

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

APPLICATION FOR BENEFICIAL WATER USE PERMIT NO. 43B 30151818 BY RGK RANCH LLC)))	CORRECTED PRELIMINARY DETERMINATION TO GRANT PERMIT
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On April 20, 2021, RGK Ranch LLC (Applicant) submitted Application for Beneficial Water Use Permit No. 43B 30151818 to the Billings Water Resources Office of the Department of Natural Resources and Conservation (Department or DNRC) for no flow rate and 132.06 acre-feet from six groundwater pits. The Department published receipt of the Application on its website. The Application was determined to be correct and complete as of September 28, 2021. The Department had a pre-application meeting with the Applicant on March 25, 2021. Mark Elison, Chris Schweigert and Jill Lippard were present for the Department, Cameron Mayo was present for the Applicant. An Environmental Assessment for this Application was completed on December 15, 2021. On January 18, 2022 the Department received an inquiry as to why a water right wasn't included in the legal demands on the Yellowstone River. After researching the question, it was determined that four water rights were erroneously excluded from the analysis. The demands are included in the corrected analysis below under FOFs 22-23. Individual notices will be mailed to those who were excluded in the original public notice.

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
- Attachments
 - Six Reservoir/Place of Storage Addendums

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- Maps: Undated aerial imagery from webmap.onxmaps.com showing proposed pits which are both the points of diversion and places of use.
- Letter from Montana Sage Grouse Habitat Conservation Program dated April 7, 2021.

Information Received after Application was Filed

- Email chain between Regional Office Hydrologist Christine Schweigert and Department Hydrologist David Amman dated September 17 through September 30, 2021 discussing estimation techniques for the ungaged stream depletion reach on the Yellowstone River downstream of the proposed appropriation.
- Email from Deborah Stephenson, DMS Natural Resources, LLC, to Mark Elison, Regional Manager received January 18, 2022 asking why 44 Big Sky Farms LLC irrigation claim no. 43B 17159-00 was not included in legal demands on the Yellowstone River depleted reach.

Information within the Department's Possession/Knowledge

- DNRC water right records
- Aquifer Test Report by Department Groundwater Hydrologist, Attila Fohnagy, dated June 10, 2021
- Depletion Report by Department Groundwater Hydrologist, Attila Fohnagy, dated June 10, 2021
- Technical Report by Regional Office Hydrologist, Christine Schweigert and Department Groundwater Hydrologist, Attila Fohnagy, dated September 28, 2021
- USGS Stream gaging records for Yellowstone River near Livingston, MT gage no. 06192500 with a period of record from 5/1897 through 3/2021
- USGS Stream gaging records for Yellowstone River at Billings, MT gage no. 06214500 with a period of record from 10/1928 through 6/2021
- USGS StreamStats for Montana web application, Chapter G p.13 Drainage Area Ratio method, Between Gages: Interpolation method and regression equations from Table 1-3

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- Weather station records from the Big Timber, Montana station no. 780, period of record from 1981 through 2010 from the Western Regional Climate Center online at <https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?mt0780>
- Monthly evaporation estimates based on data from Big Timber, MT 1981 through 2010 adjusted to 75% of Penman/Linacre (P/L) in Potts.
- A Guide to Building and Managing Private Fish Ponds in Montana, Montana Fish Wildlife and Parks Fisheries Division July 2006.
- The Department also routinely considers the following information. The following information is not included in the administrative file for this Application but is available upon request. Please contact the Billings Regional Office at 406-247-4415 to request copies of the following documents.
 - Technical Memorandum: Physical Availability of Ponds dated April 22, 2019
 - Technical Memorandum: Physical and Legal Availability of Groundwater dated April 22, 2019
 - Technical Memorandum: Pond and Wetland Evaporation/Evapotranspiration dated November 8, 2019
 - Technical Memorandum: Physical Availability of Surface Water with Gage Data dated November 1, 2019

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; and POD means point of diversion.

