

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

**APPLICATION FOR BENEFICIAL)
WATER USE PERMIT NO. 43QJ 30103019) PRELIMINARY DETERMINATION TO
BY MARK HATHAWAY) GRANT PERMIT**

On June 29, 2015, Mark Hathaway (Applicant) submitted Application for Beneficial Water Use Permit No. 43QJ 30103019 to the Billings Water Resources Office of the Department of Natural Resources and Conservation (Department or DNRC) for 750 GPM and 317.16 AF. The Department published receipt of the Application on its website. The Department held a pre-application meeting with the Applicant on March 15, 2015. The Applicant amended the application on September 8, 2015, increasing the requested volume to 399.33 AF based upon Department standards for climate region II. The priority date of the permit application was reset to September 8, 2015 (ARM 36.12.1401 (3)(b)). The Application was determined to be correct and complete as of January 29, 2016. An Environmental Assessment for this Application was completed on January 11, 2016.

INFORMATION

The Department considered the following information submitted by the Applicant.

Application as filed

- Application for Beneficial Water Use Permit, Form 600
- Aquifer Testing Addendum
- Request for Variance from Aquifer Testing Requirements, dated November 14, 2014.
- Letter from Kimberly Overcast, Billings Regional Office Manager, dated November 19, 2015, approving variance request.

Information Received after Application Filed

- Aquifer Testing Addendum received August 12, 2015.
- Letter from Lee Yelin, Applicant's consultant, to Mark Elison, Department Hydrologist, dated September 8, 2015, amending the original application to reflect historic acres irrigated

by the Kent Ditch pursuant to a Verified Motion to Amend filed with the Montana Water Court on October 15, 2015, and increasing the requested volume based on Department standards.

- E-mail from Lee Yelin, Applicant's consultant, to Mark Elison, Department Hydrologist, dated October 14, 2015, addressing pump and conveyance specifications, proposed operating schedule, period of diversion, and period for project completion.

Information within the Department's Possession/Knowledge

- Water Resources Survey for Sweet Grass County, Montana, 1950.
- Aquifer Test Report by Attila Fohnagy, Department hydrogeologist, dated November 26, 2015.
- Depletion Report by Attila Fohnagy, Department hydrogeologist, dated November 27, 2015.
- Environmental Assessment dated January 11, 2016.

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). **NOTE:** Department or DNRC means the Department of Natural Resources & Conservation; CFS means cubic feet per second; GPM means gallons per minute; AF means acre-feet; AC means acres; AF/YR means acre-feet per year; AU means animal unit; and POD means point of diversion.

PROPOSED APPROPRIATION

FINDINGS OF FACT

1. The applicant proposes to divert water from groundwater, by means of two wells, from 5/1 to 9/30 at 750 GPM (1.67 CFS) up to 399.33 AF, from two points in the NENENE section 33 T1S R17E, Sweet Grass County for irrigation from 5/1 to 9/30. The Applicant proposes to irrigate 133.05 AC of previously unirrigated land and supplement water from the Kent Ditch on 162.27 AC of existing irrigation. The total place of use includes 295.32 AC, 201.36 AC in N2 section 33 and 93.96 AC in S2 section 28 T1S R17E, Sweet Grass County. Irrigation would be by a combination of center pivot sprinklers, wheel line sprinklers, hand line sprinklers and flood.

Water from the Kent Ditch is diverted into a 3.9 AF capacity reservoir and released to an existing irrigation ditch through a 24 inch culvert with slide gate. The ditch leads to an in-ground rock-

lined cistern that acts as a sump for the pump in the eastern well (well #1). Because the Kent Ditch water is comingled with the groundwater of this application prior to being applied, the 133.05 acres of newly irrigated land and the storage reservoir are proposed to be added to the Kent Ditch place of use in pending change application 43QJ 30103020.

