

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

**APPLICATION FOR BENEFICIAL
WATER USE PERMIT NO. 42KJ 30154975)
BY PV RANCH COMPANY LLC) PRELIMINARY DETERMINATION TO
GRANT PERMIT**

On March 10, 2022, PV Ranch Company LLC (Applicant) submitted Application for Beneficial Water Use Permit No. 42KJ 30154975 to the Billings Water Resources Office of the Department of Natural Resources and Conservation (Department or DNRC) for 27 GPM flow rate and 43.55 AF of volume. The Department published receipt of the Application on its website. The Department met with the Applicant on February 16, 2021, for a pre-application meeting. Mark Elison, Christine Schweigert, and Jill Lippard were present for the Billings Regional Office and Attila Fohnagy and Evan Norman were present for the Water Management Bureau. Deborah Stephenson and Jim Potts, Consultants, and Beau Blake representing PV Ranch Company LLC were present to discuss the application. This Pre-application meeting expired, and a second pre-application meeting was held on August 20, 2021. Mark Elison, Christine Schweigert, and Jill Lippard were present for the Department and Deborah Stephenson was present for the Applicant. The Application was determined to be correct and complete as of August 19, 2022. An Environmental Assessment for this Application was completed on August 19, 2022.

INFORMATION

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

Application as filed:

- Application for Beneficial Water Use Permit, Form 600-GW
- Attachments:
 - Well logs for production wells
- Maps: 2019 NAIP Aerial photograph at approximately 10” = 1 mile showing proposed POD and POU.

USGS topographical map at the same scale showing the proposed POD and POU.

- Aquifer Testing Addendum
- Form 633 in electronic format

Information Received after Application Filed

- E-mail dated June 6, 2022, from Evan Norman, Department Hydrogeologist recommending that the Applicant request a variance from aquifer testing requirements related to observation wells.
- Letter dated June 7, 2022, from Deborah Stephenson, Consultant, to Mark Elison, Regional manager, requesting a variance from Aquifer testing Requirement 36.12.121 (3)(h).
- Letter dated July 7, 2022, from Mark Elison, Regional Manager, to Deborah Stephenson, Consultant, granting the variance request.
- E-mail dated July 5, 2022, from Jacob Mohrmann, Department Hydrologist, to Mark Elison, Regional Manager, confirming that the two-gage interpolation method was acceptable for surface water physical availability assessment.

Information within the Department's Possession/Knowledge

- Aquifer Test Report by Evan Norman, Department Hydrogeologist, dated June 16, 2022.
- Depletion Report by Evan Norman, Department Hydrogeologist, dated June 16, 2022.
- Physical Availability of Surface Water with Gage Data, Technical Memorandum, dated 11/1/2019.
- USGS StreamStats program
- DNRC Water Rights Records

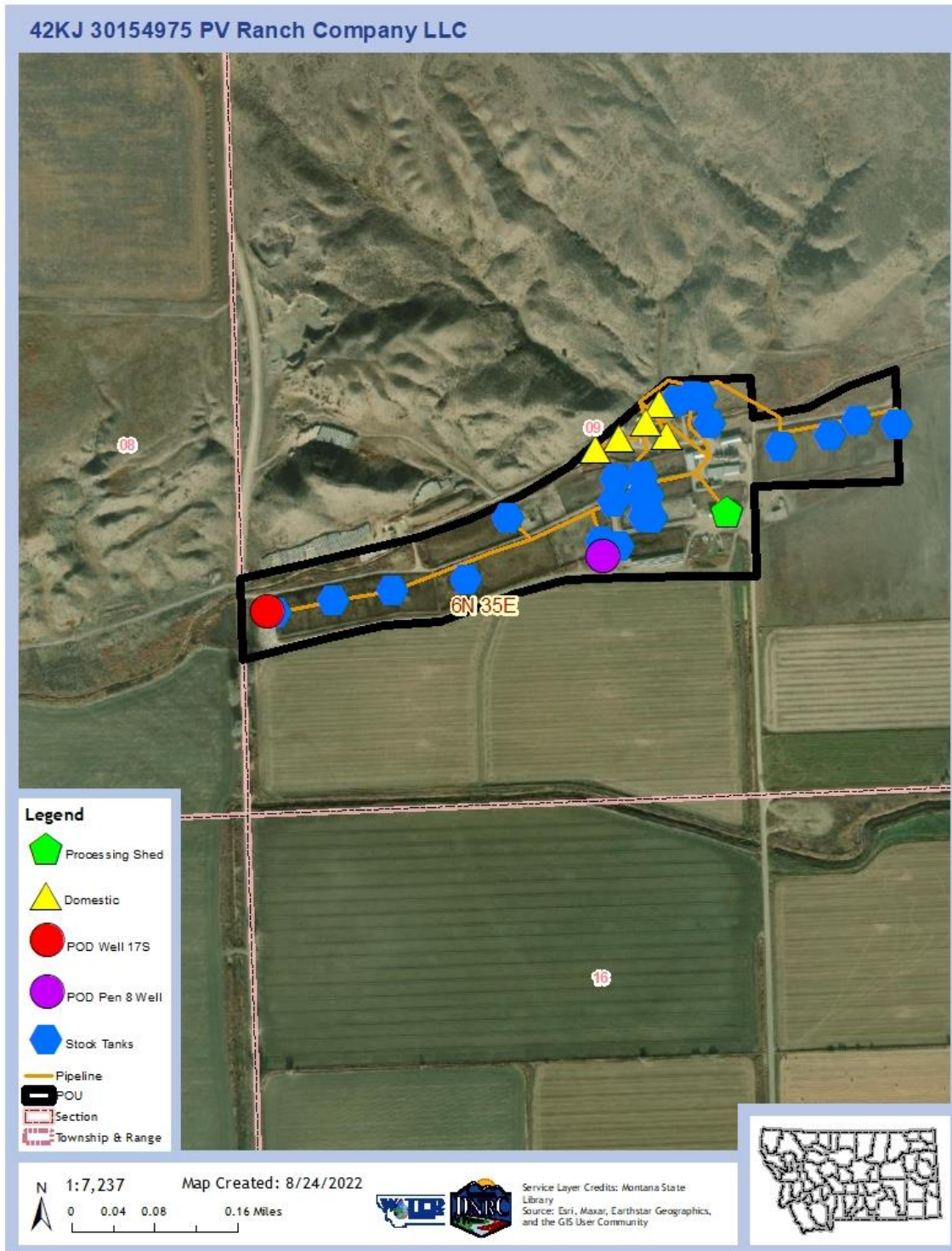
The Department has fully reviewed and considered the evidence and argument submitted in this Application and preliminarily determines the following pursuant to the Montana Water Use Act (Title 85, chapter 2, part 3, MCA). **NOTE:** Department or DNRC means the Department of Natural Resources & Conservation; CFS means cubic feet per second; GPM means gallons per minute; AF means acre-feet; AU means animal units; AF/YR means acre-feet per year; POU means place of use, and POD means point of diversion.