PROPOSED APPROPRIATION

FINDINGS OF FACT

1. The Applicant proposes to divert groundwater, by means of six pits, from January 1 to

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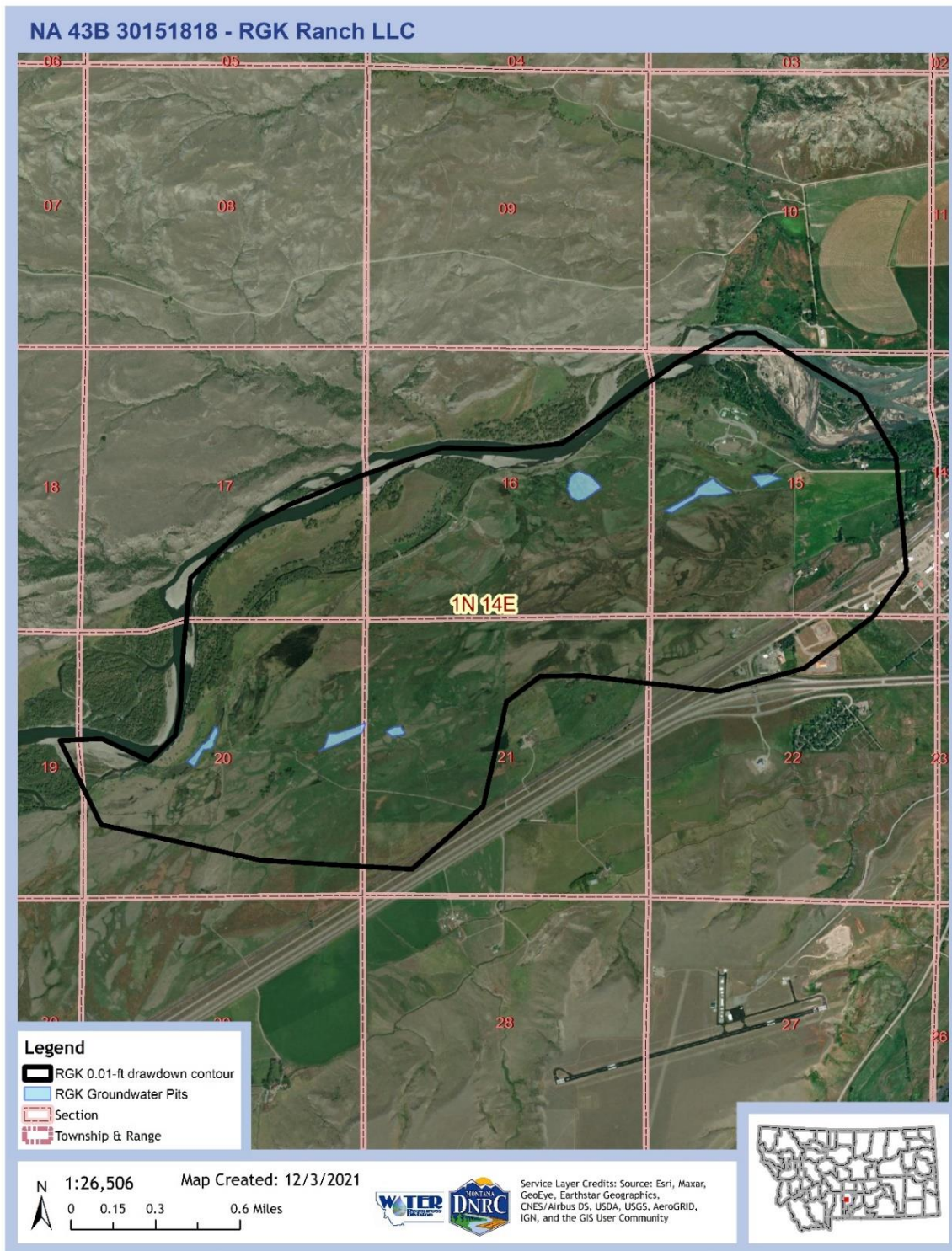
December 31 up to 132.06 AF for fishery use from January 1 to December 31. The legal descriptions of the pits are in the table below and all are in Sweet Grass County.

Table 1. Pit names and locations

Pit name	Gov't Lot/Quarter Section	Section, Township and Range
Big Tree Pond	S2SWNW	Sec. 21, T1N, R14E
Trailer House Pond	S2SENE	Sec. 20, T1N, R14E
West End Pond	Gov't Lot 4 and NENESW	Sec. 20, T1N, R14E
Water Tank Pond	Gov't Lots 7 and 8; NENWSE and NWNESW	Sec. 16, T1N, R14E
Horseshoe Pond	N2NWSW	Sec. 15, T1N, R14E
Entrance Pond	Gov't Lot 6 and N2NESW	Sec. 15, T1N, R14E

The place of use is the same as the points of diversion. The project is generally located just west of Big Timber, MT with part of the property adjacent to the Sweet Grass County fairgrounds.

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Preliminary Determination to Grant
Application for Beneficial Water Use Permit No. 43B 30151818.

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

GENERAL CONCLUSIONS OF LAW

2. 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 . . .

3. 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.

4. 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

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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.

5. 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).

6. 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.

