

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

**APPLICATION FOR BENEFICIAL WATER USE PERMIT NO. 76LJ 30067956)
PRELIMINARY DETERMINATION TO GRANT PERMIT)**

On September 12, 2014, Steven F. Moore and Cynthia S. Edstrom (Applicant) submitted Application for Beneficial Water Use Permit No. 76LJ 30067956 to the Kalispell Water Resources Office of the Department of Natural Resources and Conservation (Department or DNRC) for 83.5 GPM up to 18.54 AF. The Department published receipt of the Application on its website. The Application was determined to be correct and complete as January 12, 2015. An Environmental Assessment for this Application was completed on April 22, 2015.

INFORMATION

The Department considered the following information submitted by the Applicant.

Application as filed:

- Application for Beneficial Water Use Permit, Form 600

Attachments:

- Maps:
 - Site map which identified the place of use, proposed point of diversion, township, range, and section lines.
 - Irrigation System Design Map
- Aquifer Test Data Form 633

Information within the Department's Possession/Knowledge:

- USGS flow records for the Flathead River at Columbia Falls gage; station # 12363000. Period of record October 1951 – September 2014.
- USGS flow records for the Flathead River near Polson gage; station # 12372000. Period of record October 1938 – May 2014.

- Aquifer Test Report and Depletion Report, written by Attila Folnagy, Groundwater Hydrologist, Water Management Bureau.
- Legal demands for the above mentioned streams using the Department water right database

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 and use groundwater for irrigation April 15th thru October 15th at a rate of 83.5 GPM up to 18.54 AF from one well in Parcel A COS 13169, NESENEW, Section 19, Township 28N, Range 20W, Flathead, Montana.
2. The place of use is generally located in Parcel A COS 13169, NENW, Section 19, Township 28N, Range 20W, Flathead, Montana. 10.4 acres will be irrigated.
3. Groundwater certificate 76LJ 111262 is associated with this permit; they share the same point of diversion. A submersible pump in the well diverts water for domestic and lawn and garden irrigation under 76LJ 111262; this pump does not supply water to the 10.4 acres. This is a flowing artesian well. Artesian flow is diverted from the primary well casing via a 3 inch pipe and valve; a secondary booster pump transports the water to the 10.4 acres.
4. The point of diversion is located in the Upper Flathead River Basin (76LJ), in an area that is not subject to water right basin closures or controlled groundwater area restrictions. The Applicant's well is approximately one mile north of the Flathead River. The source aquifer is a deep confined aquifer, referred to by Montana Bureau of Mines and Geology as the Deep Aquifer. Depletions to this aquifer will show up in the Flathead River and Flathead Lake.
5. Using the USDA Irrigation Water Requirement (IWR) Program 10.4 acres of alfalfa will consume 12.9 AF. A Department approved efficiency value for sprinklers (70%) yields a total

diverted volume of 18.54 AF. One Kifco T200L Water-reel will be used to irrigate the fields. The reel is equipped with a 16mm diameter Sime Hidra sprinkler that operates between 80 and 83.5 GPM; it requires a system pressure of 94 psi. The 7.5-hp booster pump is capable of pumping 83.5 GPM at approximately 250 feet of head or 108 psi. The water-reel and sprinkler will be moved to different headers throughout the season to irrigate different portions of the field, 83.5 GPM is the maximum flow rate required by the water-reel sprinkler.

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

GENERAL CONCLUSIONS OF LAW

6. 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 . . .

7. 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.

8. 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.

9. The Montana Supreme Court further recognized in Matter of Beneficial Water Use Permit Numbers 66459-76L, Ciotti: 64988-G76L, Starnier (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).

10. 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.

11. 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

12. The proposed appropriation will utilize one well (GWIC 188126); it is 435 feet deep and has a static water level of -23.1 feet. The well casing is 8 inches in diameter 0-22 feet, 6 inches 22-435 feet and has an open bottom. It is a flowing artesian well.

13. The Applicant supplied data from a 24-hour aquifer test conducted by Applied Water Consulting on June 23, 2014. Background water levels were recorded in the Applicant's well (Moore Well, GWIC 188126) and monitoring well (The Iverson Well, GWIC 228411) between June 20, 2014 and June 23, 2014. The Department determined the 24-hour aquifer test was done using generally accepted methodologies. The Applicant's well was pumped at a rate of 83.9 GPM. Prior to the start of the aquifer test the Applicant allowed the well to flow freely 10 minutes; artesian flow equaled 20 GPM. To assess physical availability the Department used a flow rate of 63.9 GPM (83.9 GPM pumped rate – 20 GPM artesian flow). The drawdown associated with the free artesian flow (20 GPM) equaled the drawdown/baseflow at the start of the aquifer test. The drawdown associated with the pump test only reflected an additional stress on the aquifer of 63.9 GPM. The maximum drawdown in the Applicants' well was 11.9 feet below the pre-pumping water level. The water level recovered 100 percent within one hour of pumping ceasing. The Iverson well, which is 1,090 feet from the Moore well experienced a maximum drawdown of one foot from a static water level of -22.2 feet bgs.

14. Determining the drawdown in the Applicant's well during the period of diversion was done by modeling a monthly pumping schedule that accounts for domestic use (1 AF) and lawn and garden irrigation (2.5 AF) under Groundwater Certificate 76LJ 111262, the proposed irrigation

use (18.54 AF), and adding drawdown from daily pumping. Total maximum drawdown is 14.2 feet, which is the summation of modeled drawdown at the end of July (2.7 feet) and the drawdown (11.5 feet) at 1,140 minutes (time it takes to pump July’s daily volume of 80,194 gallons at 63.9 GPM). This would leave 12.8 feet of available drawdown above ground surface.

15. The well is drilled into a confined gravel and sand aquifer system, assumed to be the Deep Aquifer. A Department memo dated January 10, 2011 entitled “Legal Availability of Groundwater in the Flathead Deep Aquifer” states groundwater levels in the Deep Aquifer are effectively controlled by Flathead River and Flathead Lake. Physical availability will be evaluated for Flathead River and Flathead Lake. No additional modeling, evaluation of the zone of influence or aquifer flux calculations are needed to prove groundwater’s physical availability.

16. The source aquifer is interpreted to be hydraulically connected to Flathead River and Flathead Lake. Physical availability of surface water was assessed using the USGS’s Flathead River at Columbia Falls gage (station # 12363000), with a period of record of October 1951 thru September 2014 and the Flathead River near Polson USGS gage (station # 12372000) with a period of record of October 1938- May 2014. The following tables summarize physical availability for the Flathead River and Flathead Lake for the proposed year-round period of depletion (Table 1 - 2).

Table 1: Median of Mean Monthly Flow and Volume Flathead River at Columbia Falls USGS Gage (October 1951 - September 2014)

	Jan	Feb	Mar	Apr	May	Jun
Flow (CFS)	5,607.00	4,869.00	4,772.00	10,535.00	22,645.00	24,940.00
Volume (AF)	344,157.66	269,937.36	292,905.36	625,779.00	1,389,950.10	1,481,436.00
	Jul	Aug	Sep	Oct	Nov	Dec
Flow (CFS)	11,605.00	5,798.00	5,071.00	5,166.50	4,626.50	6,036.00
Volume (AF)	712,314.90	355,881.24	301,217.40	317,119.77	274,814.10	370,489.68

Table 2: Median of Mean Monthly Flow and Volume Flathead River near Polson USGS Gage (October 1938 – May 2014)

	Jan	Feb	Mar	Apr	May	Jun
Flow (CFS)	10,270.00	9,207.50	7,731.50	9,214.50	18,960.00	25,720.00
Volume (AF)	630,372.60	510,463.80	474,559.50	547,341.30	1,163,764.80	1,527,768.00
	Jul	Aug	Sep	Oct	Nov	Dec
Flow (CFS)	13,570.00	6,312.00	6,109.00	7,342.00	8,864.00	9,953.50
Volume (AF)	832,926.60	387,430.56	362,874.60	450,651.96	526,551.30	610,945.83

17. Based on this information water is physically available from the Flathead River and Flathead Lake to supply the proposed use.

