

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

**APPLICATION FOR BENEFICIAL
WATER USE PERMIT NO. 76LJ 30105305)
BY Mountain View Timbers Homeowners') PRELIMINARY DETERMINATION TO
Association) GRANT PERMIT**

On March 22, 2016, Mountain View Timbers Homeowners' Association (Applicant) submitted Application for Beneficial Water Use Permit No. 76LJ 30105305 to the Kalispell Water Resources Office of the Department of Natural Resources and Conservation (Department or DNRC) for 95 gallons per minute (GPM) up to 20.97 acre-feet (AF) diverted volume for multiple domestic use by 23 households and lawn & garden irrigation of 6.86 acres. The Department published receipt of the Application on its website. The Application was determined to be correct and complete as of August 3, 2016. An Environmental Assessment for this Application was completed on July 26, 2016.

INFORMATION

The Department considered the following information submitted by the Applicant.

Application as filed:

- Application for Beneficial Water Use Permit, Form 600
- Attachments
- Maps: Topographic map showing subdivision location
Aerial photo showing points of diversion and place of use
- Electronic copy of Form 633

Information received after Application Filed

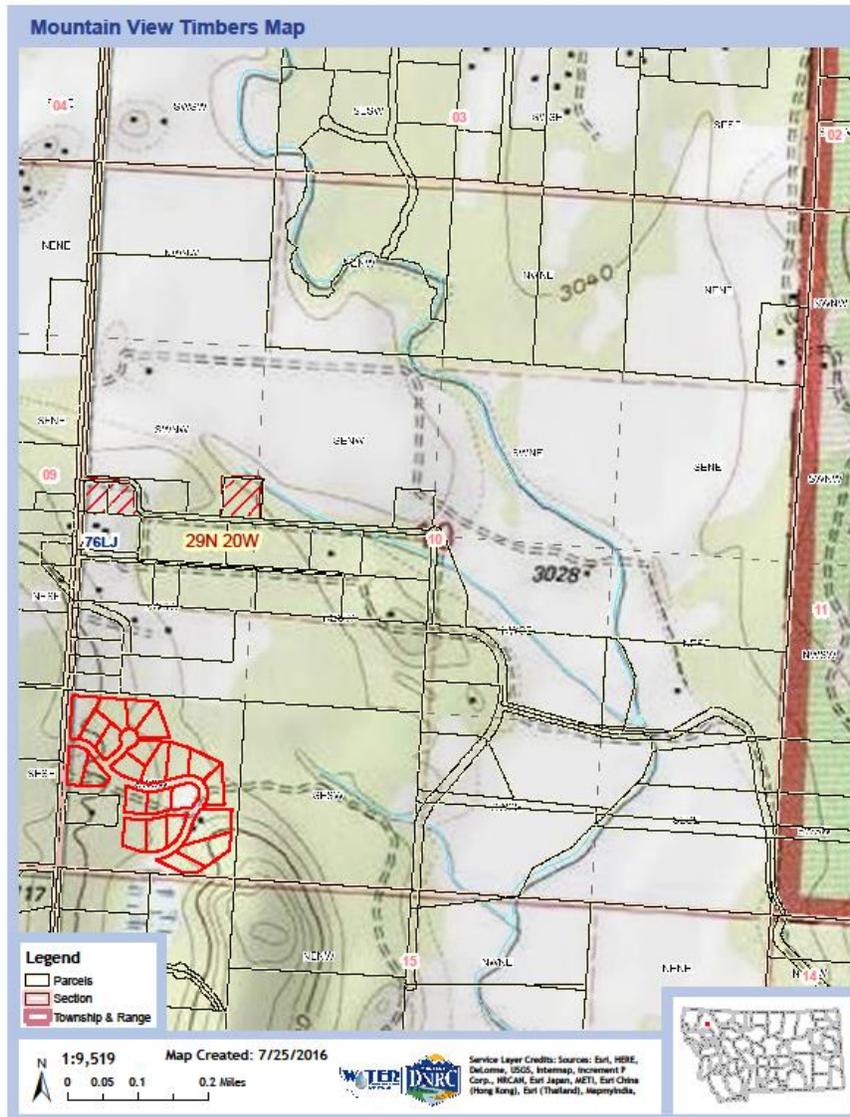
- Letter from consultant Jamie Graham clarifying/reducing requested flow rate, irrigation requirements, and acres irrigated, received May 11, 2016

- Operation & Maintenance Manual for Mountain View Timbers PWS system, received April 18, 2016

Information within the Department's Possession/Knowledge

- Department memo dated January 10, 2011 entitled "Legal Availability of Groundwater in the Flathead Deep Aquifer" written by Russell Levens and James Heffner; Groundwater Hydrologists for the Water Management Bureau
- Aquifer Test Report by DNRC groundwater Hydrologist Attila Fohnagy, dated July 7, 2016
- Depletion Report by DNRC groundwater Hydrologist Attila Fohnagy, dated June 29, 2016
- Department record of existing water rights
- 2013-2016 Lake Blaine/Blaine Creek Hydrologic Summary Report by Melissa Brickl, Hydrologist for Kalispell Water Resources Office
- Memo to application regarding Mooring Slough and Mooring Creek Physical Availability written by Melissa Brickl, Hydrologist/Water Resource Specialist for the Kalispell Regional Office
- USGS records for gaging station #12363000, Flathead River at Columbia Falls
- USGS records for gaging station #12372000, Flathead River near Polson

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 two wells; the first being 293 feet deep and the second being 289 feet deep. The wells are completed in a deep alluvial aquifer of the Flathead Valley commonly referred to by the Montana Bureau of Mines and Geology (MBMG) as the Deep Aquifer. The proposed points of diversion are located in the SWSWSW Section 10,

Township 29N, Range 20W, Flathead County. The proposed period of diversion is January 1-December 31. The proposed period of use for multiple domestic use by 23 households is January 1-December 31. The proposed period of use for lawn & garden irrigation of 6.86 acres is April 15-October 15. The place of use is generally located in the Mountain View Timbers subdivision located in the SWSW Section 10, Township 29N, Range 20W, Flathead County.

2. The Applicant has requested a domestic requirement of 300 gallons per day (gpd) per household per DEQ requirements for a total annual volume of 7.73 AF for multiple domestic use (23 households). The Applicant has also requested 1.93 AF/acre of water for the purpose of lawn and garden irrigation of 6.86 acres for a total annual irrigation volume of 13.24 AF. The Applicant's lawn and garden irrigation request is justified using the NRCS IWR program and a system efficiency of 70%.

3. The total proposed appropriation is for 95 GPM diverted flow up to 20.97 AF diverted volume per annum. Circular DEQ 1 requirements for public water supplies using groundwater require that a redundant well be completed so that systems can meet or exceed the peak instantaneous demand with the largest well out of service (See Circular DEQ 1 (3.2)). The requested flow rate is the maximum pumping rate of one well operating at capacity as determined by the pumps installed. The total consumptive use of the proposed appropriation will be 10.1 AF per annum based on 10% consumptive use for domestic purposes and 70% consumptive use for lawn and garden irrigation.

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

The appropriator shall install a Department approved in-line flow meter at a point in the delivery line approved by the Department. Water must not be diverted until the required measuring device is in place and operating. On a form provided by the Department, the appropriator shall keep a written *monthly* record of the flow rate and volume of all water diverted, including the period of time. Records shall be submitted by January 31st of each year and upon request at other times during the year until certification. Failure to submit reports may be cause for revocation of a permit or change. The records must be sent to the Kalispell

Water Resources Regional Office. The appropriator shall maintain the measuring device so it always operates properly and measures flow rate and volume accurately.

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

GENERAL CONCLUSIONS OF LAW

5. 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 . . .

6. 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.

7. 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.

8. 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).

9. 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.

10. 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

11. The proposed wells (West Well and East Well) are 289 feet and 293 feet deep and are completed in a confined aquifer referred to by the Montana Bureau of Mines and Geology (MBMG) as the Deep Aquifer. Hydrogeologic information indicates that this aquifer extends across the Flathead valley underlying an area approximately 300 square miles and is up to 3,000 feet thick.

12. Prior to the aquifer test, background groundwater levels were monitored in the West Well and East Well between January 22, 2007 and January 23, 2007.

13. An aquifer test was completed for the West Well at a flow rate of 134 GPM. The aquifer test started on January 23, 2007, at 9:00 A.M., and continued without interruption until 9:00 A.M. on January 24, 2007. The East Well was monitored for drawdown during the 24-hour aquifer test.

14. An Aquifer Test Report and Depletion Report were completed by DNRC Groundwater Hydrologist Attila Fohnagy on July 7, 2016 and June 29, 2016, respectively. The Aquifer Test Report confirmed that the aquifer test performed was adequate.

15. The recommended aquifer properties based on modeling analysis of the aquifer test using the Cooper-Jacob (1946) solution calculates an average transmissivity of 6,323 ft²/day and a storativity of 1.1×10^{-3} .

16. The West Well was evaluated with a 24-hour aquifer test at 134 GPM with a maximum drawdown of 9.3 feet below the static water level of 114.55 feet below ground surface (bgs), leaving 165 feet of water column above the bottom of the well. A semilogarithmic graph of drawdown during the 24-hour aquifer test shows that the West Well continued to drawdown

following a semi-log straight line. A best fit trendline was applied to the drawdown data from 50 minutes to 1440 minutes. This trendline was extrapolated to the maximum period of diversion of 365 days assuming the well will be pumped continuously. Modeled interference drawdown of 0.4 feet resulting from pumping in the East Well was added to the predicted pumping drawdown to give a total drawdown of 17.9 feet. This would leave 157 feet of water column above the bottom of the West Well.

17. The East Well was evaluated with an 8-hour drawdown and yield test at 95 GPM with a maximum drawdown of 11.7 feet below the static water level of 104.43 feet bgs, leaving 177 feet of water column above the bottom of the well. A semilogarithmic graph of drawdown during the 8-hour drawdown and yield test shows that the East Well continued to drawdown following a semi-log straight line. A best fit trendline was applied to the drawdown data from 150 minutes to 480 minutes. This trendline was extrapolated to the maximum period of diversion of 365 days assuming the well will be pumped continuously. Modeled interference drawdown of 0.4 feet resulting from pumping in the West Well was added to the predicted pumping drawdown to give a total drawdown of 13.9 feet. This would leave 175 feet of water column above the bottom of the East Well.

18. The wells are completed in a confined sand and gravel aquifer known as 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 the Flathead River and Flathead Lake and a new groundwater use will not alter the regional gradient, and thus the aquifer flux. New groundwater use will reduce discharge from the aquifer to the Flathead River and Flathead Lake in the amount equivalent to the consumptive use of the proposed diversion. Pursuant to this memo, physical availability of water will be evaluated for hydraulically connected 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.

19. The following USGS gages were utilized to quantify median of mean monthly flows and volumes on the Flathead River and Flathead Lake: USGS Station #12363000, Flathead River at

Columbia Falls which has a period of record from October 1951- September 2015, and USGS Station #12372000, Flathead River near Polson which has a period of record from October 1938- May 2015. The following tables summarize physical availability of water for the Flathead River and Flathead Lake for the year-round period of depletion from the proposed appropriation.

Table 1: Flathead River at Columbia Falls USGS Gage # 12363000

	Jan	Feb	Mar	Apr	May	Jun
Flow (CFS)	5,714.0	4,887.0	4,805.0	10,680.0	22,630.0	24,720.0
Volume (AF)	350,725.3	270,935.3	294,930.9	634,392.0	1,389,029.4	1,468,368.0
	Jul	Aug	Sep	Oct	Nov	Dec
Flow (CFS)	11,450.0	5,705.0	4,953.0	5,133.0	4,565.0	5,995.0
Volume (AF)	702,801.0	350,172.9	294,208.2	315,063.5	271,161.0	367,973.1

Table 2: Flathead River near Polson USGS Gage # 12372000

	Jan	Feb	Mar	Apr	May	Jun
Flow (CFS)	5,714.0	4,887.0	4,805.0	10,680.0	22,630.0	24,720.0
Volume (AF)	350,725.3	270,935.3	294,930.9	634,392.0	1,389,029.4	1,468,368.0
	Jul	Aug	Sep	Oct	Nov	Dec
Flow (CFS)	11,450.0	5,705.0	4,953.0	5,133.0	4,565.0	5,995.0
Volume (AF)	702,801.0	350,172.9	294,208.2	315,063.5	271,161.0	367,973.1

20. In addition to the Flathead River and Flathead Lake, the Department’s Depletion report identified that surface water depletions will occur to Mooring Slough and Mooring Creek due to a thin confining unit intertongued with the Deep Aquifer under Mooring Slough. Melissa Brickl, Hydrologist/Water Resources Specialist for the Kalispell Water Resources Office, created a summary report which addresses the Lake Blaine watershed which includes Mooring Slough and Mooring Creek. In the summary report, it was identified that Mooring Slough is predominately groundwater fed and has an outlet that flows during spring and early summer. The report also identifies that Mooring Creek becomes a gaining reach downstream of where Elk Park Rd crosses the creek.

21. In order to quantify the physical availability of water in Mooring Slough and Mooring Creek, the Department used the information identified in the Lake Blaine Summary Report along with a memo composed by Melissa Brickl, Hydrologist/Water Resources Specialist for the Kalispell Water Resources Office, regarding physical availability of water in Mooring Slough and Mooring Creek. Per the memo available in the application file:

A. The capacity of Mooring Slough was determined using the following Department approved equation:

$$\text{Pond Capacity} = \text{Surface Area} \times \text{Max Depth} \times 0.5$$

$$\text{Pond Capacity} = 9.76 \times 6 \times 0.5$$

$$\text{Pond Capacity} = 29.3 \text{ acre-feet}$$

B. The mean monthly flow rates of Mooring Creek were determined using the USGS Stream Stats program and checked for accuracy using flow measurements collected by the Department. The mean monthly flow estimates calculated using the Stream Stats program were determined to be reasonable based on low percentage of error between the flow estimates generated by the program and flow measurements collected by the Department. A more in-depth explanation of the methodology used to calculate the physical availability of water in Mooring Slough and Mooring Creek can be found within the memo in the file.

22. Based on the available information, the Department determines that the following tables show the amount of water in Mooring Slough and mean monthly flow rates and volumes of water physically available in Mooring Creek throughout the year.

Table 3. Mooring Slough Capacity

Pond Volume (AF)	29.3
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Table 4. Mean monthly stream flows and associated volumes for Mooring Creek above its confluence with Lake Blaine

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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Mean Monthly Streamflow Estimates (CFS)	10.25	9.99	11.89	31.25	87.89	102.34	43.11	17.63	13.01	13.71	13.80	12.31
Mean Monthly Streamflow Estimates (AF)	628.94	553.74	730.06	1,856.39	5,394.49	6,078.81	2,645.86	1,081.94	773.00	841.81	819.69	755.65

23. The Department finds that the proposed diverted flow of 95 GPM (0.21 CFS) and diverted volume of 20.97 AF is physically available in the Flathead River and Flathead Lake, which is analyzed for physical availability of water pursuant to a Department memo dated January 10, 2011, entitled “Legal Availability of Groundwater in the Flathead Deep Aquifer.”

24. The Department finds that the proposed consumptive use of 6.3 GPM up to 10.1 AF of volume annually is physically available from Mooring Slough and Mooring Creek, which are analyzed for physical availability of the proposed consumptive use pursuant to the Department’s Depletion Report.

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. 27665-411 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).

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. 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. (FOF 11-24)

Legal Availability

FINDINGS OF FACT

29. The Flathead River and Flathead Lake will be evaluated for legal availability of water based on a Department Memo dated January 10, 2011, which explains the hydraulic connection of the Deep Aquifer to the Flathead River system. In addition to the Flathead River and Flathead Lake, the Department’s Depletion Report identifies that there will be surface water depletions to Mooring Slough and Mooring Creek due to the proposed groundwater pumping. The Department will analyze the above identified surface water sources for legal availability of water.

30. The areas of potential impact for surface waters associated with this application will be from USGS gage #12363000 at Columbia Falls on the Flathead River to the inlet of Flathead Lake, Flathead Lake downstream to USGS gage #12372000 on the Flathead River near Polson, the entire area of Mooring Slough, and Mooring Creek from Mooring Slough down to the confluence of Lake Blaine and Mooring Creek.

31. The Depletion Report identifies that seasonal fluctuations of drawdown from groundwater pumping are expected to be dampened resulting in a constant year-round rate of depletion equal to the annual rate of consumption. The following table includes a breakdown of monthly depletions expected to occur within the identified surface waters.

Table 5. Summary of anticipated monthly net depletions (flow and volume) from hydraulically connected surface waters affected by the proposed groundwater appropriation

Month	Domestic Consumption (AF)	Irrigation Consumption (AF)	Depletion (AF)	Depletion (GPM)
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January	0.07	0.0	0.9	6.3
February	0.07	0.0	0.8	6.3
March	0.07	0.0	0.9	6.3
April	0.07	0.1	0.8	6.3
May	0.07	1.2	0.9	6.3
June	0.07	1.8	0.8	6.3
July	0.07	2.6	0.9	6.3
August	0.07	2.4	0.9	6.3
September	0.07	1.1	0.8	6.3
October	0.07	0.1	0.9	6.3
November	0.07	0.0	0.8	6.3
December	0.07	0.0	0.9	6.3
TOTAL	0.8	9.3	10.1	

32. 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 on the Flathead River near Polson. When calculating legal demand volumes, irrigation and lawn & garden uses were delegated as occurring from April 1-October 31. 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 the actual legal demands of volume for the respective periods of use. The Department finds this conservative method of calculating legal demands to be 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	5,714.0	3,507.8	2,206.2	135,418.4

February	4,887.0	3,507.8	1,379.2	76,464.5
March	4,805.0	3,507.8	1,297.2	79,624.0
April	10,680.0	6,806.7	3,873.3	230,075.8
May	22,630.0	8,281.7	14,348.3	880,700.5
June	24,720.0	8,281.7	16,438.3	976,436.8
July	11,450.0	5,558.7	5,891.3	361,609.9
August	5,705.0	3,656.7	2,048.3	125,726.5
September	4,953.0	3,656.7	1,296.3	77,002.0
October	5,133.0	3,656.7	1,476.3	90,617.2
November	4,565.0	3,507.8	1,057.2	62,799.5
December	5,995.0	3,507.8	2,487.2	152,666.2

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	10,380.0	104.7	10,275.3	630,699.9
February	9,234.0	104.7	9,129.3	506,130.2
March	7,778.0	104.7	7,673.3	470,989.1
April	9,223.0	172.1	9,050.9	537,621.3
May	18,570.0	172.1	18,397.9	1,129,260.9
June	25,720.0	172.1	25,547.9	1,517,543.1
July	13,570.0	172.1	13,397.9	822,360.9
August	6,312.0	172.1	6,139.9	376,864.9
September	6,076.0	172.1	5,903.9	350,689.5
October	7,369.0	172.1	7,196.9	441,743.5
November	8,838.0	104.7	8,733.3	518,759.9
December	10,070.0	104.7	9,965.3	611,672.1

33. Confederated Salish & Kootenai Tribes owns the hydropower water rights for Salish-Kootenai Dam. The two claimed water rights for Salish-Kootenai 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.

34. Salish-Kootenai 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 Salish-Kootenai Dam require 1,831,306 AF, to meet the hydropower water rights claimed in the adjudication, the records show that Salish-Kootenai Dam's reservoir, Flathead Lake, consistently obtains a full pool status each year.

35. 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, 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.

36. In addition to the Flathead River and Flathead Lake, the Department analyzed legal availability of water for Mooring Slough and Mooring Creek. The following tables list the existing water rights for Mooring Slough and Mooring Creek. For irrigation Statement of Claim rights that do not list a volume on the abstract, the Department calculated volume using the claimed flow rate and assuming constant diversion during the period of use. All other rights were assumed to be able to take their full respective volumes during any month of their period of diversion.

Table 6. Existing water rights on Mooring Slough

WRNUMBER	PURPOSES	PRTY_DATE
76LJ 150693 00	STOCK	3/2/1962
76LJ 214967 00	STOCK	5/6/1938
76LJ 214984 00	FISH AND WILDLIFE	9/5/1943

Table 7. Existing water rights on Mooring Creek

WRNUMBER	PURPOSES	PRTY_DATE
76LJ 147131 00	DOMESTIC	7/8/1954
76LJ 27746 00	DOMESTIC	5/1/1973
76LJ 16259 00	DOMESTIC	12/18/1963
76LJ 147092 00	IRRIGATION	4/7/1971
76LJ 45207 00	IRRIGATION	2/27/1950
76LJ 35726 00	IRRIGATION	8/16/1950
76LJ 147132 00	IRRIGATION	7/8/1954
76LJ 131488 00	IRRIGATION	6/1/1961
76LJ 46291 00	IRRIGATION	12/30/1963
76LJ 146941 00	IRRIGATION	2/27/1950
76LJ 124152 00	LAWN AND GARDEN	6/1/1944
76LJ 103279 00	MULTIPLE DOMESTIC	12/6/1963
76LJ 147094 00	STOCK	18951231
76LJ 124154 00	STOCK	18951231
76LJ 42412 00	STOCK; DOMESTIC	12/30/1981
76LJ 23591 00	IRRIGATION	6/26/1979
76LJ 26560 00	IRRIGATION	5/7/1968
76LJ 26559 00	STOCK	10/31/1913
76LJ 26620 00	IRRIGATION	4/15/1960

37. Based on the existing water rights, the following tables summarize the existing legal demands on Mooring Slough and Mooring Creek.

Table 8. Mooring Slough physical availability minus legal demands

Pond Volume (AF)	29.3
Existing Legal Demands (AF)	3.7
Water Available for new uses (AF)	25.6

Table 9. Mooring Creek physical availability (flow) minus legal demands

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean Monthly Q Estimate Mooring Ck at Inlet of Lake Blaine (CFS)	10.2	10.0	11.9	31.3	87.9	102.3	43.1	17.6	13.0	13.7	13.8	12.3
Legal Demands from Mooring Slough to Inlet of Lake Blaine (CFS)	0.5	0.5	0.5	1.5	3.2	5.2	5.2	5.2	5.2	3.1	0.5	0.5
Legal Availability Mooring Creek (CFS)	9.7	9.5	11.4	29.7	84.7	97.2	37.9	12.5	7.8	10.6	13.3	11.8

Table 10. Mooring Creek physical availability (volume) minus legal demands

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean Monthly Volume (AF) at Inlet Lake Blaine	628.9	553.7	730.1	1,856.4	5,394.5	6,078.8	2,645.9	1,081.9	773.0	841.8	819.7	755.6
Legal Demands from Mooring Slough to Inlet of Lake Blaine (AF)	19.3	18.9	19.3	75.6	177.7	291.5	300.5	300.5	291.5	172.3	19.2	19.3

Legal Availability Mooring Creek (AF)	609.6	534.8	710.7	1,780.8	5,216.8	5,787.3	2,345.4	781.4	481.5	669.5	800.5	736.3
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38. The Department finds that the proposed diverted flow of 95 GPM (0.21 CFS) and diverted volume of 20.97 AF is legally available in the Flathead River and Flathead Lake, which is analyzed for legal availability of water pursuant to a Department memo dated January 10, 2011, entitled “Legal Availability of Groundwater in the Flathead Deep Aquifer.”

39. The Department finds that the proposed consumptive use of 6.3 GPM up to 10.1 AF of volume annually is legally available from Mooring Slough and Mooring Creek, which are analyzed for legal availability of the proposed consumptive use pursuant to the Department’s Depletion Report.

CONCLUSIONS OF LAW

40. 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).

41. 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.

42. 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.

43. 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*.

44. 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 29-39)

Adverse Effect

FINDINGS OF FACT

45. The Mountain View Timbers Homeowners' Association has the ability to regulate the volume of water diverted during times of water shortage so that the water rights of prior appropriators may be satisfied. During times of water shortage, they will initially reduce irrigation water by 50%. If reduction of irrigation water is not enough, they will cease all irrigation. They also have the ability to ration domestic water use to 50% and ultimately can shut off the wells until water becomes available again.

46. Attila Fohnagy, groundwater Hydrologist for the Water Management Bureau of the DNRC, modeled drawdown of the aquifer by the proposed pumping of the Applicant's well. The evaluation of drawdown was completed using the Theis (1935) solution with the following parameters: $T=6,323 \text{ ft}^2/\text{day}$ and $S=0.0011$. After five years of pumping, drawdown in excess of 1 foot occurs in wells that are 85 feet from the Applicant's wells. There are no water rights that are predicted to experience drawdown greater than one foot.

47. Depletion by pumping in the Deep Aquifer primarily occurs through propagation of drawdown through the overlying confining layer. For this application, the Department identified that depletions will occur to Mooring Slough, Mooring Creek, the Flathead River downstream of Columbia Falls, and Flathead Lake. Because depletions will occur through propagation of drawdown through the overlying confining layer, depletion effects are expected to be dampened resulting in constant year-round depletion even though consumption from the requested appropriation is concentrated in summer. The following table shows the expected depletion effects.

Table 11. Summary of anticipated monthly net depletions (flow and volume) from hydraulically connected surface waters affected by the proposed groundwater appropriation

Month	Domestic Consumption (AF)	Irrigation Consumption (AF)	Depletion (AF)	Depletion (GPM)
January	0.07	0.0	0.9	6.3
February	0.07	0.0	0.8	6.3

March	0.07	0.0	0.9	6.3
April	0.07	0.1	0.8	6.3
May	0.07	1.2	0.9	6.3
June	0.07	1.8	0.8	6.3
July	0.07	2.6	0.9	6.3
August	0.07	2.4	0.9	6.3
September	0.07	1.1	0.8	6.3
October	0.07	0.1	0.9	6.3
November	0.07	0.0	0.8	6.3
December	0.07	0.0	0.9	6.3
TOTAL	0.8	9.3	10.1	

48. The Applicant will be subject to the following conditions, limitations, or restrictions on its permit:

The appropriator shall install a Department approved in-line flow meter at a point in the delivery line approved by the Department. Water must not be diverted until the required measuring device is in place and operating. On a form provided by the Department, the appropriator shall keep a written *monthly* record of the flow rate and volume of all water diverted, including the period of time. Records shall be submitted by January 31st of each year and upon request at other times during the year until certification. Failure to submit reports may be cause for revocation of a permit or change. The records must be sent to the Kalispell Water Resources Regional Office. The appropriator shall maintain the measuring device so it always operates properly and measures flow rate and volume accurately.

49. The Department finds that there will be no adverse effect to existing water users due to the proposed appropriation. There are no water rights which have wells completed in the Deep Aquifer which will experience drawdown below the bottom of their perforations due to the Applicant's proposed pumping, and water is both physically and legally available in the Flathead

River, Flathead Lake, Mooring Slough, and Mooring Creek in the amount which will be depleted.

CONCLUSIONS OF LAW

50. 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.

51. 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).

52. 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 Salish-Kootenai Dam, and below the inflows from the Bureau of Reclamation's Hungry Horse Dam.

53. 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 Confederated Salish & Kootenai Tribe'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 Confederated Salish & Kootenai Tribes can reasonably exercise their hydropower water rights.

54. 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.

55. 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.

56. 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.

57. 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.

58. The Applicants have 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 45-49)

Adequate Diversion

FINDINGS OF FACT

59. The Applicant proposes to divert 95 GPM up to 20.97 AF per year from two wells located in the SWSWSW Section 10, Township 29N, Range 20W, Flathead County. The wells were drilled by Western Water Works, Inc, a licensed well driller in the State of Montana (Lic. No. WWC-521). The West Well is 289 feet deep with an 8-inch casing. The East Well is 293 feet deep with an 8-inch casing. Both wells are completed in a confined aquifer in the Flathead Valley referred to by the Montana Bureau of Mines and Geology as the Deep Aquifer.

60. The requested flow rate of 95 GPM is the maximum attainable flow rate of one well operating. Circular DEQ 1 requirements for public water supplies using groundwater require that a redundant well be completed so that systems can meet or exceed the peak instantaneous demand with the largest well out of service (See Circular DEQ 1 (3.2)).

61. Each well is operated using a 7.5 horsepower motor. The exact make/model of the pumps is unknown, and it is assumed that each well has the same pump. The requested flow rate of 95 GPM was verified on PWS #2 during the 8-hour drawdown & yield test. The well pumps are controlled by a variable-frequency drive (VFD) system which maintains system pressure at 60 psi. Once the system pressure starts dropping, the VFD kicks a pump on at a flow rate necessary to maintain pressure at 60 psi. The water distribution system includes two Pro-Source PS-50 pressure tanks. Distribution pipes are 4" HDPE and individual lots are served by 1-inch HDPE service lines. The water distribution system was designed by Schwarz Engineering, Inc.

CONCLUSIONS OF LAW

62. 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.

63. 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.

64. 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 59-61)

Beneficial Use

FINDINGS OF FACT

65. The Applicant is proposing to divert 95 GPM flow up to 20.97 AF per year for multiple domestic use in 23 households and lawn & garden irrigation of 6.86 acres in Mountain View Timbers Subdivision. The multiple domestic requirements were calculated by the Professional Engineer for the project at 300 gallons per day per household using DEQ standards for a total use of 7.73 AF per annum. Each household will have an individual septic system. Consumptive use is estimated at 10% of diverted volume for domestic use with a septic system installed; therefore, the total consumption for multiple domestic purposes is 0.8 AF per annum.

66. The lawn & garden irrigation requirements are 13.24 AF per annum. Lawn & garden irrigation requirements were calculated using the NRCS IWR program for turf grass irrigation in conjunction with the Creston weather station and an application efficiency of 70% for sprinklers. The consumptive requirement of turf grass as identified by the IWR program is 16.27 inches of water (1.36 AF/acre) for a total consumption of 9.3 AF per annum for lawn & garden irrigation.

67. Multiple domestic and irrigation purposes are identified as beneficial uses of water in § 85-2-102(4)(a), MCA. The requested period of diversion is January 1-December 31; the

proposed period of use for multiple domestic purposes is January 1-December 31, and the proposed period of use for lawn & garden irrigation is April 15-October 15, which follows the DNRC standard for period of use in climatic area 3. The flow rate of 95 GPM has been requested because that is the peak demand of the system.

CONCLUSIONS OF LAW

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

69. 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).

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. Applicant proposes to use water for domestic use (which includes garden and landscaping irrigation, also commonly referred to as 'lawn and garden irrigation') which is a recognized beneficial use. § 85-2-102(4), MCA. "Domestic use" by DNRC rule means those water uses

common to a household including: ... (g) garden and landscaping irrigation up to five acres.”
ARM 36.12.101(21). Applicant has proven by preponderance of the evidence multiple domestic and lawn & garden irrigation are beneficial uses and that 20.97 AF of diverted volume and 95 GPM flow of water requested is the amount needed to sustain the beneficial use. § 85-2-311(1)(d), MCA. (FOF 65-67)

Possessory Interest

FINDINGS OF FACT

71. The Applicants signed the application form affirming the Applicants have 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

72. 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.

73. 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.

74. The Applicants have proven by a preponderance of the evidence that they have 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 71)

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 30105305 should be GRANTED.

The Department determines the Applicant may divert water from a groundwater aquifer, by means of two wells, from January 1-December 31 at 95 GPM up to 20.97 AF, from a point in the SWSWSW Section 10, Township 29N, Range 20W, Flathead County, for multiple domestic use by 23 households from January 1-December 31 and lawn & garden irrigation use from April 15-October 15. The Applicant may irrigate 6.86 acres of lawn & garden. The place of use is 23 lots in Mountain View Timbers Subdivision located in the SWSW Section 10, Township 29N, Range 20W, Flathead County.

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

The appropriator shall install a Department approved in-line flow meter at a point in the delivery line approved by the Department. Water must not be diverted until the required measuring device is in place and operating. On a form

provided by the Department, the appropriator shall keep a written *monthly* record of the flow rate and volume of all water diverted, including the period of time. Records shall be submitted by January 31st of each year and upon request at other times during the year until certification. Failure to submit reports may be cause for revocation of a permit or change. The records must be sent to the Kalispell Water Resources Regional Office. The appropriator shall maintain the measuring device so it always operates properly and measures flow rate and volume accurately.

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 11th day of August, 2016

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