2. The two wells are 123 feet apart and approximately 1500 feet south of the Yellowstone River.
3. The consumptive use of the proposed appropriation is 317.4 AF.



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

GENERAL CONCLUSIONS OF LAW

4. 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 . . .

5. 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.

6. 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.

7. 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).

8. 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.

9. 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

10. Applicant proposes to divert water at 750 GPM up to 399.33 AF from two wells 123 feet apart in NENENE Section 33 T1S R17E, Stillwater County. The eastern well (well #1) was the pumping well for a 72-hour aquifer test and the western well (well #2) was used as an observation well. The 72-hour test was performed in compliance with Department rules (ARM 36.12.121). A variance was granted that permitted the Applicant to submit results from a 4-hour drawdown and yield test on well #2 instead of an 8-hour test. Department hydrogeologist Attila Felnagy modeled the results of the 72 hour aquifer test at an average flow rate of 750 GPM using the AQTESOLV modeling program and applied the Cooper-Jacob solution. Aquifer properties generated by the model are transmissivity = 18,500 ft²/day and storativity = 0.07. A distance

drawdown plot was generated using the Theis (1935) solution, a constant pumping rate of 247.6 GPM for one year (average flow rate to provide requested volume), $T = 18,500 \text{ ft}^2/\text{day}$, $S = 0.07$, a constant head boundary represented by a fully penetrating river at the centerline of the Yellowstone River (1,500 feet away), and a no-flow boundary representing the bedrock to the south (2,100 feet away). According to the modeling, the 0.01 foot drawdown contour occurs in wells that are 9,700 feet both up and down gradient of the applicant's wells. The calculation for groundwater flux (Q) through the delineated area is given by equation. 1 and is 185,000 ft^3/day or 1,550.2 AF/year:

Equation 1: $Q = TWi$

where:

$T = \text{Transmissivity} = 18,500 \text{ ft}^2/\text{day}$

$W = \text{Width of Zone of Influence} = 5,000 \text{ ft.}$

$i = \text{Groundwater gradient (from groundwater elevations provided by the applicant)} = 0.002 \text{ ft/ft.}$

The Applicant proposes to divert water at 750 GPM up to 399.33 AF. The aquifer flux through the region is 1550.2 AF

11. According to Department hydrogeologist, Attila Folnagy, the proposed appropriation would deplete surface water in the Yellowstone River during all months of the year. United States Geological Survey gage 06192500 (Yellowstone River near Livingston MT) was utilized to quantify median of mean monthly flows and volumes during the period when the proposed diversion would deplete the Yellowstone River. Water rights between the gage at Livingston and the proposed point of diversion were subtracted from the median of the mean monthly flow at the gage and two major tributaries (Shields River and Boulder River) were added to determine physically available water at the proposed POD.

Table 1. Physical availability analysis on the Yellowstone River.

a. Flow Rate in CFS.

Month	Median of Mean Monthly Flow at Gage (CFS)	Water Rights Between Gage and POD (CFS)	Tributaries Between Gage and POD (CFS)	Physical Availability (CFS)
January	1188.0	27.0	224.9	1385.9

February	1180.0	27.0	213.6	1366.6
March	1268.0	28.9	269.5	1508.6
April	1880.0	547.5	543.0	1875.5
May	7016.0	799.8	1778.4	7994.6
June	12960.0	823.8	3324.8	15461.0
July	7490.0	806.0	1238.7	7922.7
August	3533.0	801.7	297.9	3029.2
September	2292.0	749.9	241.2	1783.3
October	1916.5	598.5	333.0	1651.0
November	1637.0	39.2	319.0	1916.8
December	1359.5	29.2	255.4	1585.7

b. Volume in AF.