CONCLUSIONS OF LAW

18. 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.”

19. It is the applicant’s burden to provide the required evidence. *In the Matter of Application for Beneficial Water Use Permit No. 27665-411 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).

20. 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).

21. The Applicant has proven that water is physically available at the proposed point of diversion in the amount Applicant seeks to appropriate. § 85-2-311(1)(a)(i), MCA. Finding of Fact (FOF) 12-17.

Legal Availability:

FINDINGS OF FACT

22. The source aquifer is interpreted to be hydraulically connected to the Flathead River and Flathead Lake. Seasonal fluctuations of drawdown are expected to be dampened resulting in a constant year-round rate of depletion equal to the annual rate of consumption. Below is a breakdown of monthly depletions to surface waters (Table 3). Based on the Department memo dated January 10, 2011 evaluation of legal availability was based on the Flathead River and Flathead Lake.

Table 3: Monthly Depletions to Surface Water Sources

Month	Irrigation Consumption (AF)	Depletion (AF)	Depletion (GPM)
January	0.00	1.10	8.0
February	0.00	1.00	8.0
March	0.00	1.10	8.0
April	0.00	1.07	8.0
May	0.28	1.10	8.0
June	3.15	1.07	8.0
July	4.65	1.10	8.0
August	4.08	1.10	8.0
September	0.82	1.07	8.0
October	0.00	1.10	8.0
November	0.00	1.07	8.0
December	0.00	1.10	8.0
TOTAL	12.98	12.98	

23. The Department assessed all surface water legal demands from the Flathead River at Columbia Falls USGS gage (# 12363000) to the Inlet of Flathead Lake and on Flathead Lake to USGS gage # 12372000 Flathead River near Polson. When calculating legal demand volumes, irrigation and lawn/garden uses were delegated as occurring from April 1st to October 31st; all legal demands exist within climatic region three. Domestic, commercial, multiple domestic, industrial and other uses were analyzed as year round uses. Due to the difficulty of differentiating the distribution of appropriated volume over the period of depletion, it was

assumed the flow rate associated with each month is continuously in use during that month. This assumption leads to an overestimate of legal demands for their respective periods and as a result the Department finds this an appropriate measure of legal demands. A summary of all legal demands over the proposed period of depletion for the Flathead River and Flathead Lake are presented in Tables 4-5 below.

Table 4: Flathead River at Columbia Falls USGS Gage # 12363000 minus legal demands on Flathead River to inlet of Flathead Lake.

Month	Water Physically Available (CFS)	Existing Legal Demands (CFS)	Physically Available Water minus Legal Demands (CFS)	Physically Available Water minus Legal Demands (AF)
January	5,607.00	3,615.34	1,991.66	122,248.09
February	4,869.00	3,615.34	1,253.66	69,502.91
March	4,772.00	3,615.34	1,156.66	70,995.79
April	10,535.00	6,768.09	3,766.91	223,754.45
May	22,645.00	8,243.09	14,401.91	883,989.24
June	24,940.00	8,243.09	16,696.91	991,796.45
July	11,605.00	5,520.09	6,084.91	373,491.78
August	5,798.00	3,618.09	2,179.91	133,802.88
September	5,071.00	3,618.09	1,452.91	86,302.85
October	5,166.50	3,618.09	1,548.41	95,041.41
November	4,626.50	3,615.34	1,011.16	60,062.90
December	6,036.00	3,615.34	2,240.66	148,580.11

Table 5: Flathead River near Polson USGS Gage # 12372000 minus legal demands on Flathead Lake