PROPOSED APPROPRIATION

FINDINGS OF FACT

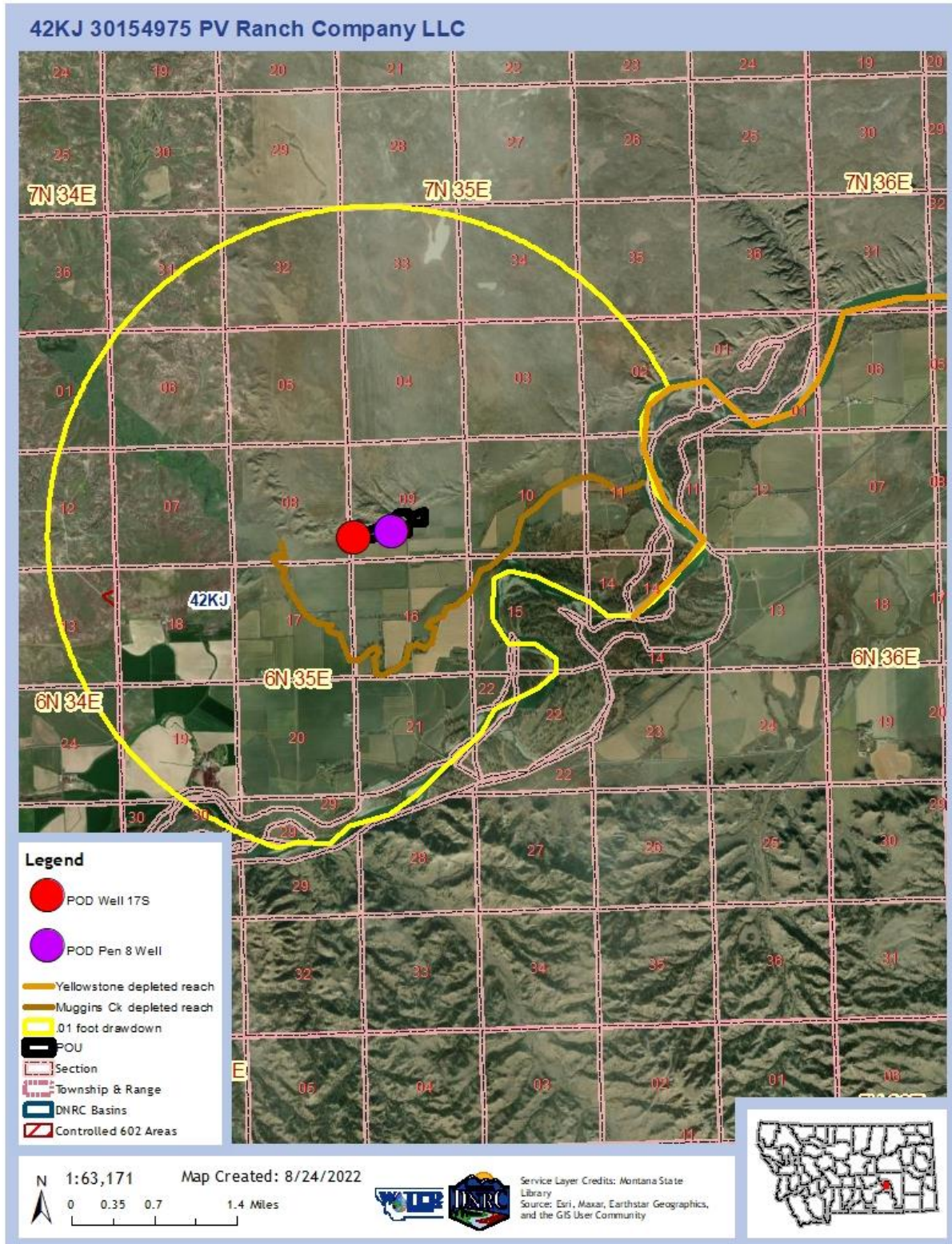
1. The Applicant proposes to divert groundwater, by means of two wells named Well 17S (28 feet deep) and Pen 8 Well (32 feet deep), from January 1 through December 31 at 27 GPM up to 43.55 AF, from points in the NWSWSW Section 9, T6N, R35E, Treasure County (Well 17S) and the NWSESW Section 9, T6N, R35E, Treasure County (Well Pen 8), for multiple domestic, stock, and commercial use from January 1 through December 31. The Applicant proposes to provide domestic water to five residences, water to one beef processing shed (commercial purpose), and stock water to 22 tanks within a feedlot. The Applicant proposes 5 AF/YR for multiple domestic use, 1 AF/YR for the cattle processing shed, and 42.5 AF/YR for stock based on 3570 AU from December to May and 3000 AU from September to November. The requested volume is limited to 43.55 AF based on the 27 GPM combined capacity of the two wells. Proposed stock use is 37.55 AF/YR and the proposed period of diversion is January 1 through December 31. The wells are manifold into a single system. The place of use is generally located in the N2SWSW, N2SESW, NESW, and NWSE, Section 9, T6N, R35E, Treasure County approximately 6 miles west of Hysham, Montana.

Figure 1. Detail of Proposed Points of Diversion and Places of Use.



2. The proposed wells lie approximately 0.6 miles east of Muggins Creek. Muggins Creek turns to the east south of the proposed place of use and the wells lie approximately 0.9 and 1 mile north northwest of Muggins Creek and the Yellowstone River, respectively. Muggins Creek and the Yellowstone River are hydraulically connected surface water sources that are modeled to experience depletions from the proposed water use.

Figure 2. General Place of Use and Potentially Depleted Surface Water Sources



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

GENERAL CONCLUSIONS OF LAW

3. 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 . . .

4. 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.

5. 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.