Month	Median of Mean Monthly Flow at Gage (AF)	Water Rights Between Gage and POD (AF)	Tributaries Between Gage and POD (AF)	Physical Availability (AF)
January	72919.4	801.7	13801.3	85919.0
February	65419.2	724.1	11839.2	76534.3
March	77829.8	814.9	16538.8	93553.8
April	111672.0	9825.5	32251.2	134097.8
May	430642.1	23535.5	109158.2	516264.8
June	769824.0	25940.0	197490.2	941374.2
July	459736.2	26351.1	76028.3	509413.5

August	216855.5	25914.4	18285.1	209226.3
September	136144.8	22457.2	14327.3	128014.9
October	117634.8	15177.2	20436.5	122894.0
November	97237.8	1325.8	18948.6	114860.6
December	83446.1	869.3	15676.5	98253.3

12. The minimum monthly flow on the Yellowstone River in the depleted reach is 1366.6 CFS and 76,534.3 AF in February.

CONCLUSIONS OF LAW

13. 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.”

14. 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).

15. 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).

16. Use of published upstream gauge data minus rights of record between gauge and point of diversion adjusted to remove possible duplicated rights shows water physically available. *In the Matter of Application for Beneficial Water Use Permit No. 41P-105759 by Sunny Brook Colony* (DNRC Final Order 2001).

17. 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 10 – 12)

Legal Availability

FINDINGS OF FACT

18. Modeling by Department hydrogeologist, Attila Fohnagy, using aquifer properties given above and a constant year-around pumping rate of 247.6 GPM to provide the requested volume predicts that 0.01 foot of drawdown would occur in wells 9700 feet up and down the Yellowstone River from the proposed POD.

19. There are five existing groundwater rights within the zone of influence defined by the 0.01 foot drawdown contour that appropriate a total of 14.57 AF/YR.

20. Table 2 is a comparison of the water supply and current legal demands for groundwater that could be reduced by any amount due to the proposed appropriation.

Table 2. Comparison of physically available groundwater and existing legal demands.

Physically Available (AF/YR)	Existing Legal Demands (AF/YR)	Physically Available minus Existing Legal Demands (AF/YR)
1550.2	14.57	1535.63

21. The proposed wells are approximately 1500 feet from both Work Creek and the Yellowstone River and produce water from a sand and gravel alluvial aquifer. The static water level in the wells is below the stream bed of Work Creek but the Yellowstone River is incised into the source aquifer. The source aquifer is hydraulically connected to the Yellowstone River but not to Work Creek.

22. Depletion modeling by Department hydrogeologists suggests that depletion to the Yellowstone River will occur distributed over the year from a minimum of 0.2 GPM in April to a maximum of 662.0 GPM in August based upon aquifer properties and the distance to the river. Depletion to the Yellowstone River based on the monthly consumption determined from the Irrigation Water Requirements program (IWR) is shown in table 3.

Table 3. Monthly depletion to the Yellowstone River by proposed groundwater appropriation.

Month	Irrigation Consumption (AF)	Depletion (AF)	Depletion (GPM)
January	0.0	0.5	3.8
February	0.0	1.3	9.9
March	0.0	2.5	18.5
April	0.0	0.0	0.2
May	21.7	10.3	77.0
June	73.8	44.6	331.8
July	102.4	80.1	596.1
August	88.0	88.9	662.0
September	31.4	59.6	443.5
October	0.0	23.4	173.9
November	0.0	5.9	44.1
December	0.0	0.2	1.6
Total	317.4	317.4	

23. The area of potential impact for this application is the Yellowstone River from the proposed point of diversion to the confluence with the Stillwater River, a major tributary that enters the Yellowstone River near Columbus, MT approximately 21 miles downstream. Table 4 shows a comparison of the physically available water supply at the POD and the current legal demands on the Yellowstone River in the area of potential impact.

Table 4. Comparison of physically available water and legal demands on the Yellowstone River.

Month	Physical Availability (CFS)	Existing Legal Demands (CFS)	Physical – Legal (CFS)	Physical Availability (AF)	Existing Legal Demands (AF)	Physical – Legal (AF)
January	1385.9	5.0	1380.9	85919.0	272.1	85646.9
February	1366.6	5.0	1361.6	76534.3	245.8	76288.5

March	1508.5	48.8	1459.7	93553.8	619.4	92934.4
April	1875.4	260.2	1615.2	134097.8	4100.8	129997.0
May	7994.6	283.1	7711.5	516264.8	6318.4	509946.4
June	15460.9	283.1	15177.8	941374.2	6154.6	935219.6
July	7922.6	283.1	7639.5	509413.5	6359.7	503053.8
August	3029.2	283.1	2746.1	209226.3	6356.0	202870.3
September	1783.3	282.0	1501.3	128014.9	6059.4	121955.6
October	1650.9	213.2	1437.7	122894.0	5808.7	117085.3
November	1916.8	40.0	1876.8	114860.6	740.3	114120.3
December	1585.7	5.0	1580.7	98253.3	272.1	97981.1

24. Modeled depletion to the Yellowstone River is less in all months than the difference between physical availability and legal demands.

CONCLUSIONS OF LAW

25. 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).

26. 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.

27. 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.

28. 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*.

29. In analyzing legal availability for surface water, applicant was required to evaluate legal demands on the source of supply throughout the “area of potential impact” by the proposed use under §85-2-311(1)(a)(ii), MCA, not just within the “zone of influence.” *Sitz Ranch v. DNRC*, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, (2011) Pg. 6.

30. Use of published upstream gauge data minus rights of record between gauge and point of diversion adjusted to remove possible duplicated rights shows water physically available. Using same methodology and adding rights of record downstream of point of diversion to the mouth of the stream shows water legally available. *In the Matter of Application for Beneficial Water Use Permit No. 41P-105759 by Sunny Brook Colony* (DNRC Final Order 2001); *In the Matter of Application for Beneficial Water Use Permit No. 81705-g76F by Hanson* (DNRC Final Order 1992);

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 18 – 24)

Adverse Effect

FINDINGS OF FACT

32. The Applicant's plan to prevent adverse effect is to shut down one of the pivots if call is made. The Applicant has the ability to shut down both pumps if necessary.

33. Department hydrogeologist, Attila Fohnagy modeled drawdown in the source aquifer. There are three water rights in the source aquifer that are predicted to experience drawdown greater than one foot. The available water column in these wells after drawdown is greater than 14.8 feet.

34. The modeled depletion to the Yellowstone River, shown in table 3, is less in all months than the difference between physically available water and current legal demands, shown in table 4.

35. Affected wells will have sufficient water column to continue pumping and water available in the Yellowstone River exceeds modeled depletions.

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. 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.

39. 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.

40. 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.

41. 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.

42. Simply asserting that an acknowledged reduction, however small, would not affect those with a prior right does not constitute the preponderance of the evidence necessary to sustain applicant’s burden of proof. Wesmont Developers v. DNRC, CDV-2009-823, First Judicial District Court, *Memorandum and Order*, (2011) Pgs. 11 (Court rejected applicant’s argument that net depletion of .15 millimeters in the level of the Bitterroot River could not be adverse effect.); Sitz Ranch v. DNRC, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, (2011) Pgs. 3-4 (Court rejected applicant’s arguments that its net depletion (3 and 9 gpm, respectively to Black Slough and Beaverhead River) was “not an adverse effect because it’s not measureable,” and that the depletion “won’t change how things are administered on the source.”).

After calculating the projected depletion for the irrigation season, the District Court in Sitz Ranch v. DNRC explained:

Section 85-2-363(3)(d) MCA requires analysis whether net depletion will adversely affect prior appropriators. Many appropriators are those who use surface water. Thus, surface water must be analyzed to determine if there is a net depletion to that resource. Sitz's own evidence demonstrates that about 8 acre feet of water will be consumed each irrigation season. Both Sitz and any other irrigator would claim harm if a third party were allowed to remove 8 acre feet of water each season from the source upon which they rely.