7. 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

8. Department Groundwater Hydrologist, Attila Fohnagy, issued an Aquifer Test Report on June 10, 2021. The Applicant requested and was granted a variance from aquifer testing requirements in ARM 36.12.121 because conducting tests on pits of these sizes are not feasible. Aquifer properties were modeled based on existing literature and known properties of similar terrace and alluvial aquifers.

9. An aquifer transmissivity (T) of 2,500 ft²/day used to delineate the zone of influence (ZOI) was calculated from an estimate of hydraulic conductivity equal to 100 ft/day for the middle range of sand and gravel sediments from Bear (1972) (See Aquifer Test Report, for full list of citations, under Processing Information and Correspondence flag), and a saturated thickness of 25 ft. was taken from well logs in the Groundwater Information Center (GWIC). The aquifer transmissivity of 2,500 ft²/day and specific yield (S_y) of 0.1 for an unconfined aquifer (Lohman, 1972) were used to evaluate physical availability and adverse effect.

10. Using the Theis (1935) solution, a constant net evaporation of 24.7 GPM (flow rate required to produce the annual net evaporation volume of 39.8 AF distributed throughout the year to each pit based on its size), T = 2,500 ft²/day, and S_y = 0.1 showed that the ZOI extends past the aquifer boundaries to the north. Therefore, the ZOI was truncated to the Yellowstone River to the north and resulted in an average width of 5,950 ft. The groundwater gradient for the source aquifer near Big Timber was generated using groundwater elevations in GWIC. The aquifer flux volume within the ZOI is calculated as $Q = TWi$ where T is transmissivity, W is the width of the zone of influence (taken at 5,950 ft) and i is the groundwater gradient (0.005 ft/ft from groundwater levels in GWIC). The calculated volume of total aquifer flux each year within the zone of influence is 74,375 ft³/day or 623 AF/YR.

CONCLUSIONS OF LAW

11. 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.”

12. 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).

13. 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).

14. 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).

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 8-10)

Legal Availability:

FINDINGS OF FACT

16. Based on a 0.01-foot drawdown contour, there are 15 groundwater rights within the zone of influence. Those rights are shown in the table below.

Table 2. Existing legal demands within the zone of influence

Water Right Number	Owners	Priority Date	Volume (AF)
43B 30047627	SWEET GRASS COUNTY FAIRGROUNDS	11/9/2009	1.0*
43B 9158-00	SWEET GRASS COUNTY FAIRGROUNDS	8/10/1976	17.0*
43B 33303-00	SWEET GRASS COUNTY FAIRGROUNDS	6/1/1955	0.1
43B 30137440	EDITH R KULL	12/16/1963	0.6

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43B 30137438	EDITH R KULL	12/31/1946	1.1
43B 110974-00	DALE AND SUSAN SPARTAS	2/28/2000	1.6
43B 30138208	WESLEY AND KAREN TUSCANO	1947	1.7
43B 30137439	EDITH R KULL	12/31/1946	2.2
43B 34076-00	MAURICE N FLANAGAN	6/18/1981	3.0
43B 30149842	STRAUSS TRUST	9/9/2020	6.2
43B 30149843	STRAUSS TRUST	9/9/2020	6.2
43B 30149844	STRAUSS TRUST	9/9/2020	6.2
43B 30050811	WINDBREAK RANCH LLC	5/11/2010	9.3
43B 1983-00	GEORGE AND TERRI ROSTAD	4/8/1974	22.0
43B 34695-00	BIG TIMBER HOLDINGS LLC	7/9/1981	24.2
		TOTAL	102.4 AF

* See FOF 17 for explanation

17. Two groundwater certificates within the ZOI were issued without a volume. The record for Groundwater Certificate no. 43B 30047627 shows that the volume should be 1 AF, so it was corrected and reissued on December 2, 2021. Groundwater Certificate no. 43B 9158-00 was also issued without a volume. Department records do not provide enough information to determine what the volume should be. The Department assigned a volume of 17 AF for the purpose of this analysis, this volume is the amount that can be produced at a rate of 18 GPM (flow rate on the right) for 214 days (the number of days between April 1 and November 1 – the longest period of use on this right). These numbers were not included in the Technical Report issued on September 28, 2021 and they change the legal demand from 84.4 AF to 102.4 AF.

18. The physical amount of water available is 623 AF/YR (FOF 10) and the existing legal demands on groundwater total 102.4 AF/YR (FOF 16). The comparison shows that groundwater is legally available ($623 - 102.4 = 520.6$).

19. The Depletion Report, by Attila Fohnagy, dated June 10, 2021, concludes that the proposed appropriation will deplete the Yellowstone River downstream of the western section line of Sec. 20, T1N, R14E. Table 3, below, shows the modeled depletions in flow rate and volume.

Table 3. