department may condition permits as it deems necessary to meet the statutory criteria:

> (1) (a) The department may issue a permit for less than the amount of water requested, but may not issue a permit for more water than is requested or than can be beneficially used without waste for the purpose stated in the application. The department may require modification of plans and specifications for the appropriation or related diversion or construction. The department may issue a permit subject to terms, conditions, restrictions, and limitations it considers necessary to satisfy the criteria listed in 85-2-311 and subject to subsection (1)(b), and it may issue temporary or seasonal permits. A permit must be issued subject to existing rights and any final determination of those rights made under this chapter.

E.g., Montana Power Co. v. Carey (1984), 211 Mont. 91, 96, 685 P.2d 336, 339 (requirement to grant applications as applied for, would result in, "uncontrolled development of a valuable natural resource" which "contradicts the spirit and purpose underlying the Water Use Act."); see also, *In the Matter of Application for Beneficial Water Use Permit No. 65779-76M by Barbara L. Sowers* (DNRC Final Order 1988)(conditions in stipulations may be included if it further compliance with statutory criteria); *In the Matter of Application for Beneficial Water Use Permit No. 42M-80600 and Application for Change of Appropriation Water Right No. 42M-036242 by Donald H. Wyrick* (DNRC Final Order 1994); Admin. R. Mont. (ARM) 36.12.207.

14. The Montana Supreme Court further recognized in Matter of Beneficial Water Use Permit Numbers 66459-76L, Ciotti: 64988-G76L, Starner (1996), 278 Mont. 50, 60-61, 923 P.2d 1073, 1079, 1080, *superseded by legislation on another issue*:

> Nothing in that section [85-2-313], however, relieves an applicant of his burden to meet the statutory requirements of § 85-2-311, MCA, before DNRC may issue that provisional permit. Instead of resolving doubts in favor of appropriation, the Montana Water Use Act requires an applicant to make explicit statutory showings that there are unappropriated waters in the source of supply, that the water rights of a prior appropriator will not be adversely affected, and that the proposed use will not unreasonably interfere with a planned use for which water has been reserved.

See also, Wesmont Developers v. DNRC, CDV-2009-823, First Judicial District Court, *Memorandum and Order* (2011). The Supreme Court likewise explained that:

> .... unambiguous language of the legislature promotes the understanding that the Water Use Act was designed to protect senior water rights holders from encroachment by junior appropriators adversely affecting those senior rights.

Montana Power Co., 211 Mont. at 97-98, 685 P.2d at 340; see also Mont. Const. art. IX §3(1).

15. An appropriation, diversion, impoundment, use, restraint, or attempted appropriation, diversion, impoundment, use, or restraint contrary to the provisions of § 85-2-311, MCA is invalid. An officer, agent, agency, or employee of the state may not knowingly permit, aid, or assist in any manner an unauthorized appropriation, diversion, impoundment, use, or other restraint. A person or corporation may not, directly or indirectly, personally or through an agent, officer, or employee, attempt to appropriate, divert, impound, use, or otherwise restrain or control waters within the boundaries of this state except in accordance with this § 85-2-311, MCA. § 85-2-311(6), MCA.

16. The Department may take notice of judicially cognizable facts and generally recognized technical or scientific facts within the Department's specialized knowledge, as specifically identified in this document. ARM 36.12.221(4).

Physical Availability

FINDINGS OF FACT

17. The Applicant is proposing to divert water from a 500-foot deep well for irrigation and commercial (water hazard) uses. The well (ML #3) is completed in the Deep Alluvial Aquifer of the Flathead Valley. The top of the aquifer is approximately 245 feet below ground surface (bgs) based on available well logs.

18. The Applicant completed a 72-hour aquifer test at an average flow rate of 360 GPM. The maximum drawdown during the test was 109.2 feet below the static water level of 146.8 feet below ground surface (bgs), leaving 209 feet above the perforations in the well casing.

19. The Department granted a variance from the aquifer testing requirements and Form 633 completion requirements. The specific variances authorized were for ARM 36.12.121(2)(d), which requires wellhead elevations be provided; ARM 36.12.121(2)(f), which requires Form 633, with all information and data be provided (i.e. all blanks on Form 633 filled in); ARM 36.12.121(3)(b), which requires that the discharge rate be equal to or greater than the proposed rate for the entire duration of the test; ARM 36.12.121(3)(c), which requires the discharge rate be recorded according to the schedule on Form 633; and ARM 36.12.121(3)(j), which requires groundwater levels in all observation wells be monitored at frequent intervals for at least two days prior to the beginning of the aquifer test. The variances were not significant as to impact the ability of the Department to complete an evaluation of the aquifer test.

20. The Applicant's aquifer test was evaluated as a leaky confined aquifer with hydrologic units separated by aquitards that have leakage between them. This is supported by the Applicant's aquifer test data which showed that drawdown occurs in an intermediate aquifer when pumping the proposed well. The Neuman-Witherspoon (1969) solution was used to model aquifer drawdown using the following parameters: T of 1,258 ft^2/day, S of 4.0 x 10^{-4}, r/B of 1.043, b of 0.001061, T2 of 1,000 ft^2/day, S2 of 0.01, and a monthly pumping schedule provided by the Applicant in the application materials (Table 1). The monthly pumping schedule includes initial pond filling in the month of March. Determining the drawdown during the period of diversion is done by modeling the period of diversion for the ML #3 well and applying a calculated well

efficiency to the theoretical drawdown. The well efficiency is calculated from modeling the aquifer test and dividing the predicted drawdown by the observed drawdown. Calculated well efficiency is equal to 33% for ML #3. Actual drawdown with well loss is calculated by applying the well efficiency to the theoretical drawdown. The last column in Table 2 gives the remaining available water column 193.4 feet) above the well perforations for the production well.

Table 1: Assumed Monthly Pumping Schedule for the Proposed Well (GWIC # 288602)

Month	**IWR (inches) – West Glacier; Pasture (grass)**	**Diversion (AF)**	**Diversion (GPM)**
January	0.0	0.0	3.5
February	0.0	0.0	3.9
March	0.0	31.6	230.6
April	0.05	0.9	6.8
May	1.92	26.6	193.8
June	2.95	40.6	305.9
July	4.45	49.3	360.0
August	3.97	49.3	360.0
September	1.75	24.6	185.6
October	0.0	0.0	0.0
November	0.0	0.0	0.0
December	0.0	0.0	0.0
TOTAL	**15.09**	**222.9**	

Table 2: Remaining Available Water Column for ML #3 (GWIC # 288602)

Well	**Well Total Depth** *(ft)*	**Pre-Test Static Water Level** *(ft btc)*	**Available Drawdown above well perforations** *(ft)*	**Well Efficiency** *(%)*	**Predicted Drawdown (Theoretical)** *(ft)*	**Predicted Drawdown including Well Loss** *(ft)*	**Remaining Available Water Column** *(ft)*
GWIC # 288602	500	146.8	328.2	33%	44.5	134.8	193.4

21. Physical groundwater availability, for the purpose of evaluating legal availability, was evaluated pursuant to the December 12, 2019 Water Management Bureau memorandum to the

Water Resources Division Administrator entitled "Technical Memorandum: Legal Availability of Groundwater in the Flathead Deep Aquifer." As described in the memo, groundwater levels in the Flathead Deep Aquifer (and physical availability of groundwater in the context of a legal availability analysis) are effectively controlled by the stage of Flathead River and Flathead Lake. A new groundwater user will reduce the discharge from the aquifer to the river and lake, generally in an amount equivalent to their consumptive use. Therefore, physical and legal availability for this application were evaluated for the Flathead River and Flathead Lake based on the surface water depletion analysis found in the Depletion Report. The depletion analysis found that a year-round depletion caused by the proposed groundwater use will occur in the Flathead River between Columbia Falls and Flathead Lake.

22. *Flathead River – Physical Availability:* Physical availability of the Flathead River was quantified monthly at the Columbia Falls USGS gage. The Flathead River at Columbia Falls, MT USGS Gaging Station #12363000 (period of record: October 1951 – September 2020) and the method outlined below were utilized to quantify median of the mean monthly flows and volumes during the proposed period of diversion. This gage was used because it is the nearest gage upstream of where depletions will manifest.

i. USGS Gaging Station #12363000 records were used to calculate median of the mean flow rates in cubic feet per second (CFS) for each month during the proposed period of diversion (Table 3, column B), which were then converted to monthly volumes (AF) (Table 3, column C) using the following equation found on the Department's Form 615: median of the mean monthly flow (CFS) × 1.98 (AF/day/1 CFS) × days per month = AF/month.

Table 3: Physical Availability of Flathead River from USGS gage #12363000 to the inlet of Flathead Lake

A	B	C
Month	**Median of Mean Monthly Flow at Gage 12363000 (CFS)**	**Median of Mean Monthly Volume at Gage 12363000 (AF)**
January	5,244.5	321,907.4
February	4,869.0	269,937.4

March	4,920.0	301,989.6
April	10,895.0	647,163.0
May	22,645.0	1,389,950.1
June	24,700.0	1,467,180.0
July	11,415.0	700,652.7
August	5,444.0	334,152.7
September	4,560.0	270,864.0
October	5,052.0	310,091.8
November	4,546.0	270,032.4
December	5,499.0	337,528.6

23. *Flathead Lake – Physical Availability:* Physical availability of Flathead Lake from the inlet to USGS Gaging Station #12372000 on the Flathead River near Polson, MT was quantified monthly. The Flathead River near Polson, MT USGS Gaging Station #12372000 (period of record: October 1938 – September 2020) and the method outlined below were utilized to quantify median of the mean monthly flows and volumes during the proposed period of diversion. This gage was used because Selis Ksanka Qlispe Dam (formerly known as Kerr Dam) near Polson is the control structure for Flathead Lake, and depletions to the Flathead River will reduce the total volume of water flowing down the river and leaving the lake (passing over/through the dam). USGS Gage #12372000 on the Flathead River near Polson, MT is the nearest gage downstream of Flathead Lake and Selis Ksanka Qlispe Dam. The date range used includes the entire period of record for this gage.

i. USGS Gaging Station #12372000 records were used to calculate median of the mean flow rates in CFS for each month during the proposed period of diversion (Table 4, column B), which were then converted to monthly volumes (AF) (Table 4, column C) using the following equation found on the Department's Form 615: median of the mean monthly flow (CFS) × 1.98 (AF/day/1 CFS) × days per month = AF/month.

ii. For analysis of reaches where the gaging station used is below the depleted reach (in this instance, the entirety of Flathead Lake), Department practice is to add in the flow rates and volumes of existing rights for the reach (Table 4, column D) to the median of

the mean monthly gage values to determine physical availability (Table 4, column E - F). This is done to account for existing users' withdrawals on the source. For this analysis, the Department added all rights between USGS Gage #12372000 and the Flathead Lake inlet to determine physical availability for the reach.

iii. When calculating the flow and volume appropriated by existing users on the source (Table 4, column D), irrigation and lawn/garden uses were delegated as occurring from April 1 to October 31. All other water uses were analyzed as year-round uses. In order to account for livestock direct from source rights, Department practice is to assign one flow rate (0.08 CFS) for all stock rights without a designated flow rate. Due to the difficulty of differentiating the distribution of appropriated volume over the period of diversion, it was assumed that the flow rate of each existing right is continuously diverted throughout each month of the period of diversion. This assumption leads to an overestimation of existing uses from the source. Monthly volumes were calculated by converting monthly flows in CFS to AF per month using the conversion formula from Department Form 615. The Department finds this an appropriate measure of assessing existing rights as it protects existing water users. A list of existing rights was generated for this reach of the Flathead River, a copy of which can be found in the water right file.

Table 4: Physical Availability of Flathead Lake from the Flathead Lake Inlet to USGS Gage #12372000 near Polson, MT

A	B	C	D	E	F
Month	**Median of Mean Monthly Flow at Gage 12372000 (CFS)**	**Median of Mean Monthly Volume at Gage 12372000 (AF)**	**Existing Legal Demands from Inlet to Gage 12372000 (CFS)**	**Physically Available Water: Flathead Lake (CFS)**	**Physically Available Water: Flathead Lake (AF)**
January	10,405.0	638,658.9	105.6	10,510.6	638,658.9
February	9,173.5	508,578.8	105.6	9,279.1	508,578.8
March	7,821.5	480,083.7	105.6	7,927.1	480,083.7
April	9,336.5	554,588.1	176.3	9,512.8	554,588.1
May	19,420.0	1,191,999.6	176.3	19,596.3	1,191,999.6
June	25,820.0	1,533,708.0	176.3	25,996.3	1,533,708.0
July	12,745.0	782,288.1	176.3	12,921.3	782,288.1

August	6,243.5	383,226.0	176.3	6,419.8	383,226.0
September	6,022.0	357,706.8	176.3	6,198.3	357,706.8
October	7,308.5	448,595.7	176.3	7,484.8	448,595.7
November	8,675.0	515,295.0	105.6	8,780.6	515,295.0
December	9,976.5	612,357.6	105.6	10,082.1	612,357.6

24. Based on this information, the Department finds that the amount of groundwater the Applicant seeks to appropriate, 360 GPM up to 222.9 AF, is physically available in the aquifer and hydraulically connected surface water sources.

CONCLUSIONS OF LAW

25. Pursuant to § 85-2-311(1)(a)(i), MCA, an applicant must prove by a preponderance of the evidence that "there is water physically available at the proposed point of diversion in the amount that the applicant seeks to appropriate."

26. It is the applicant's burden to produce the required evidence. *In the Matter of Application for Beneficial Water Use Permit No. 27665-41I by Anson* (DNRC Final Order 1987) (applicant produced no flow measurements or any other information to show the availability of water; permit denied); In *the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC.,* (DNRC Final Order 2005).

27. An applicant must prove that at least in some years there is water physically available at the point of diversion in the amount the applicant seeks to appropriate. *In the Matter of Application for Beneficial Water Use Permit No. 72662s76G by John Fee and Don Carlson* (DNRC Final Order 1990); *In the Matter of Application for Beneficial Water Use Permit No. 85184s76F by Wills Cattle Co. and Ed McLean* (DNRC Final Order 1994).

28. Applicant has proven that water is physically available at the proposed point of diversion in the amount Applicant seeks to appropriate (360 GPM up to 222.9 AF annually). § 85-2-311(1)(a)(i), MCA. (Findings of Fact (FOF) No. 17-24).

Legal Availability

FINDINGS OF FACT

29. The groundwater levels in the Flathead Deep Aquifer are effectively controlled by the stage of the Flathead River and Flathead Lake as stated in the Department's December 12, 2019 memo titled, "Technical Memorandum: Legal Availability of Groundwater in the Flathead Deep Aquifer." The Applicant's well is completed in the Flathead Deep Aquifer and surface water depletion by pumping in the Flathead Deep Aquifer occurs through propagation of drawdown through the overlying confining layer to the Flathead River and Flathead Lake. For this application, legal availability was evaluated for the Flathead River and Flathead Lake based on the surface water depletion analysis found in the Depletion Report. A year-round surface water depletion of 103.5 GPM (167 AF/year) caused by the proposed groundwater use will occur.

30. *Flathead River – Legal Availability:* Legal availability of the Flathead River from Columbia Falls to the inlet of Flathead Lake was quantified monthly. The physical availability of water (see Physical Availability section and Table 5, columns B - C) and the method outlined below were utilized to quantify legal availability during the proposed period of diversion. This gage was used because it is the nearest gage upstream of the depleted reach and the date range used includes the entire period of record for this gage.

i. When evaluating criteria for legal availability (36.12.1704 & 36.12.1705), existing rights (legal demands) were subtracted from physically available water. For this analysis, the Department subtracted out all legal demands (Table 5, column D) from the Columbia Falls gage downstream to the Flathead Lake inlet in order to determine legal availability for this reach (Table 5, columns E - F). A list of existing water users in this reach was compiled and can be found in the water right file.

ii. When calculating the flow and volume appropriated by existing users on the source (legal demands), irrigation and lawn/garden uses were delegated as occurring from April 1 to October 31. All other water uses were delegated as year-round uses. In order to account for livestock direct from source rights, Department practice is to assign one flow rate (0.08 CFS) for all stock rights without a designated flow rate. Due to the difficulty of differentiating the distribution of appropriated volume over the period of

diversion, it was assumed that the flow rate of each existing legal demand is continuously diverted throughout each month of the period of diversion. This assumption leads to an overestimation of legal demands on the physical volume of water, which the Department finds an appropriate measure of quantifying legal demands as it protects existing water users. Volumes were calculated by converting monthly flows using the equation found on Department Form 615.

Table 5: Legal Availability of Flathead River from Columbia Falls gage to the Flathead Lake Inlet

A	B	C	D	E	F
Month	**Physically Available Water (CFS)**	**Physically Available Water (AF)**	**Existing Legal Demands (CFS)**	**Physically Available Water minus Legal Demands (CFS)**	**Physically Available Water minus Legal Demands (AF)**
January	5,244.5	321,907.4	3,508.3	1,736.2	106,566.7
February	4,869.0	269,937.4	3,508.3	1,360.7	75,436.1
March	4,920.0	301,989.6	3,508.3	1,411.7	86,648.9
April	10,895.0	647,163.0	6,813.6	4,081.4	242,435.0
May	22,645.0	1,389,950.1	8,288.6	14,356.4	881,195.6
June	24,700.0	1,467,180.0	8,288.6	16,411.4	974,837.0
July	11,415.0	700,652.7	5,565.6	5,849.4	359,036.0
August	5,444.0	334,152.7	3,663.6	1,780.4	109,280.8
September	4,560.0	270,864.0	3,663.6	896.4	53,246.0
October	5,052.0	310,091.8	3,663.6	1,388.4	85,219.8
November	4,546.0	270,032.4	3,508.3	1,037.7	61,638.2
December	5,499.0	337,528.6	3,508.3	1,990.7	122,187.9

31. *Flathead Lake – Legal Availability:* Legal availability of Flathead Lake from the inlet to USGS Gaging Station #12372000 on the Flathead River near Polson, MT was quantified monthly. The Flathead River near Polson, MT USGS Gaging Station #12372000 (period of record: October 1938 – September 2020) and the method outlined below were utilized to quantify legal availability during the proposed period of diversion. This gage was used because Selis Ksanka Qlispe Dam near Polson is the control structure for Flathead Lake, and depletions to the Flathead River and

Flathead Lake will reduce the total volume of water flowing down the river and leaving the lake (passing over/through the dam). USGS Gage #12372000 on the Flathead River near Polson, MT is the nearest gage downstream of Flathead Lake and Selis Ksanka Qlispe Dam. The date range used includes the entire period of record for this gage.

i. When evaluating criteria for legal availability (36.12.1704 & 36.12.1705), existing rights (legal demands) were subtracted from physically available water. For this analysis, the Department subtracted out all legal demands (Table 6, column D) from the Flathead Lake inlet down to USGS Gage #12372000 in order to determine legal availability for this reach (Table 6, columns E - F). A list of existing water users on Flathead Lake from the Flathead Lake inlet down to USGS Gage #12372000 was compiled and can be found in the water right file.

ii. When calculating the flow and volume appropriated by existing users on the source (legal demands), irrigation and lawn/garden uses were delegated as occurring from April 1 to October 31. All other water uses were delegated as year-round uses. In order to account for livestock direct from source rights, Department practice is to assign one flow rate (0.08 CFS) for all stock rights without a designated flow rate. Due to the difficulty of differentiating the distribution of appropriated volume over the period of diversion, it was assumed that the flow rate of each existing legal demand is continuously diverted throughout each month of the period of diversion. This assumption leads to an overestimation of legal demands on the physical volume of water, which the Department finds an appropriate measure of quantifying legal demands as it protects existing water users. Volumes were calculated by converting monthly flows using the equation found on Department Form 615.

Table 6: Legal Availability of Flathead Lake from the Flathead Lake Inlet to USGS Gage # 12372000 near Polson, MT

A	B	C	D	E	F
Month	**Physically Available Water: Flathead Lake (CFS)**	**Physically Available Water: Flathead Lake (AF)**	**Existing Legal Demands from Inlet to Gage 12372000 (CFS)**	**Physically Available Water minus Legal**	**Physically Available Water minus Legal Demands (AF)***

				Demands (CFS)*	
January	10,510.6	645,139.8	105.6	10,405.0	638,658.9
February	9,279.1	514,432.6	105.6	9,173.5	508,578.8
March	7,927.1	486,564.6	105.6	7,821.5	480,083.7
April	9,512.8	565,057.8	176.3	9,336.5	554,588.1
May	19,596.3	1,202,818.3	176.3	19,420.0	1,191,999.6
June	25,996.3	1,544,177.7	176.3	25,820.0	1,533,708.0
July	12,921.3	793,106.8	176.3	12,745.0	782,288.1
August	6,419.8	394,044.8	176.3	6,243.5	383,226.0
September	6,198.3	368,176.5	176.3	6,022.0	357,706.8
October	7,484.8	459,414.5	176.3	7,308.5	448,595.7
November	8,780.6	521,566.8	105.6	8,675.0	515,295.0
December	10,082.1	618,838.5	105.6	9,976.5	612,357.6

*These calculations of legally available water on Flathead Lake do not include the Confederated Salish & Kootenai Tribes' hydropower water rights, which are considered reasonably legally available in relation to this application (see FOF 32-34 below).

32. Confederated Salish & Kootenai Tribes owns the hydropower water rights for Selis Ksanka Qlispe Dam. The two claimed water rights for Selis Ksanka Qlispe Dam are for 14,540 CFS up to 614,200 AF for power generation, and a volume of 614,700 second foot days for storage for power generation which is equivalent to 1,217,106 AF. (A second foot day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. The term is used extensively as a unit of runoff volume or reservoir capacity.) The total volume from the two claimed rights is 614,200 AF plus 1,217,106 AF which equals 1,831,306 AF. Flathead Lake is managed to keep a full pool of water during the late spring and summer months. At the claimed flow rate of 14,540 CFS flowing 24 hours per day, both of the claimed water rights, the direct flow hydropower right and storage for hydropower water right, can be fulfilled over a period of 64 days.

33. Selis Ksanka Qlispe Dam operations are complex and must accommodate many management factors including, but not limited to federal licensing (Flathead Lake levels required by FERC (Federal Energy Regulatory Commission)) for fish and recreation, instream flow requirements, flood control, and irrigation needs. These factors fluctuate seasonally and from year to year. The

average yearly flow of water through Flathead Lake is approximately 11,437 CFS as measured at the USGS gauge at Polson (12372000), for the time period of 1939-2006 (USGS, 2009). Even though hydropower water rights at Selis Ksanka Qlispe Dam require 1,831,306 AF, to meet the hydropower water rights claimed in the adjudication, the records show that Selis Ksanka Qlispe Dam's reservoir, Flathead Lake, consistently obtains a full pool status each year.

34. Pending an adjudication of Confederated Salish & Kootenai Tribes hydropower water rights and completion of a water availability study that shows otherwise, the Department finds that water in Flathead River and Flathead Lake can reasonably be considered legally available during the period in which the Applicant seeks to appropriate. This finding is based on the information and on the records of the Department and other evidence provided to the Department.

35. The Department finds that the surface water depletion of 167 AF at a constant rate of 103.5 GPM is legally available from the surface water which will be depleted.

CONCLUSIONS OF LAW

36. Pursuant to § 85-2-311(1)(a), MCA, an applicant must prove by a preponderance of the evidence that:

> (ii) water can reasonably be considered legally available during the period in which the applicant seeks to appropriate, in the amount requested, based on the records of the department and other evidence provided to the department. Legal availability is determined using an analysis involving the following factors:
>
> (A) identification of physical water availability;
>
> (B) identification of existing legal demands on the source of supply throughout the area of potential impact by the proposed use; and
>
> (C) analysis of the evidence on physical water availability and the existing legal demands, including but not limited to a comparison of the physical water supply at the proposed point of diversion with the existing legal demands on the supply of water.

E.g., ARM 36.12.101 and 36.12.120; Montana Power Co., 211 Mont. 91, 685 P.2d 336 (Permit granted to include only early irrigation season because no water legally available in late irrigation season); *In the Matter of Application for Beneficial Water Use Permit No. 81705-g76F by Hanson* (DNRC Final Order 1992).

37. It is the applicant's burden to present evidence to prove water can be reasonably considered legally available. Sitz Ranch v. DNRC, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, (2011) Pg. 7 (the legislature set out the criteria (§ 85-2-311, MCA) and placed the burden of proof squarely on the applicant. The Supreme Court has instructed that those burdens are exacting.); see also Matter of Application for Change of Appropriation Water Rights Nos. 101960-41S and 101967-41S by Royston (1991), 249 Mont. 425, 816 P.2d 1054 (burden of proof on applicant in a change proceeding to prove required criteria); *In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC.*, (DNRC Final Order 2005))(it is the applicant's burden to produce the required evidence.); *In the Matter of Application for Beneficial Water Use Permit No. 41H 30023457 by Utility Solutions, LLC* (DNRC Final Order 2007)(permit denied for failure to prove legal availability); see also ARM 36.12.1705.

38. Pursuant to Montana Trout Unlimited v. DNRC, 2006 MT 72, 331 Mont. 483, 133 P.3d 224, the Department recognizes the connectivity between surface water and ground water and the effect of pre-stream capture on surface water. E.g., Wesmont Developers v. DNRC, CDV-2009-823, Montana First Judicial District Court, *Memorandum and Order*, (2011) Pgs. 7-8; *In the Matter of Beneficial Water Use Permit Nos. 41H 30012025 and 41H 30013629 by Utility Solutions LLC* (DNRC Final Order 2006)(mitigation of depletion required), *affirmed*, Faust v. DNRC et al., Cause No. CDV-2006-886, Montana First Judicial District (2008); see also Robert and Marlene Takle v. DNRC *et al.*, Cause No. DV-92-323, Montana Fourth Judicial District for Ravalli County, *Opinion and Order* (June 23, 1994) (affirming DNRC denial of Applications for Beneficial Water Use Permit Nos. 76691-76H, 72842-76H, 76692-76H and 76070-76H; underground tributary flow cannot be taken to the detriment of other appropriators including surface appropriators and ground water appropriators must prove unappropriated surface water, *citing* Smith v. Duff, 39 Mont. 382, 102 P. 984 (1909), and Perkins v. Kramer, 148 Mont. 355, 423 P.2d 587 (1966)); *In the Matter of Beneficial Water Use Permit No. 80175-s76H by Tintzman* (DNRC Final Order 1993)(prior appropriators on a stream gain right to natural flows of all tributaries in so far as may be necessary to afford the amount of water to which they are entitled, *citing* Loyning v. Rankin (1946), 118 Mont. 235, 165 P.2d 1006; Granite Ditch Co. v. Anderson (1983), 204 Mont. 10, 662 P.2d 1312;

Beaverhead Canal Co. v. Dillon Electric Light & Power Co. (1906), 34 Mont. 135, 85 P. 880); *In the Matter of Beneficial Water Use Permit No.* 63997*-42M by Joseph F. Crisafulli* (DNRC Final Order 1990) (since there is a relationship between surface flows and the ground water source proposed for appropriation, and since diversion by applicant's well appears to influence surface flows, the ranking of the proposed appropriation in priority must be as against all rights to surface water as well as against all groundwater rights in the drainage.) Because the applicant bears the burden of proof as to legal availability, the applicant must prove that the proposed appropriation will not result in prestream capture or induced infiltration and cannot limit its analysis to ground water. § 85-2-311(a)(ii), MCA. Absent such proof, the applicant must analyze the legal availability of surface water in light of the proposed ground water appropriation. *In the Matter of Application for Beneficial Water Use Permit No. 41H 30023457 By Utility Solutions LLC* (DNRC Final Order 2007) (permit denied); *In the Matter of Application for Beneficial Water Use Permit No. 76H-30028713 by Patricia Skergan and Jim Helmer* (DNRC Final Order 2009); Sitz Ranch v. DNRC, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, (2011) Pg. 5 ; Wesmont Developers v. DNRC, CDV-2009-823, First Judicial District Court, *Memorandum and Order*, (2011) Pgs. 11-12.

39. Where a proposed ground water appropriation depletes surface water, applicant must prove legal availability of amount of depletion of surface water throughout the period of diversion either through a mitigation /aquifer recharge plan to offset depletions or by analysis of the legal demands on, and availability of, water in the surface water source. Robert and Marlene Takle v. DNRC *et al.*, Cause No. DV-92-323, Montana Fourth Judicial District for Ravalli County, *Opinion and Order* (June 23, 1994); *In the Matter of Beneficial Water Use Permit Nos. 41H 30012025 and 41H 30013629 by Utility Solutions LLC* (DNRC Final Order 2006)(permits granted), *affirmed*, Faust v. DNRC et al., Cause No. CDV-2006-886, Montana First Judicial District (2008); *In the Matter of Application for Beneficial Water Use Permit 41H 30019215 by Utility Solutions LLC* (DNRC Final Order 2007*)*(permit granted), *affirmed*, Montana River Action Network et al. v. DNRC et al., Cause No. CDV-2007-602, Montana First Judicial District (2008); *In the Matter of Application for Beneficial Water Use Permit No. 41H 30023457 by Utility Solutions LLC* (DNRC Final Order

2007) (permit denied for failure to analyze legal availability outside of irrigation season (where mitigation applied)); *In the Matter of Application for Beneficial Water Use Permit No. 41H 30026244 by Utility Solutions LLC* (DNRC Final Order 2008); *In the Matter of Application for Beneficial Water Use Permit No. 76H-30028713 by Patricia Skergan and Jim Helmer* (DNRC Final Order 2009)(permit denied in part for failure to analyze legal availability for surface water depletion); Sitz Ranch v. DNRC, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, (2011) Pg. 5 (Court affirmed denial of permit in part for failure to prove legal availability of stream depletion to slough and Beaverhead River); Wesmont Developers v. DNRC, CDV-2009-823, First Judicial District Court, *Memorandum and Order*, (2011) Pgs. 11-12 ("DNRC properly determined that Wesmont cannot be authorized to divert, either directly or indirectly, 205.09 acre-feet from the Bitterroot River without establishing that the water does not belong to a senior appropriator"; applicant failed to analyze legal availability of surface water where projected surface water depletion from groundwater pumping); *In the Matter of Application for Beneficial Water Use Permit No. 76D-30045578 by GBCI Other Real Estate, LLC* (DNRC Final Order 2011) (in an open basin, applicant for a new water right can show legal availability by using a mitigation/aquifer recharge plan or by showing that any depletion to surface water by groundwater pumping will not take water already appropriated; development next to Lake Koocanusa will not take previously appropriated water). Applicant may use water right claims of potentially affected appropriators as a substitute for "historic beneficial use" in analyzing legal availability of surface water under § 85-2-360(5), MCA. Royston, supra.

40. Applicant has proven by a preponderance of the evidence that water can reasonably be considered legally available during the period in which the applicant seeks to appropriate, in the amount requested, based on the records of the Department and other evidence provided to the Department. § 85-2-311(1)(a)(ii), MCA. (FOF No. 29-35).

Adverse Effect

FINDINGS OF FACT

41. The Applicant has a plan for the exercise of the permit that demonstrates that the Applicant's use of water can be controlled so the water rights of prior appropriators will be satisfied. The Applicant proposes to implement the following steps during periods of water shortage:

i. Initially reduce irrigation application 50%;

ii. Irrigate only tees and greens;

iii. Turn off the pump in Well #3 when a senior appropriator makes call

42. Drawdown in neighboring wells was evaluated using the Neuman-Witherspoon (1969) solution with inputs of T = 1,258 ft^2/day and S = 4.0 x 10^{-4}. After August of the fifth year of the monthly pumping schedule provided by the Applicant, the 1-foot drawdown contour extends 18,500 feet from the Applicant's well in both the deep aquifer and the unpumped intermediate aquifer. There are 1,078 water rights, of which 837 rights have a known well depth greater than 100 feet, which are predicted to experience drawdown of 1-foot or greater. Of wells with a known depth within the 1-foot drawdown contour, the lowest projected remaining water column is 7.4 feet. Based on the Department's analysis, no adverse effect to existing well users with known well depths are expected to occur based on the proposed appropriation.

43. The Department reviewed Garnier Creek and Trumbull Creek for adverse effect potential, along with the Flathead River and Flathead Lake. Garnier Creek is approximately 1,600 feet from the proposed well and Trumbull Creek is approximately 6,200 feet from the proposed well. The thickness of the confining unit is approximately 100-200 feet near the Applicant's property, Garnier Creek, and Trumbull Creek. This evidence supports a conclusion that Garnier Creek and Trumbull Creek are not hydraulically connected to the Deep Aquifer. Additionally, the Department has analyzed hydraulic connection of the Deep Aquifer to Trumbull Creek in multiple permit applications in the past and has deemed the Deep Aquifer and Trumbull Creek not to be hydraulically connected. Based on available evidence, the Department Groundwater Hydrologist has determined that the proposed use will result in a depletion to the Flathead River between Columbia Falls and Flathead Lake. Table 7 summarizes the anticipated monthly net depletions (volume and flow) from the Flathead River.

Table 7: Consumption and Net Monthly Surface Water Depletions

Month	Consumption (AF)	Total Depletions (AF)	Total Depletions (GPM)
January	0.0	14.2	103.5
February	0.0	12.8	103.5
March	31.6	14.2	103.5
April	0.7	13.7	103.5
May	17.0	14.2	103.5
June	25.9	13.7	103.5
July	40.1	14.2	103.5
August	36.0	14.2	103.5
September	15.9	13.7	103.5
October	0.0	14.2	103.5
November	0.0	13.7	103.5
December	0.0	14.2	103.5
TOTAL	**167.0**	**167.0**	

44. Net depletion by pumping in the source aquifer primarily occurs through propagation of drawdown through the overlying confining layer to the Flathead River downstream of Columbia Falls. As a result, depletion effects are expected to be dampened, resulting in a constant year-round rate of depletion of 103.5 GPM (0.25 CFS) to the Flathead River, even though the consumption from the requested appropriation is concentrated in the summer. Since depletions to the Flathead River will also affect the outflow of Flathead Lake at Selis Ksanka Qlispe Dam, Flathead Lake was also reviewed for adverse effect.