Sitz Ranch v. DNRC, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, (2011) Pgs. 3-4.

43. Constant call is adverse effect. *In the Matter of Application for Beneficial Water Use Permit Nos. 56782-76H and 5830-76H by Bobby D. Cutler* (DNRC Final Order 1987); *In the Matter of Application for Beneficial Water Use Permit No. 80175-s76H by Tintzmen* (DNRC Final Order 1993); *In the Matter of Application for Beneficial Water Use Permit No. 81705-g76F by Hanson* (DNRC Final Order 1992)(applicant must show that at least in some years no legitimate call will be made); *In the Matter of Application for Beneficial Water Use Permit No. 76N 30010429 by Thompson River Lumber Company* (DNRC 2006).

44. Adverse effect not required to be measurable but must be calculable. *Sitz Ranch v. DNRC*, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, (2011) Pg. 7 (DNRC permit denial affirmed; 3 gpm and 9 gpm depletion to surface water not addressed in legal availability or mitigation plan.); *Wesmont Developers v. DNRC*, CDV-2009-823, First Judicial District Court, *Memorandum and Order*, (2011) Pg. 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 depletion from groundwater pumping); *In the Matter of Beneficial Water Use Permit No. 76N-30010429 by Thompson River Lumber Company* (DNRC Final Order 2006); see also *Robert and Marlene Tackle v. DNRC et al.*, Cause No. DV-92-323, Montana Fourth Judicial District for Ravalli County, *Opinion and Order* (June 23, 1994). Artesian pressure is not protectable and a reduction by a junior appropriator is not considered an adverse effect. See *In re Application No. 72948-G76L by Cross*, (DNRC Final Order 1991); see also *In re Application No. 75997-G76L by Carr*, (DNRC Final Order 1991).

45. 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

46. Applicant proposes to divert water by means of two wells. The eastern well (well #1) is 33 feet deep and the western well (well #2) is 123 feet west of well #1 and 22 feet deep. Maximum drawdown in well #1 modeled by Department hydrogeologist, Attila Fohnagy, occurs in July and is 16.8 feet leaving 14 feet of water column above the bottom of the well. Modeled drawdown in well #2 was 25 feet leaving no water column in the well. Well #2 will have a smaller pump than well #1 and is less efficient. Department hydrogeologists evaluated drawdown in well #2 by dividing predicted drawdown by observed drawdown to calculate a well efficiency. The calculated well efficiency was applied to theoretical drawdown and resulted in maximum drawdown of 14.8 feet which would leave 3 feet of water column in the well.

47. Well #1 will be equipped with a Gould's model 12FDLC pump capable of operating at 1400 GPM. Well #2 has a 40 HP McDonald pump capable of operating at 600 GPM. The combined pumping rate of 2000 GPM includes the 750 GPM from this application and 1250 GPM of Kent Ditch water. The Applicant has shares in the Kent Ditch that total 10 CFS (4488.0 GPM).

48. Water from the Kent Ditch is diverted into a 3.9 AF capacity reservoir and released to an existing irrigation ditch through a 24 inch culvert with slide gate. The ditch leads to an in-ground rock-lined cistern that acts as a sump for the pump in the eastern well (well #1).

49. The separate pumps feed a 12 inch pipeline that services all of the sprinkler irrigation via valves and risers located at junctions. Each junction is sized to fit the associated wheel line or hand line sprinkler. The 12 inch line runs 2200 feet to the eastern pivot. The line from the eastern pivot to the western pivot will be 2400 feet of 12 inch pipe.

50. The hand lines are 4 inch diameter pipe with a total length of 2000 feet split evenly between the southern and northern fields (see map). The wheel lines are 4 or 5 inch pipe with a total length of approximately 2000 feet. The western field has 1500 foot length and the eastern field has 500 foot length (see map).