6. 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).

7. 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.

8. 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**

9. Department hydrogeologist, Evan Norman, modeled the results of a 24-hour aquifer test at an average rate of 16.3 GPM. Based on the aquifer test, an aquifer transmissivity of 3,300 ft²/day was recommended for permit evaluation. A storativity of 0.1 for unconfined aquifers was taken from the literature (Lohman, 1972) and a groundwater gradient of 0.001 ft/ft was estimated from a digital elevation surface model. Modeling using those aquifer properties and a constant pumping rate of 27.0 GPM (requested flow rate), generated a distance-drawdown plot. The modeled 0.01-foot drawdown contour occurs at 14,800 feet from the proposed wells. The zone of

influence as defined by the 0.01-foot drawdown contour is truncated against the Yellowstone River.

10. The volume of total aquifer flux each year within the zone of influence as defined by 0.01 foot of drawdown is given by transmissivity x width of the zone of influence x groundwater gradient and is 85,800 ft³/day (3,300 ft²/day x 26,000 ft x 0.001 ft/ft) or 718.9 AF/YR.

11. The Department finds that the physical availability of groundwater is 718.9 AF/YR.

CONCLUSIONS OF LAW

12. 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.”

13. 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).

14. 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).

15. 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 9 - 11)

Legal Availability:

FINDINGS OF FACT

16. There are 57 groundwater rights within the modeled zone of influence. There is a single exempt notice, 22 Groundwater Certificates and 34 Statements of Claim. Three Groundwater Certificates do not have a recorded volume. Of those three Groundwater Certificates, 42KJ 30045237 was taken as 10 AF because the certificate was issued for up to 10 AF. 42KJ 3074-00

and 42KJ 6827-00 were issued in the mid-1970s. The volume on these Groundwater Certificates was taken as the authorized maximum flow rate used continuously all year. Twenty-two Statements of Claim had no volume listed. All were for stock use and the volumes were calculated as the number of animal units times 30 GPD/AU (0.034 AF/YR/AU). A list of the water rights and the total legal demand for groundwater in the zone of influence is given in table 1 below.

Table 1. Existing Legal Demands for Groundwater Within the Department’s Identified Zone of Influence.

Water Right Number	Owners	Purpose	Maximum Acres	Volume	Well Depth	Animal Units
42KJ 48752 00	JAMES M KOSS; KRISTEN K KOSS	DOMESTIC; STOCK		4.2	20	
42KJ 30045237	PV RANCH COMPANY LLC	STOCK		10	100	
42KJ 3074 00	PLOTTS, GORDON AND DIANE TRUST	STOCK		19.3	20	
42KJ 6827 00	WARD FENTON	DOMESTIC; STOCK		24.2	30	
42KJ 30072102	CAT COULEE ENTERPRISES LLC	DOMESTIC		1		
42KJ 54152 00	JOHNSON, FRED V RANCH INC	STOCK		1.04	60	
42KJ 30116289	JAMES M KOSS; KRISTEN K KOSS	DOMESTIC; LAWN AND GARDEN	0.1	1.25	28	
42KJ 49469 00	SHIRLEY REDLAND	DOMESTIC		1.5	32	
42KJ 90960 00	GREGORY W LACKMAN; LAUREEN LACKMAN; WILLIAM D WILLEMS	DOMESTIC; STOCK		2	82	110
42KJ 29755 00	LACKMAN, GREG FARMS INC	STOCK		2.1	20	
42KJ 49471 00	WILLIAM D WILLEMS	DOMESTIC; LAWN AND GARDEN; STOCK	0.13	2.12	62	
42KJ 72870 00	HAVEMAN RANCH LLC	STOCK		2.96	120	300
42KJ 76354 00	DECOCK RANCH CO	DOMESTIC		3	120	
42KJ 44686 00	KEVAN KIMBALL; RICHARD L KIMBALL; TAMARA KIMBALL	MULTIPLE DOMESTIC; STOCK		3.15	25	

42KJ 33578 00	KEVAN KIMBALL; TAMARA KIMBALL	DOMESTIC; STOCK		3.18		
42KJ 70850 00	ROBERT W WEBB	LAWN AND GARDEN	1.5	3.75	34	
42KJ 1432 00	KEVAN KIMBALL; TAMARA KIMBALL	STOCK		4	24	150
42KJ 49470 00	SHIRLEY REDLAND	DOMESTIC		4.5	32	
42KJ 30149760	DECOCK RANCH CO	LAWN AND GARDEN	2	5	30	
42KJ 39015 00	HAVEMAN RANCH LLC	STOCK		5.04		
42KJ 52208 00	HAVEMAN RANCH LLC	STOCK		5.04	25	
42KJ 79841 00	SHIRLEY REDLAND	DOMESTIC; LAWN AND GARDEN; STOCK	1	8.9	35	200
42KJ 32625 00	PV RANCH COMPANY LLC; WEBB, ROBERT W REVOCABLE TRUST	DOMESTIC; STOCK		10		
42KJ 118265 00	MONTANA, STATE OF DEPT OF FISH WILDLIFE & PARKS	STOCK		5.1		150
42KJ 17386 00	GREGORY W LACKMAN; LAUREEN LACKMAN	STOCK		5.151		151.5
42KJ 186771 00	DECOCK RANCH CO	STOCK		25.5		750
42KJ 188955 00	ROBERT REDLAND	STOCK		4.08		120
42KJ 38254 00	SHIRLEY REDLAND	STOCK		40.8		1200
42KJ 38255 00	SHIRLEY REDLAND	STOCK		40.8		1200
42KJ 38256 00	SHIRLEY REDLAND	STOCK		40.8		1200
42KJ 38257 00	SHIRLEY REDLAND	STOCK		40.8		1200
42KJ 38258 00	SHIRLEY REDLAND	STOCK		40.8		1200
42KJ 39389 00	PV RANCH COMPANY LLC	STOCK		0.68		20
42KJ 39390 00	PV RANCH COMPANY LLC	STOCK		68		2000
42KJ 39439 00	NEIL A BROWN; JAMES D WHITE	STOCK		5.1		150
42KJ 39440 00	DIANN GRIERSON	STOCK		13.6		400

42KJ 39442 00	CAT COULEE ENTERPRISES LLC	STOCK		13.6		400
42KJ 39443 00	CAT COULEE ENTERPRISES LLC	STOCK		13.6		400
42KJ 39444 00	DIANN GRIERSON	STOCK		13.6		400
42KJ 43345 00	HAVEMAN RANCH LLC	STOCK		10.2		300
42KJ 43346 00	HAVEMAN RANCH LLC	STOCK		10.2		300
42KJ 43348 00	HAVEMAN RANCH LLC	STOCK		10.2		300
42KJ 43349 00	HAVEMAN RANCH LLC	STOCK		10.2		300
42KJ 43350 00	HAVEMAN RANCH LLC	STOCK		10.2		300
42KJ 8249 00	MONTANA STATE BOARD OF LAND COMMISSIONERS	STOCK		1.02		30
42KJ 118266 00	MONTANA, STATE OF DEPT OF FISH WILDLIFE & PARKS	DOMESTIC		1	28	
42KJ 118267 00	MONTANA, STATE OF DEPT OF FISH WILDLIFE & PARKS	DOMESTIC		1		
42KJ 43354 00	HAVEMAN RANCH LLC	DOMESTIC	0.25	1		
42KJ 17387 00	GREGORY W LACKMAN; LAUREEN LACKMAN	DOMESTIC	1	2		
42KJ 43352 00	HAVEMAN RANCH LLC	DOMESTIC	0.25	2.5		
42KJ 43353 00	HAVEMAN RANCH LLC	DOMESTIC	0.25	2.5		
42KJ 38259 00	SHIRLEY REDLAND	DOMESTIC	0.5	3		
42KJ 39454 00	PV RANCH COMPANY LLC	DOMESTIC	0.5	4		
42KJ 39455 00	PV RANCH COMPANY LLC	DOMESTIC	1	4		
42KJ 186770 00	DECOCK RANCH CO	DOMESTIC	0	4.5		
42KJ 189005 00	MARY A FENTON; WARD FENTON	DOMESTIC	2	4.6		
42KJ 39458 00	ALMOND FAMILY PARTNERSHIP LP	MULTIPLE DOMESTIC	1	5.5		
			Total Legal Demand	586.84		

17. The modeled physical availability of groundwater within the 0.01-foot drawdown contour is 718.9 AF/YR. The total of all legal demands of groundwater within the zone of influence defined by the 0.01-foot drawdown contour is 586.8 AF/YR. The physically available groundwater minus the legal demands is 132.1 AF/YR ($718.9 - 586.8 = 132.1$). The Applicant is requesting 43.6 AF/YR. The Department finds that groundwater is legally available in the amount the Applicant requests.

18. The depletion report dated June 16, 2022, by Even Norman, Department Hydrogeologist, determined that Muggins Creek and the Yellowstone River are hydraulically connected to the source aquifer and would be depleted by the proposed appropriation.

Table 2. Modeled Depletions to Muggins Creek and the Yellowstone River.

Month	Total Depletions (AF)	Depletions to Muggins Creek (AF)	Depletions to Muggins Creek (GPM)	Depletions to Yellowstone River (AF)	Depletions to Yellowstone River (GPM)
January	3.3	2.0	14.6	1.4	10.2
February	3.0	1.8	14.6	1.2	9.7
March	3.3	2.0	14.6	1.4	10.2
April	3.2	1.9	14.4	1.3	9.8
May	3.3	2.0	14.6	1.4	10.2
June	3.2	1.9	1.4	1.3	9.8
July	3.3	2.0	14.6	1.4	10.2
August	3.3	2.0	14.6	1.4	10.2
September	3.2	1.9	14.4	1.3	9.8
October	3.3	2.0	14.6	1.4	10.2
November	3.2	1.9	14.4	1.3	9.8
December	3.3	2.0	14.6	1.4	10.2
Total	39.1	23.1		16.0	

19. The USGS has multiple gages on the Yellowstone River including a gage downstream of the depleted reach at Miles City, MT and an upstream gage at Billings, MT. The Department analyzed physical availability in the depleted reach using the Between Gages: Interpolation

method outlined in USGS StreamStats and DNRC Technical Memorandum: Physical Availability of Surface Water with Gage Data dated November 1, 2019. After consultation with Water Management Bureau staff, it was decided that the results of the Interpolation method were reasonable although the size of ungaged drainage area is outside the suggested parameters of $0.5A_g - 1.5A_g$ for the Billings gaged area.

20. The Interpolation method can be used when there are both an upstream gage and a downstream gage on the same source as that to be estimated. The equation (equation 11) from USGS StreamStats, Chapter G, p.13 for Montana can be used to make a logarithmic linear interpolation between the two gages: $\log Q_u = \log Q_{g1} + (\log Q_{g2} - \log Q_{g1}) \frac{\log A_u - \log A_{g1}}{\log A_{g2} - \log A_{g1}}$ where Q_u is the streamflow characteristic, A is the contributing drainage area, and subscripts u , $g1$ and $g2$ refer to the ungaged site and the gaged sites 1 and 2, respectively. Below is a table of the estimated median of the mean monthly flow rates and volumes used to quantify physical availability of surface water in the depleted reach. USGS stream gage records for the Yellowstone River at Billings (gage no. 06214500) and for the Yellowstone River at Miles City (gage no. 06309000), are in the file. Estimated volume is calculated as flow rate times 1.98 times number of days in the month.

Table 3. Flow and Volume at ungaged site (depleted reach) – using USGS gages at Miles City and Billings.

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Median of Mean Monthly Flow at Billings Gage (CFS)	2,533	2,534	2,895	3,962	12,890	23,740	12,450	4,578	3,721	3,917	3,572	2,809
Median of Mean Monthly Flow at Miles City Gage (CFS)	5,313	5,727	7,634	7,824	17,780	35,215	18,640	7,346	6,822	7,676	7,048	5,898
Estimate of Mean Monthly Flow at Depleted Reach (CFS)	4,630	4,922	6,375	6,894	16,748	32,726	17,293	6,727	6,095	6,774	6,212	5,138
Estimate of Monthly Volume at Depleted Reach (AF)	284,163	272,851	391,294	409,507	1,028,004	1,943,937	1,061,431	412,931	362,046	415,767	368,967	315,391

21. The reach of the Yellowstone River that would experience depletions from this groundwater appropriation is downstream from the confluence of the Yellowstone River and Muggins Creek (Figure 2). The area of potential impact is considered to extend approximately 9 miles downstream to the mouth of Froze to Death Creek. This is an appropriate area of potential impact because a river as dynamic as the Yellowstone changes more than the modeled depletions of up to 10.2 GPM over this distance. Moreover, this reach receives return flows from irrigated acres south of the river serviced by the Hysham Irrigation District. There are ten water rights on the Yellowstone River in the area of potential impact shown in Table 4 below. A list of these water rights by flow rate and volume is in the file. Table 5 shows the physical availability of water, the legal demands, and the comparison for the depleted reach of the Yellowstone River.

Table 4. Water Rights Within the Depleted Reach of the Yellowstone River.

WATER RIGHT NUMBER	OWNERS	FLOW RATE (GPM)	FLOW RATE (CFS)	MAXIMUM ACRES	VOLUME
42KJ 1259900	KOLB BROTHERS	35	0.078	0.00	102.00
42KJ 30142918	USA (DEPT OF INTERIOR BUREAU OF LAND MGMT)	0	0.000	0.00	0.68
42KJ 30144186	MONTANA, STATE OF DEPT OF FISH WILDLIFE & PARKS	1.73	0.004	0.00	28.22
42KJ 1260300	KOLB BROTHERS	5000	11.140	225.80	925.78
42KJ 18676900	PV RANCH HOLDINGS LLC	5533.7	12.330	325.40	1334.14
42KJ 18894700	HOWARD H HADDEN; WILBONA J HADDEN	117.3	0.260	6.90	28.29
42KJ 30031332	G & J HAY LLC; TREASURE COUNTY CONSERVATION DIST	2423.52	5.400	32.00	88.00
42KJ 30031335	G & J HAY LLC; TREASURE COUNTY CONSERVATION DIST	2423.52	5.400	41.00	113.00
42KJ 4452400	DARWIN F PFAFFINGER; SHIRLEY A PFAFFINGER	4981	11.090	293.00	1201.30
42KJ 30153181	PV RANCH COMPANY LLC; PV RANCH HOLDINGS LLC	1000	2.220	0.00	22.80

Table 5. Physical Availability of Water, Legal Demands, and Physical Availability Minus Legal Demands for Flow rate (CFS) and Volume (AF) in the Depleted Reach of the Yellowstone River.

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Physical Availability of Water in the Depleted Reach (CFS)	4,630	4,922	6,375	6,894	16,748	32,726	17,293	6,727	6,095	6,774	6,212	5,138
Legal Demands in the Depleted Reach (CFS)	0.08	0.08	2.30	47.92	47.92	47.92	47.92	47.92	47.92	36.83	2.30	0.08
Physical Availability minus Legal Demands in the Depleted Reach (CFS)	4,629	4,921	6,373	6,846	16,700	32,678	17,245	6,680	6,047	6,737	6,209	5,138
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Physical Availability of Water at the Top of Depleted Reach (AF)	284,163	272,851	391,294	409,507	1,028,004	1,943,937	1,061,431	412,931	362,046	415,767	368,967	315,391
Legal Demands in the Depleted Reach (AF)	11.12	10.04	13.69	390.35	577.21	558.59	577.21	577.21	558.59	520.41	38.66	11.12
Physical Availability minus Legal Demands in the Depleted Reach (AF)	284,152	272,841	391,280	409,117	1,027,426	1,943,378	1,060,854	412,354	361,487	415,247	368,929	315,379

22. The reach of Muggins Creek modeled to experience depletion from this appropriation begins where Muggins Creek enters the Yellowstone River floodplain (Figure 2). The total annual amount of water available at the head of the depleted reach of Muggins Creek was estimated using the Orsborn method. This method uses drainage area and precipitation to estimate mean annual flow in a stream (Potts, 1983). In region 1, the mean annual flow rate is estimated as $0.0222(P \times A)^{0.9042}$, where P is annual precipitation in inches and A is drainage basin area in square miles. Basin delineation in USGS StreamStats application gives annual precipitation as 14 inches and the drainage basin area as 155.8 square miles. The estimate of mean annual flow is 23.2 CFS ($0.0222(14 \times 155.8)^{0.9042} = 23.18$). Mean monthly flow was estimated by comparing the percentage of annual flow in each month at a nearby gage. USGS

gage #06309075, Sunday Creek near Miles City, MT was used to determine the percentage of mean annual flow that occurs in any given month. Those percentages were applied to the mean annual flow estimated in Muggins Creek. Estimates of monthly volume were calculated as flow rate times 1.98 times the number of days in the month.

Table 6. Estimated Flow and Volume in Muggins Creek.

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Percent of Mean Annual Flow in Sunday Creek	0.22	1.7	3.4	0.84	2.4	1.91	0.32	0.3	0.51	0.4	0.05	0.02
Estimated Monthly Mean Flow in Muggins Creek (CFS)	5.1	39.4	78.8	19.5	55.6	44.3	7.4	7.0	11.8	9.3	1.2	0.5
Estimated Monthly Volume in Muggins Creek (AF)	313.0	2,184.7	4,837.5	1,156.6	3,414.7	2,629.9	455.3	426.8	702.2	569.1	68.8	28.5

23. Flow and volume of water in Muggins Creek in Table 5 must be adjusted for all water rights on Muggins Creek and tributaries above the top of the depleted reach. To calculate the amount of water physically available at the top of the depleted reach, all legal demands above the top of the depleted reach must be subtracted from the estimated flow and volume in Muggins Creek. There are 118 water rights on Muggins Creek and its tributaries. A list is in the file. Of these legal demands, 95 are dams or pits, 9 are dikes or diversion dams, 13 are livestock direct from source and one is a pump. There are only three water rights that have assigned flow rates. The dikes and dams take water when it is available. There are 107 water rights for stock. Ten are stockwater permits and have an assigned volume. The others are statements of claim which have no specified volume. The volume for these water rights is calculated as the number of animal units times 30 GPD/AU (0.034 AF/AU). Irrigation water rights for which there was no assigned volume were calculated as the number of acres times 4.1 AF/AC, which is the Department standard for 45% efficient flood irrigation in climate region 1. The total volume of legal demand above the top of the depleted reach is 3,716.22 AF. The legal demand was distributed by month as follows. The dams, pits, dikes, and diversion dams for which there is no specified flow rate because they take water when it is available are considered annual demands. There are 2,884.08

AF of these annual demands. The annual demand was subtracted from the total volume of water produced annually in Muggins Creek (16,787.07 AF, Table 5). This recognizes that the water can be taken at any time during the year and, because that water would be distributed based on the hydrograph from a nearby gage, preferentially places the demand in high flow months. This is a realistic method for distributing annual demands. The remaining 13,902.99 AF was distributed by month according to the monthly percentages of annual flow in Sunday Creek. All legal demands with period of diversion and flow rates and all livestock direct from source which require a monthly flow rate and volume were then subtracted from the resulting distribution. The physical availability of water by flow rate and volume in Muggins Creek at the top of the depleted reach, including adjustment for annual demands, is shown in the table below.