Month	Water Physically Available (CFS)	Existing Legal Demands (CFS)	Physically Available Water minus Legal Demands (CFS)	Physically Available Water minus Legal Demands (AF)
January	10,270.00	98.68	10,171.32	624,309.87
February	9,207.50	98.68	9,108.82	504,987.79
March	7,731.50	98.68	7,632.82	468,496.74
April	9,214.50	169.13	9,045.37	538,396.48
May	18,960.00	169.13	18,790.87	1,154,720.78
June	25,720.00	169.13	25,550.87	1,518,919.56
July	13,570.00	169.13	13,400.87	823,783.21
August	6,312.00	169.13	6,142.87	378,287.17
September	6,109.00	169.13	5,939.87	354,026.16
October	7,342.00	169.13	7,172.87	441,508.57
November	8,864.50	98.68	8,765.82	520,684.14
December	9,953.50	98.68	9,854.82	604,883.10

24. PPL Montana LLC owns the hydropower water rights for Kerr Dam. PPL Montana LLC and the Confederated Salish and Kootenai Tribes jointly operate Kerr Dam. The two claimed water rights for Kerr 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 PPL Montana LLC’s claimed water rights, the direct flow hydropower right and storage for hydropower water right, can be fulfilled over a period of 64 days.

25. Kerr 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 PPL Montana LLC hydropower water rights at Kerr Dam require 1,831,306 AF, to meet the hydropower water rights claimed in the adjudication, the records show that Kerr Dam's reservoir, Flathead Lake, consistently obtains a full pool status each year.

26. Pending an adjudication of PPL Montana LLC hydropower water rights and completion of a water availability study that shows otherwise, the Department finds that water in Flathead River, Flathead Lake and the Stillwater River 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.

CONCLUSIONS OF LAW

27. 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).

28. 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.

29. 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.

30. 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*.

31. 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 22-26.

Adverse Effect

FINDINGS OF FACT

32. As noted in the Aquifer Test Report (Folnagy, A., 2014), the Department’s groundwater hydrologists evaluated drawdown in nearby wells using the Theis (1935) solution, a transmissivity value of 8,400 ft²/day, a storativity value of 5.7×10^{-6} and the Applicant’s monthly pumping schedule for the period of diversion. After five years of pumping drawdown in excess of one foot occurs in one well within 1,850 feet of the Applicant’s well (Table 6).

Table 6: Water rights affected by the proposed use

Water Right No.	Owner Name	Distance (ft)	Well Depth (ft)	Additional Drawdown (ft)	Static Water Level (ft) bgs	Available Water Column (ft)
76LJ 30048434	E.R. Weigel; M. Weigel	1,090	381	1.1	-22.1	402.0

33. To evaluate if this project will adversely affect existing water rights on the Flathead River and Flathead Lake the Department subtracts monthly net depletions from the flow rate/volume of water legally available on those sources. For every month of the proposed period of diversion the flow rate/volume of Flathead Lake and the Flathead River exceed all legal demands and the proposed use.

34. 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. During times of extreme water shortage or if call should be made, the Applicant proposes the following plan:

1. Reduce irrigation application 50%;
2. Irrigate only with drip irrigation,
3. Turn off well pump

35. The proposed use will not adversely affect nearby wells or senior surface water users of the Flathead River and Flathead Lake.

CONCLUSIONS OF LAW

36. 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.
37. 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(8).
38. 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) (TRLIC) 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. The proposed appropriation in this case is a groundwater appropriation that depletes surface water more than 150 miles upstream of Noxon Reservoir and is located above Flathead Lake and Kerr Dam, and below the inflows from the Bureau of Reclamation's Hungry Horse Dam.
39. 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's and PPL Montana's 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 PPL Montana LLC can reasonably exercise their hydropower water rights.

40. 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.

41. 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.

42. 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.

43. 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.

44. The 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 32-35)

Adequate Diversion

FINDINGS OF FACT

45. The Applicants' well (GWIC 188126) was drilled in 2006; it is 435 feet deep and has a static water level of -23.1 feet. The well casing is 8 inches in diameter 0-22 feet, 6 inches 22-435 feet and has an open bottom. It is a flowing artesian well. The well was drilled by a licensed well driller (license # WWC-450) in accordance with MCA Title 37, Chapter 43 and ARM Title 36, Chapter 21.

46. The Applicants' well (GWIC 188126) supplies domestic and lawn and garden irrigation water to the Applicant's residence via a submersible pump under Groundwater Certificate 76LJ 111262-00. This certificate diverts water at a rate of 26 GPM up to 3.5 AF. When capped, the closed in pressure of the well is approximately 10 psi. A 3-inch steel pipe is welded to the side of the 8-inch casing. Water pressure within the well forces water out of the 3-inch steel pipe when the valve is open. Artesian flow can be controlled via the valve. Outside the well house the 3-inch steel casing is adapted to a 4-inch buried PVC water main; water is conveyed 250 feet west to the booster pump site. The booster pump is hung from a drop pipe within an 8-inch closed bottom casing driven into the ground. The booster pump is a 7.5 horsepower 6-inch submersible pump (Model 75FA7S6-PE) capable of delivering up to 83.5 GPM at approximately 250 feet of head. The booster pump is used to pressurize the flow into the irrigation system which requires pressure in excess of that provided from the well itself. Even while pumping there is still enough excess pressure from the well column to provide the required flow. From the booster station a 3-inch PVC water main conveys irrigation water northwest approximately 530 feet. Six 2-inch irrigation headers with ball valves and cam-lock fittings come off of the mainline. A single Kifco T200L Water-Reel is used to irrigate the field. Headers two through five irrigate the fields to the east and west of the mainline while header one only irrigates the field to the west. The water-reel is equipped with a 16mm diameter Sime Hidra Sprinkler that provides up to 83.5 GPM. A system pressure of 94 psi is required to operate the water-reel at 80 GPM. The booster pump is capable of producing the required pressure.

CONCLUSIONS OF LAW

47. 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.

48. 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.

49. 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 45-46).

Beneficial Use

FINDINGS OF FACT

50. Using the USDA Irrigation Water Requirement (IWR) Program 10.4 acres of alfalfa will consume 12.9 AF of water. A Department approved efficiency value for sprinklers (70%) yields a total diverted volume of 18.54 AF ($12.9 \text{ AF} \div 0.70 = 18.54 \text{ AF}$).

51. A Kifco T200L Water-reel will be used to irrigate the fields. The reel is equipped with a 16mm diameter Sime Hidra sprinkler that operates at 80 to 83.5 GPM. The water-reel and sprinkler will be moved throughout the season to irrigate different portions of the field, 83.5 GPM is the maximum flow rate produced by the water-reel sprinkler. The Applicants' irrigation

schedule below demonstrates how the requested flow rate will produce the requested volume.

Irrigation Diversion Schedule				
Month	IWR Requirement (gallons)	*Days of Irrigation (per header)	Hours of Irrigation (per day)	Diverted Volume (gallons)
April	0	0	0	0
May	129,099	9 (1)	3	132,435
June	1,464,467	18 (2)	16.67	1,471,794
July	2,166,444	23 (2.5)	19	2,143,485
August	1,900,177	22 (2.5)	17.67	1,906,770
September	379,228	9 (1)	8.67	382,737
October	0	0	0	0
Total	6,039,416	81	1,230.8	6,037,221

*Average flow rate assumed to be 81.75 gpm

CONCLUSIONS OF LAW

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

53. 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).

54. 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).

55. Applicant proposes to use water for irrigation use. The Applicant has proven by a preponderance of the evidence that irrigation is a beneficial use and that 83.5 GPM of water up to 18.54 AF is the amount needed to sustain the beneficial use. § 85-2-311(1)(d), MCA, (FOF 50-51)

Possessory Interest

FINDINGS OF FACT

56. The applicant signed and had the affidavit on the application form notarized 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

57. 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.

58. 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.

59. 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. 56)

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 30067956 should be GRANTED.

The Department determines the Applicant may divert groundwater by means of one well, from April 15th thru October 15th at 83.5 GPM up to 18.54 AF, from a point in Parcel A COS 13169, NESENEW, Section 19, Township 28N, Range 20W, Flathead, Montana for irrigation use April 15th thru October 15th. The place of use is located in Parcel A COS 13169, NENW, Section 19, Township 28N, Range 20W, Flathead, Montana. 10.4 acres will be irrigated.

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 22nd day of April, 2015

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