45. Physical availability of water in the depleted surface water sources was assessed using USGS Gaging Station data, which was then compared to existing legal demands of water from the depleted sources. The Department finds that there is sufficient water available, both physically and legally, in the depleted sources throughout the proposed period of diversion in excess of the constant year-round depletion rate of 103.5 GPM (0.25 CFS) and total net depletion of 167 AF. Therefore, there will be no adverse effect to senior surface water appropriators on the depleted surface water sources.

CONCLUSIONS OF LAW

46. In regard to senior hydropower water rights, the facts in this application are distinguishable from those In the Matter of Application for Beneficial Water Use Permit No. 76N30010429 by Thompson River Lumber Co (2006) (TRLC) concerning the Avista Company's water rights for Noxon Reservoir. Thompson River Company's proposed diversion on the Clark Fork was surface water immediately upstream of Avista's Noxon Reservoir that had an immediate calculable adverse impact on Avista's water rights and power production.

47. Section §85-2-401, MCA, makes clear that an appropriator is not entitled under the prior appropriation doctrine to protect itself from all changes in condition of water occurrence. In this basin which is not closed to surface or ground water appropriations, priority of appropriation for a large hydropower right that may otherwise prohibit future upstream development in the basin, does not, pursuant to §85-2-401, MCA, include the right to prevent the decrease of streamflow or the lowering of a water table or water level if the prior appropriator can reasonably exercise their water right under the new conditions. Here, the Department finds that Avista and Confederated Salish and Kootenai Tribes' prior appropriations in this basin, which has not been closed to appropriation by the Legislature, does not include the right to prevent this appropriation where Avista and Confederated Salish and Kootenai Tribes can reasonably exercise their hydropower water rights.

48. Pursuant to § 85-2-311(1)(b), MCA, the Applicant bears the affirmative burden of proving by a preponderance of the evidence that the water rights of a prior appropriator under an existing water right, a certificate, a permit, or a state water reservation will not be adversely affected. Analysis of adverse effect must be determined based on a consideration of an applicant's plan for the exercise of the permit that demonstrates that the applicant's use of the water will be controlled so the water right of a prior appropriator will be satisfied. See Montana Power Co. (1984), 211 Mont. 91, 685 P.2d 336 (purpose of the Water Use Act is to protect senior appropriators from encroachment by junior users); Bostwick Properties, Inc. ¶ 21.

49. An applicant must analyze the full area of potential impact under the § 85-2-311, MCA criteria. *In the Matter of Beneficial Water Use Permit No. 76N-30010429 by Thompson River Lumber Company* (DNRC Final Order 2006). While § 85-2-361, MCA, limits the boundaries expressly required for compliance with the hydrogeologic assessment requirement, an applicant is

required to analyze the full area of potential impact for adverse effect in addition to the requirement of a hydrogeologic assessment. Id. ARM 36.12.120(5).

50. Applicant must prove that no prior appropriator will be adversely affected, not just the objectors. Sitz Ranch v. DNRC, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, (2011) Pg. 4.

51. In analyzing adverse effect to other appropriators, an applicant may use the water rights claims of potentially affected appropriators as evidence of their "historic beneficial use." See Matter of Application for Change of Appropriation Water Rights Nos. 101960-41S and 101967-41S by Royston (1991), 249 Mont. 425, 816 P.2d 1054.

52. It is the applicant's burden to produce the required evidence. E.g., Sitz Ranch v. DNRC, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, (2011) Pg. 7 (legislature has placed the burden of proof squarely on the applicant); *In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC.*, (DNRC Final Order 2005). (DNRC Final Order 2005). The Department is required to grant a permit only if the § 85-2-311, MCA, criteria are proven by the applicant by a preponderance of the evidence. Bostwick Properties, Inc. ¶ 21.

53. Section 85-2-311 (1)(b) of the Water Use Act does not contemplate a de minimis level of adverse effect on prior appropriators. Wesmont Developers v. DNRC, CDV-2009-823, First Judicial District Court, *Memorandum and Order*, (2011) Pg. 8.

54. Applicant has proven by a preponderance of the evidence that the water rights of a prior appropriator under an existing water right, a certificate, a permit, or a state water reservation will not be adversely affected. § 85-2-311(1)(b), MCA. (FOF No. 41-45).

Adequate Diversion

FINDINGS OF FACT

55. The applicant proposes to supply water by means of a well, referred to as Well #3 (GWIC # 288602), which is completed in the Flathead Deep Alluvial Aquifer. The well was drilled to a depth of 797 feet bgs and was cased to a depth of 500 feet bgs (static water level: 146.8-feet bgs). Well #3 is equipped with a Goulds Model 7CLC submersible pump and 40-hp motor. A DeZURIK

control valve will be used to maintain the flow rate at 360 GPM. The well is controlled manually by a switch located near the wellhead.

56. The well will convey water to Pond #1 via 1600' of buried 6" HDPE pipe. From Pond #1, the water will be distributed throughout the system as needed. Pump Station #1 pulls water from Pond #1 and can either divert water to the irrigation system for the southern portion of the golf course, or supply water to Pond #2. Pump Station #1 is capable of a maximum withdrawal rate of 850 GPM and is controlled by a Watertronics Pump Control Station (Model VT-50/20STV). The pump station consists of a Goulds model 11CLC-5 pump and 50-hp US Electric motor serving as the primary pump and a 20-hp Goulds model 6CHC-4 with Franklin Electric motor serving as the sustaining pump. Pump Station #2 controls the irrigation for the northern portion of the golf course. It is capable of withdrawing water from Pond #2 at a maximum flow rate of 850 GPM at 100 psi of pressure. Pump Station #2 is controlled by a Watertronics Pump Control Station (Model VTX-40X2/3ST-480-3). The pump station consists of two 40-hp HydroFlo Model 12C-4 pumps driven by US Electric motors, and a Goulds model 33GS30 3-hp sustaining pump with 3-hp Franklin Electric motor.

CONCLUSIONS OF LAW

57. Pursuant to § 85-2-311(1)(c), MCA, an Applicant must demonstrate that the proposed means of diversion, construction, and operation of the appropriation works are adequate.

58. The adequate means of diversion statutory test merely codifies and encapsulates the case law notion of appropriation to the effect that the means of diversion must be reasonably effective, i.e., must not result in a waste of the resource. *In the Matter of Application for Beneficial Water Use Permit No. 33983s41Q by Hoyt* (DNRC Final Order 1981); § 85-2-312(1)(a), MCA.

59. Water wells must be constructed according to the laws, rules, and standards of the Board of Water Well Contractors to prevent contamination of the aquifer. *In the Matter of Application for Beneficial Water Use Permit No.* 41I-105511 *by Flying J Inc.* (DNRC Final Order 1999).

60. Information needed to prove that proposed means of diversion, construction, and operation of the appropriation works are adequate varies, based upon project complexity design by licensed

engineer adequate. *In the Matter of Application for Beneficial Water Use Permit No. 41C-11339900 by Three Creeks Ranch of Wyoming LLC* (DNRC Final Order 2002).

61. Applicant has proven by a preponderance of the evidence that the proposed means of diversion, construction, and operation of the appropriation works are adequate for the proposed beneficial use. § 85-2-311(1)(c), MCA. (FOF No. 55-56).

Beneficial Use

FINDINGS OF FACT

62. The applicant proposes to use up to 360 GPM and up to 222.9 AF of water for irrigation and commercial (water hazard) uses within the golf course. Using the IWR software, the Department's guidelines outlined in the memo titled "DNRC Consumptive Use Methodology – Turf Grass," and assuming 70 percent sprinkler irrigation efficiency, the applicant identified a net irrigation requirement of 21.54 inches per acre per year (21.54 inches ÷ 12.0 inches/foot = 1.80 AF), which is within DNRC standards found in ARM 36.12.115. The irrigation requirement for 114.4 acres is 205.38 AF, however, due to system limitations because of flow rate, the requested annual irrigation volume is 189.5 AF. During the peak irrigation months of July and August, the irrigation requirement calculated exceeds the amount that the well can produce. The maximum flow rate of 360 GPM will only allow for a maximum diversion of 49.3 AF in each of these months, but the Applicant has a calculated maximum demand for irrigation and commercial uses of 62.1 AF in July and 55.7 AF in August.

63. Ponds #1 and #2 are used as storage for the irrigation system as well as water hazards. Ponds #3 and #4 are solely used as water hazards. Commercial (water hazard) use was determined by calculating the pond capacities and net evaporation from the pond surfaces. Pond capacities were calculated using the DNRC standard equations for pit (surface area x max depth x 0.5) and pond (surface area x max depth x 0.4) developments found on the Reservoir Addendum. Combined capacity of all four ponds is 31.59 AF. Net evaporation was calculated using the Department's Technical Memorandum: Pond and Wetland Evaporation/Evapotranspiration. The net evaporation for the period of March-October is calculated to be 11.46 inches for the West Glacier weather

station, which is the weather station with the characteristics most representative of the Meadow Lake Golf Course location. Combined surface area of all four ponds is 5.29 acres and the net evaporation calculated from the ponds during the period of use is 5.05 AF. Total commercial (water hazard) use is calculated by the Applicant to be 36.64 AF. Characteristics of each pond are broken out in table 8 below.

Table 8. Pond Characteristics

Pond #	Surface Area (Acres)	Max Depth (feet)	Capacity (AF)	Evaporation (AF)
Pond #1	2.58	12	12.38	2.46
Pond #2	1.57	15	11.78	1.50
Pond #3	0.86	15	6.45	0.82
Pond #4	0.28	7	0.98	0.27
Totals	**5.29**	**N/A**	**31.59**	**5.05**

64. The requested flow of 360 GPM is equal to the maximum production rate of the well pump. Secondary diversions within the water delivery system allow the Applicant to move water around within their distribution system at a higher rate, however, the overall system is limited by the well pumping rate of 360 GPM. The Applicant's operations for the months of July and August will be at a deficit to the anticipated maximum need. It will be up to the Applicant to manage their system adequately and prioritize their uses to best use the water available to them in these months. Projected maximum monthly water use is laid out in Table 9 below. The "Combined Volume" column identifies maximum monthly use of all supplemental rights for the golf course. The "Maximum Monthly Volume (AF)" column identifies that maximum monthly volume of water used under this proposed permit. In total, the volume diverted from the well will not exceed 222.9 AF. The maximum irrigation use will be up to 189.5 AF and the maximum commercial use will be up to 36.6 AF.

Table 9. Projected Maximum Monthly Water Use

Month	Turf Irrigation (AF)	Pond Evap (AF)	Pond Filling (AF)	Combined Volume (AF)	Maximum Monthly Volume (AF)
March	0	0.00	31.59	31.59	31.59
April	0.68	0.24	-	0.92	0.92
May	26.15	0.40	-	26.55	26.55
June	40.18	0.38	-	40.56	40.56
July	60.54	1.57	-	62.11	49.32*
August	54.00	1.68	-	55.68	49.32*
September	23.83	0.78	-	24.61	24.61
October	0	0.00	-	0.00	0**
Total	205.38	5.05	31.59	242.02	222.87

*Monthly volume is limited by flow rate of 360 GPM.

**IWR program shows that irrigation is not needed in October due to natural precipitation, however the DNRC standard period of use for climatic area 4 includes use up to October 10.

65. The application will be subject to the following conditions, limitations or restrictions.

WATER USE MEASUREMENT

THE APPROPRIATOR SHALL INSTALL A DEPARTMENT APPROVED IN-LINE FLOW METER AT PUMP SITE #1 WHICH WILL MEASURE ALL DIVERSIONS FROM POND #1. THE APPROPRIATOR SHALL ALSO INSTALL AN IN-LINE FLOW METER BETWEEN WELL ML#3 AND POND #1. WATER MUST NOT BE DIVERTED UNTIL THE REQUIRED MEASURING DEVICES ARE IN PLACE AND OPERATING. ON A FORM PROVIDED BY THE DEPARTMENT, THE APPROPRIATOR SHALL KEEP A WRITTEN DAILY RECORD OF THE FLOW RATE AND VOLUME OF ALL WATER MEASURED EACH MEASURING DEVICE, INCLUDING THE PERIOD OF TIME. RECORDS SHALL BE SUBMITTED BY JANUARY 31 OF EACH YEAR AND UPON REQUEST AT OTHER TIMES DURING THE YEAR UNTIL THE PERMIT IS PERFECTED AND THE DEPARTMENT RECEIVES A PROJECT COMPLETION NOTICE. IN THE EVENT THAT AUTHORIZED FLOW RATES AND/OR VOLUMES HAVE BEEN EXCEEDED DURING PERFECTION OF THE PERMIT OR THE APPROPRIATOR FAILS TO SUBMIT ANNUAL REPORTS, THE DEPARTMENT MAY CONTINUE TO REQUIRE ANNUAL SUBMISSIONS OF MEASUREMENT RECORDS. FAILURE TO SUBMIT REPORTS MAY BE CAUSE FOR REVOCATION OF THE PERMIT. RECORDS MUST BE SENT TO THE KALISPELL WATER RESOURCES REGIONAL OFFICE. THE APPROPRIATOR SHALL MAINTAIN THE MEASURING DEVICES SO THEY ALWAYS OPERATE PROPERLY AND MEASURE FLOW RATE AND VOLUME ACCURATELY.

66. The Department finds the water uses to be beneficial and the requested flow rate of 360 GPM and volume of 222.9 AF are reasonably justified.

CONCLUSIONS OF LAW

67. Under § 85-2-311(1)(d), MCA, an Applicant must prove by a preponderance of the evidence the proposed use is a beneficial use.

68. An appropriator may appropriate water only for a beneficial use. See also, § 85-2-301 MCA. It is a fundamental premise of Montana water law that beneficial use is the basis, measure, and limit of the use. E.g., McDonald, supra; Toohey v. Campbell (1900), 24 Mont. 13, 60 P. 396. The amount of water under a water right is limited to the amount of water necessary to sustain the beneficial use. E.g., Bitterroot River Protective Association v. Siebel, *Order on Petition for Judicial Review*, Cause No. BDV-2002-519, Montana First Judicial District Court, Lewis and Clark County (2003), *affirmed on other grounds*, 2005 MT 60, 326 Mont. 241, 108 P.3d 518; *In The Matter Of Application For Beneficial Water Use Permit No. 43C 30007297 by Dee Deaterly* (DNRC Final Order), *affirmed other grounds*, Dee Deaterly v. DNRC *et al*, Cause No. 2007-186, Montana First Judicial District, *Order Nunc Pro Tunc on Petition for Judicial Review* (2009); Worden v. Alexander (1939), 108 Mont. 208, 90 P.2d 160; Allen v. Petrick (1924), 69 Mont. 373, 222 P. 451; *In the Matter of Application for Beneficial Water Use Permit No. 41S-105823 by French* (DNRC Final Order 2000).

69. Amount of water to be diverted must be shown precisely. Sitz Ranch v. DNRC, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, (2011) Pg. 3 (citing BRPA v. Siebel, 2005 MT 60, and rejecting applicant's argument that it be allowed to appropriate 800 acre-feet when a typical year would require 200-300 acre-feet).

70. It is the applicant's burden to produce the required evidence. Sitz Ranch v. DNRC, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, (2011) Pg. 7; *In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC.*, (DNRC Final Order 2005); see also Royston; Ciotti.

71. Applicant proposes to use water for commercial and irrigation purposes which are recognized beneficial uses. § 85-2-102(5), MCA. Applicant has proven by a preponderance of the evidence that commercial and irrigation uses are beneficial uses and that 222.9 AF of diverted volume and 360 GPM of water requested is the amount needed to sustain the beneficial uses. § 85-2-311(1)(d), MCA. (FOF No. 62-66).

Possessory Interest

FINDINGS OF FACT

72. The applicant signed the application form affirming the applicant has possessory interest, or the written consent of the person with the possessory interest, in the property where the water is to be put to beneficial use.

CONCLUSIONS OF LAW

73. Pursuant to § 85-2-311(1)(e), MCA, an Applicant must prove by a preponderance of the evidence that it has a possessory interest or the written consent of the person with the possessory interest in the property where the water is to be put to beneficial use, or if the proposed use has a point of diversion, conveyance, or place of use on national forest system lands, the applicant has any written special use authorization required by federal law to occupy, use, or traverse national forest system lands for the purpose of diversion, impoundment, storage, transportation, withdrawal, use, or distribution of water under the permit.

74. Pursuant to ARM 36.12.1802:

> (1) An applicant or a representative shall sign the application affidavit to affirm the following:
> (a) the statements on the application and all information submitted with the application are true and correct and
> (b) except in cases of an instream flow application, or where the application is for sale, rental, distribution, or is a municipal use, or in any other context in which water is being supplied to another and it is clear that the ultimate user will not accept the supply without consenting to the use of water on the user's place of use, the applicant has possessory interest in the property where the water is to be put to beneficial use or has the written consent of the person having the possessory interest.

(2) If a representative of the applicant signs the application form affidavit, the representative shall state the relationship of the representative to the applicant on the form, such as president of the corporation, and provide documentation that establishes the authority of the representative to sign the application, such as a copy of a power of attorney.
(3) The department may require a copy of the written consent of the person having the possessory interest.

75. The Applicant has proven by a preponderance of the evidence that it has a possessory interest, or the written consent of the person with the possessory interest, in the property where the water is to be put to beneficial use. § 85-2-311(1)(e), MCA. (FOF No. 72).

PRELIMINARY DETERMINATION

Subject to the terms, analysis, and conditions in this Order, the Department preliminarily determines that this Application for Beneficial Water Use Permit No. 76LJ 30150985 should be GRANTED.

The Department determines the applicant may divert groundwater from the Flathead Deep Aquifer by means of a single production well (Well #3; GWIC # 288602) from March 1 – October 31 at 360 GPM up to a volume of 222.9 AF for irrigation of 114.4 acres from April 20 – October 10 and for commercial (water hazard) use from March 1 – October 31. The maximum irrigation use per annum will be 189.5 AF and the maximum commercial use (water hazard) will be 36.6 AF. In combination, the irrigation and commercial use will not exceed a total volume of 222.9 AF. It will be up to the Applicant to manage the volumes diverted for each purpose as to not exceed the total permitted amount. The point of diversion is in the SESWSE Section 6, Township 30N, Range 20W, Flathead County. The place of use is the Meadow Lake Golf Course, in the E2W2 and W2E2 Section 6, Township 30N, Range 20W, Flathead County.

The Applicant is authorized a total of four places of storage. Pond #1 and Pond #2 will be used for the commercial purpose as well as for storage of irrigation water. Pond #3 and Pond #4 will be used exclusively for commercial use. Pond #1 will be located in the S2SESW Section 6, Township 30N, Range 20W, Flathead County. Pond #2 will be located in the E2NESW Section 6, Township 30N, Range 20W, Flathead County. Pond #3 will be located in the NENESW Section

6, Township 30N, Range 20W, Flathead County. Pond #4 will be located in the SESWSE Section 6, Township 30N, Range 20W, Flathead County.

Authorized Pond Capacities			
Pond #	**Surface Area (Acres)**	**Max Depth (feet)**	**Capacity (AF)**
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The application will be subject to the following conditions, limitations or restrictions.

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NOTICE

This Department will provide public notice of this Application and the Department's Preliminary Determination to Grant pursuant to §§ 85-2-307, MCA. The Department will set a deadline for objections to this Application pursuant to §§ 85-2-307, and -308, MCA. If this Application receives no valid objection or all valid objections are unconditionally withdrawn, the

Department will grant this Application as herein approved. If this Application receives a valid objection, the application and objection will proceed to a contested case proceeding pursuant to Title 2 Chapter 4 Part 6, MCA, and § 85-2-309, MCA. If valid objections to an application are received and withdrawn with stipulated conditions and the department preliminarily determined to grant the permit or change in appropriation right, the department will grant the permit or change subject to conditions necessary to satisfy applicable criteria.

DATED this 24th day of September 2021.

/Original signed by Kathy Olsen/
Kathy Olsen, Regional Manager
Kalispell Regional Water Resources Office
Department of Natural Resources and Conservation

CERTIFICATE OF SERVICE

This certifies that a true and correct copy of the PRELIMINARY DETERMINATION TO GRANT was served upon all parties listed below on this 24th day of September 2021, by first class United States mail.

MEADOW LAKE INVESTMENTS, LLC
755 TEXAS AVE
WHITEFISH, MT 59937

WATER AND ENVIRONMENTAL TECHNOLOGIES
% BRAD BENNETT
102 COOPERATIVE WAY, SUITE #100
KALISPELL, MT 59901
BBENNETT@WATERENVTECH.COM

/Original signed by Nathaniel T. Ward/ — *9/24/2021*
NAME — DATE
Kalispell Regional Office, (406) 755-2288