Table 7. Estimate of Physically Available Water in both Flow Rate (CFS) and Volume (AF) in Muggins Creek at the Top of the Depleted Reach, with volume adjusted for annual demands

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Estimated Monthly Mean Flow in Muggins Creek (CFS)	5.1	39.4	78.8	19.5	55.6	44.3	7.4	7.0	11.8	9.3	1.2	0.5
Legal Demands Above Top of the Depleted Reach (CFS)	0.13	0.13	0.13	4.63	4.63	4.63	4.63	4.63	4.63	4.63	0.13	0.13
Physical Availability of Water at the Top of the Depleted Reach (CFS)	4.97	39.28	78.68	14.84	51.00	39.65	2.79	2.33	7.19	4.64	1.03	0.34

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Estimated Monthly Mean Flow in Muggins Creek (AF) Adjusted for Annual Demands	259.78	1,813.10	4,014.73	959.88	2,833.92	2,182.58	377.86	354.24	582.78	472.32	57.14	23.62
Monthly Legal Demands Above Top of the Depleted Reach (AF)	12.00	10.84	12.00	106.68	110.24	106.68	110.24	110.24	106.68	110.24	24.29	12.00
Physical Availability of Water at the Top of the Depleted Reach (AF)	247.78	1,802.26	4,002.73	853.19	2,723.68	2,075.89	267.62	244.00	476.10	362.08	32.85	11.62

24. The reach of Muggins Creek modeled to experience depletion from this appropriation begins where Muggins Creek enters the Yellowstone River floodplain and extends to the confluence with the Yellowstone River. There are three water rights within the depleted reach.

Table 8. Water Rights Within the Depleted Reach of Muggins Creek.

WATER RIGHT NUMBER	OWNERS	PURPOSE	FLOW RATE (GPM)	FLOW RATE (CFS)	MAXIMUM ACRES	VOLUME	ANIMAL UNITS
42KJ 30128239	HAVEMAN RANCH LLC	STOCK	35	0.0780	0.00	5.95	350.0
42KJ 30144511	MONTANA, STATE OF DEPT OF FISH WILDLIFE & PARKS	STOCK	2.06	0.0046	0.00	3.37	99.0
42KJ 35240 00	MONTANA, STATE OF DEPT OF FISH WILDLIFE & PARKS	IRRIGATION	897.6	2.0000	62.10	254.61	0.0
Total			934.66	2.08	62.10	263.93	

25. The estimated physical availability at the top of the depleted reach of Muggins Creek minus the legal demands within the depleted reach are shown in the table below for both flow rate (CFS) and volume (AF).

Table 9. Physical Availability of Water, Legal Demands, and Physical Availability Minus Legal Demands for Flow rate (CFS) and Volume (AF) in the Depleted Reach of Muggins Creek.

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Physical Availability of Water at the Top of the Depleted Reach (CFS)	4.97	39.28	78.68	14.84	51.00	39.65	2.79	2.33	7.19	4.64	1.03	0.34
Legal Demands Within the Depleted Reach (CFS)	0.08	0.08	0.08	2.08	2.08	2.08	2.08	2.08	2.08	2.08	0.08	0.08
Physical Availability Minus Legal Demands (CFS)	4.89	39.20	78.60	12.76	48.92	37.56	0.71	0.24	5.11	2.56	0.95	0.25

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Physical Availability of Water at the Top of the Depleted Reach (AF)	247.78	1,802.26	4,002.73	853.19	2,723.68	2,075.89	267.62	244.00	476.10	362.08	32.85	11.62
Legal Demands Within the Depleted Reach (AF)	0.79	0.71	0.79	22.43	42.77	41.39	42.77	42.77	41.39	26.52	0.77	0.79
Physical Availability Minus Legal Demands (AF)	246.99	1,801.55	4,001.94	830.76	2,680.91	2,034.50	224.85	201.23	434.71	335.56	32.08	10.83

26. The Department finds that water can be reasonably considered legally available in both surface water sources predicted to be depleted by the groundwater appropriation.

CONCLUSIONS OF LAW

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

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

(A) identification of physical water availability;

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

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

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

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

29. Pursuant to Montana Trout Unlimited v. DNRC, 2006 MT 72, 331 Mont. 483, 133 P.3d 224, the Department recognizes the connectivity between surface water and ground water and the effect of pre-stream capture on surface water. E.g., Wesmont Developers v. DNRC, CDV-2009-823, Montana First Judicial District Court, *Memorandum and Order*, (2011) Pgs. 7-8; *In the*

Matter of Beneficial Water Use Permit Nos. 41H 30012025 and 41H 30013629 by Utility Solutions LLC (DNRC Final Order 2006)(mitigation of depletion required), *affirmed*, Faust v. DNRC et al., Cause No. CDV-2006-886, Montana First Judicial District (2008); *see also* Robert and Marlene Takle v. DNRC et al., Cause No. DV-92-323, Montana Fourth Judicial District for Ravalli County, *Opinion and Order* (June 23, 1994) (affirming DNRC denial of Applications for Beneficial Water Use Permit Nos. 76691-76H, 72842-76H, 76692-76H and 76070-76H; underground tributary flow cannot be taken to the detriment of other appropriators including surface appropriators and ground water appropriators must prove unappropriated surface water, *citing* Smith v. Duff, 39 Mont. 382, 102 P. 984 (1909), and Perkins v. Kramer, 148 Mont. 355, 423 P.2d 587 (1966)); *In the Matter of Beneficial Water Use Permit No. 80175-s76H by Tintzman* (DNRC Final Order 1993)(prior appropriators on a stream gain right to natural flows of all tributaries in so far as may be necessary to afford the amount of water to which they are entitled, *citing* Loyning v. Rankin (1946), 118 Mont. 235, 165 P.2d 1006; Granite Ditch Co. v. Anderson (1983), 204 Mont. 10, 662 P.2d 1312; Beaverhead Canal Co. v. Dillon Electric Light & Power Co. (1906), 34 Mont. 135, 85 P. 880); *In the Matter of Beneficial Water Use Permit No. 63997-42M by Joseph F. Crisafulli* (DNRC Final Order 1990)(since there is a relationship between surface flows and the ground water source proposed for appropriation, and since diversion by applicant's well appears to influence surface flows, the ranking of the proposed appropriation in priority must be as against all rights to surface water as well as against all groundwater rights in the drainage.) Because the applicant bears the burden of proof as to legal availability, the applicant must prove that the proposed appropriation will not result in prestream capture or induced infiltration and cannot limit its analysis to ground water. § 85-2-311(a)(ii), MCA. Absent such proof, the applicant must analyze the legal availability of surface water in light of the proposed ground water appropriation. *In the Matter of Application for Beneficial Water Use Permit No. 41H 30023457 By Utility Solutions LLC* (DNRC Final Order 2007) (permit denied); *In the Matter of Application for Beneficial Water Use Permit No. 76H-30028713 by Patricia Skergan and Jim Helmer* (DNRC Final Order 2009); Sitz Ranch v. DNRC, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, (2011) Pg. 5 ; Wesmont Developers v. DNRC, CDV-2009-823, First Judicial District Court, *Memorandum and Order*, (2011) Pgs. 11-12.

30. Where a proposed ground water appropriation depletes surface water, applicant must prove legal availability of amount of depletion of surface water throughout the period of diversion either through a mitigation /aquifer recharge plan to offset depletions or by analysis of the legal demands on, and availability of, water in the surface water source. Robert and Marlene Takle v. DNRC et al., Cause No. DV-92-323, Montana Fourth Judicial District for Ravalli County, *Opinion and Order* (June 23, 1994); *In the Matter of Beneficial Water Use Permit Nos. 41H 30012025 and 41H 30013629 by Utility Solutions LLC* (DNRC Final Order 2006)(permits granted), *affirmed*, Faust v. DNRC et al., Cause No. CDV-2006-886, Montana First Judicial District (2008); *In the Matter of Application for Beneficial Water Use Permit 41H 30019215 by Utility Solutions LLC* (DNRC Final Order 2007)(permit granted), *affirmed*, Montana River Action Network et al. v. DNRC et al., Cause No. CDV-2007-602, Montana First Judicial District (2008); *In the Matter of Application for Beneficial Water Use Permit No. 41H 30023457 by Utility Solutions LLC* (DNRC Final Order 2007) (permit denied for failure to analyze legal availability outside of irrigation season (where mitigation applied)); *In the Matter of Application for Beneficial Water Use Permit No. 41H 30026244 by Utility Solutions LLC* (DNRC Final Order 2008); *In the Matter of Application for Beneficial Water Use Permit No. 76H-30028713 by Patricia Skergan and Jim Helmer* (DNRC Final Order 2009)(permit denied in part for failure to analyze legal availability for surface water depletion); Sitz Ranch v. DNRC, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, (2011) Pg. 5 (Court affirmed denial of permit in part for failure to prove legal availability of stream depletion to slough and Beaverhead River); Wesmont Developers v. DNRC, CDV-2009-823, First Judicial District Court, *Memorandum and Order*, (2011) Pgs. 11-12 (“DNRC properly determined that Wesmont cannot be authorized to divert, either directly or indirectly, 205.09 acre-feet from the Bitterroot River without establishing that the water does not belong to a senior appropriator”); applicant failed to analyze legal availability of surface water where projected surface water depletion from groundwater pumping); *In the Matter of Application for Beneficial Water Use Permit No. 76D-30045578 by GBCI Other Real Estate, LLC* (DNRC Final Order 2011) (in an open basin, applicant for a new water right can show legal availability by using a mitigation/aquifer recharge plan or by showing that any depletion to surface water by groundwater pumping will not take water already appropriated; development next to Lake Koocanusa will not take previously

appropriated water). Applicant may use water right claims of potentially affected appropriators as a substitute for “historic beneficial use” in analyzing legal availability of surface water under § 85-2-360(5), MCA. Royston, supra.

31. A flow of water on a given date does not show that water is legally available without showing that all prior appropriators were diverting all claimed water at that moment. Sitz Ranch v. DNRC, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, (2011) Pgs. 5-6. A flow of water past a point on a particular date or dates does not demonstrate that water is legally available. Id.

32. 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.

33. *In the Matter of Beneficial Water Use Permit No. 62935-s76LJ by Crop Hail Management* (DNRC Final Order 1991) (Applicant showed water physically available for appropriation by producing evidence based on upstream diversions; however, he failed to show water legally available with information of downstream uses).

34. 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).

35. 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 16 - 26)

Adverse Effect

FINDINGS OF FACT

36. The Applicant has the ability to stop pumping the wells if call is made.

37. Using aquifer parameters described above and a monthly pumping schedule that accounts for domestic, commercial, and stock use, modeled drawdown is greatest at the end of July in the fifth year of pumping and exceeds 1.0 foot in wells closer than 200 feet from the proposed wells. There are no water rights in the source aquifer that are predicted to experience drawdown greater than 1 foot.

38. Tables 4 and 8 show the physically available water, legal demands, and the difference for the depleted reaches of the Yellowstone River and Muggins Creek, respectively. The difference between physically available water and legal demands is greater than modeled depletions for both Muggins Creek and the Yellowstone River for all months. Water rights considered for adverse effect are those that lie within the depleted reach of either source. The water rights considered for adverse effect on Muggins Creek are shown in Table 8 above. The water rights considered for adverse effect on the Yellowstone River are listed in Table 4.

39. Because there is water physically and legally available in both the source aquifer and in surface water sources predicted to be depleted by the groundwater appropriation, the Department finds that there will be no adverse effect to any existing water right.

CONCLUSIONS OF LAW

40. 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.

41. 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).

42. 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.

43. 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.

44. 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.

45. 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.

46. 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 measurable," 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.