51. The center pivot sprinklers are Reinke Irrigation model E2060 systems. The eastern pivot has seven spans and the western pivot has 6 spans and each pivot covers approximately 96 AC including end guns. The pivots are designed to operate at 700 GPM each.
52. The wheel lines require approximately 340 GPM and the hand lines require approximately 260 GPM.
53. The irrigation system was designed by Billings Pump and Irrigation.

CONCLUSIONS OF LAW

54. 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.
55. 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.
56. Water wells must be constructed according to the laws, rules, and standards of the Board of Water Well Contractors to prevent contamination of the aquifer. *In the Matter of Application for Beneficial Water Use Permit No. 41I-105511 by Flying J Inc.* (DNRC Final Order 1999).
57. Information needed to prove that proposed means of diversion, construction, and operation of the appropriation works are adequate varies, based upon project complexity design by licensed engineer adequate. *In the Matter of Application for Beneficial Water Use Permit No. 41C-11339900 by Three Creeks Ranch of Wyoming LLC* (DNRC Final Order 2002).
58. 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 46 - 53)

Beneficial Use

FINDINGS OF FACT

59. The proposed use is irrigation which is a recognized beneficial use under the Montana Water Use Act. § 85-2-102, MCA
60. The proposed flow rate of 750 GPM (1.67 CFS) is based upon the flow rate requirements of the system. The two pivots are designed to operate at 700 GPM each, the wheel lines require

340 GPM and the hand lines need 260 GPM. The total necessary flow is 2000 GPM and will be supplemented with 1250 GPM from the Kent Ditch. See change application #43QJ 30103020.

61. The requested volume of 399.33 AF (2.3 AF/AC) is based upon full service irrigation on 133.05 AC of new irrigated land and 25% supplemental irrigation on 162.27 AC currently irrigated from the Kent Ditch. Based on 124.52 AF consumptive volume on the historic acres (162.27 x 20.60/12 x .447) and an efficiency of 45%, the Kent Ditch historically provided 276.7 AF. Adding the associated volumes the total volume for all 295.32 acres is 673.53 AF or 2.3 AF/AC. This volume is within Department standards for sprinkler irrigation in climatic region 2 of 2.30 – 2.69 AF/AC.

CONCLUSIONS OF LAW

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

63. 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).

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

65. Applicant proposes to use water for irrigation which is a recognized beneficial use. § 85-2-102(4), MCA. Applicant has proven by a preponderance of the evidence irrigation is a beneficial use and that 750 GPM and 399.33 AF of diverted volume of water requested is the amount needed to sustain the beneficial use. § 85-2-311(1)(d), MCA, (FOF 59 - 61)

Possessory Interest

FINDINGS OF FACT

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

CONCLUSIONS OF LAW

67. 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.

68. 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.

69. 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 66)

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. 43QJ 30103019 should be GRANTED.

The Department determines the Applicant may divert water from groundwater, by means of two wells, 33 and 22 feet deep, from May 1 through September 30 at 750 GPM (1.67 CFS) up to 399.33 AF, from two points in the NENENE Section 33 T1S R17E, Sweet Grass County, for irrigation use from May 1 through September 30. The Applicant may irrigate 295.32 AC. The place of use is 201.36 AC in N2 section 33 and 93.96 AC in S2 section 28 T1S R17E, Sweet Grass County.

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 2nd day of May 2016.

/Original signed by Kimberly Overcast/
Kimberly Overcast, Manager
Billings Regional Office
Department of Natural Resources and Conservation

CERTIFICATE OF SERVICE

This certifies that a true and correct copy of the PRELIMINARY DETERMINATION TO GRANT was served upon all parties listed below on this _____ day of _____ 20__, by first class United States mail.

MARK HATHAWAY
50 WORK CK RD
REED POINT, MT 59069

LEE YELIN
WATER RIGHTS, INC.
PO BOX 9285
MISSOULA, MT 59807

NAME

DATE