47. The Department can and routinely does, condition a new permit's use on use of that special management, technology, or measurement such as augmentation now generally known as mitigation and aquifer recharge. See § 85-2-312; § 85-2-360 et seq., MCA; see, e.g., *In the Matter of Beneficial Water Use Permit No. 107-411 by Diehl Development* (DNRC Final Order 1974) (No adverse effect if permit conditions to allow specific flow past point of diversion.); *In the Matter of Combined Application for Beneficial Water Use Permit No. 76H- 30043133 and Application No. 76H-30043132 to Change Water Right Nos. 76H-121640-00, 76H-131641-00 and 76H-131642-00 by the Town of Stevensville* (DNRC Final Order 2011).

48. It was within the discretion of the Department to decline to consider an undeveloped mitigation proposal as mitigation for adverse effect in a permit proceeding. Wesmont Developers v. DNRC, CDV-2009-823, First Judicial District Court, *Memorandum and Order*, (2011) Pg. 10.

49. 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).

50. No evidence that the resulting reduction in flows in in the creek would not aggravate water shortages experienced downstream from area affected by project. *In the Matter of Beneficial Water Use Permit No. 55880-40A by Daniel Debuff* (DNRC Final Order 1987).

51. Evidence shows that applicant proposed diversion will lower the water levels in objectors' wells. Applicant did not prove that objectors could reasonably operate their wells with lowered water. *In the Matter of Beneficial Water Use Permit No. 55749-g76LJ by Meadow Lake Country Club Estates* (DNRC Final Order 1988).

52. 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).

53. Artesian pressure is not protectable and a reduction by a junior appropriator is not considered adverse effect as long as an appropriator can reasonable exercise his or her water right. See In re Application No. 72948-G76L by Cross, (DNRC Final Order 1991); In re Application No. 75997-G76L by Carr, (DNRC Final Order 1991); *In the Matter of Application for Beneficial Water Use Permit No. 41S 30005803 by William And Wendy Leininger* (DNRC Final Order 2006) (Artesian pressure not protectable, may have to install pump, worst case

scenario that objector may run out of water after 80 years held not to be adverse effect.); see §§ 85-2-311(1)(b) and -401, MCA.

54. 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 36 - 39)

Adequate Diversion

FINDINGS OF FACT

55. Groundwater is diverted from well 17S with a 1-horsepower Ace pump and from well Pen 8 with a ¾-horsepower pump. The wells are piped into the system through 1¼ -inch PVC pipe. Valves within the system allow water to be directed to various places of use.

56. All stock tanks are equipped with float valves.

57. One well (GWIC # 234802, Well 17S) was evaluated with a 24-hour aquifer test at 16.3 GPM with a maximum drawdown of 2.67 feet leaving 23.68 feet of available water column above the well bottom. The other well (GWIC # 234801, Well Pen 8) was evaluated with a 24-hour aquifer test at 10.7 GPM with a maximum drawdown of 1.39 feet leaving 23.03 feet of available water column above the well bottom. The combined flow rate equaled the requested maximum flow rate. Actual drawdown with well loss, calculated by applying well efficiency to theoretical maximum drawdown, was 3.4 feet and 2.7 feet respectively leaving a minimum of 21.7 feet of available water column.

CONCLUSIONS OF LAW

58. 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.

59. 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.

60. 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).
61. 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).
62. Specific ditch segments would be adequate after completion of maintenance and rehabilitation work. *In the Matter of Application for Beneficial Water Use Permit No. 43B-30002710 by USDA.* (DNRC Final Order 2005).
63. 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 55 - 57).

Beneficial Use

FINDINGS OF FACT

64. The Applicant proposes to use water for multiple domestic, stock, and commercial uses. Multiple domestic, stock, and commercial uses are recognized beneficial uses under the Montana Water Use Act.
65. The two wells proposed for use can pump a combined 27 GPM and this is the requested flow rate.
66. The Applicant proposes to water 70 bulls, 3,400 calves, and 100 cows from December through May and 3,000 calves from September through November. Based on Department standards of 15 GPD/AU, the total stock demand is 42.5 AF (3570 AU x 15 GPD/AU x 182 Days + 3000 AU x 15 GPD/AU x 91 Days = 13,841,100 gallons/325851 G/AF = 42.5 AF). The total commercial demand is 1.0 AF/YR for a cattle processing shed and the multiple domestic use for 5 residences is 5.0 AF/YR based on the Department standard of 1 AF/household per year. The total volume of water requested is limited by the 27 GPM capacity of the wells up to 43.55 AF (27 GPM x 60 min/hr x 24 hr/day x 365 days/325,851 gal/AF = 43.55 AF). Commercial and multiple domestic uses will be as listed above, and stock use will be limited to 37.55 AF/YR

(43.55 AF capacity – 5.0 AF multiple domestic – 1.0 AF commercial = 37.55 AF stock). The period of diversion and period of use for stock is January 1 through December 31. The volume of water requested for stock is less than Department standards but beneficial for the Applicant.

67. The requested flow rate is justified by the capacity of the wells and the requested volume is based upon Department standards for the requested purposes but limited to the capacity of the pumps.

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).

70. 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).

71. 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.

72. Applicant proposes to use water for stock, multiple domestic, and commercial uses which are recognized beneficial uses. § 85-2-102(5), MCA. Applicant has proven by a preponderance of the evidence stock, multiple domestic and commercial uses are beneficial uses and that 27 GPM flow rate and 43.55 AF of diverted volume of water requested is the amount needed to sustain the beneficial use. § 85-2-311(1)(d), MCA. (FOF 64 - 67)

Possessory Interest

FINDINGS OF FACT

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

CONCLUSIONS OF LAW

74. 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.

75. 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.

76. 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 73)

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. 42KJ 30154975 should be GRANTED.

The Department determines the Applicant may divert groundwater, by means of two wells, 28 and 32 feet deep, from January 1 to December 31 at 27 GPM up to 43.55 AF, from points in the NWSWSW and NWSESW Section 9, T6N, R35E, Treasure County, for multiple domestic (5 households), commercial use (cattle processing shed), and stock use from January 1 to December 31. The total volume is limited to 43.55 AF/YR based on capacity of the pumps. The Applicant may divert up to 5.0 AF/YR for multiple domestic use, 1.0 AF/YR for commercial use and 37.55 AF/YR for stock use. The place of use is in the N2SWSW, N2SESW, NESW, and NWSE Section 9, T6N, R35E, Treasure 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 17th day of October 2022.

/Original signed by Mark Elison/

Mark Elison, 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 _____ 2022, by first class United States mail.

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BILLINGS REGIONAL OFFICE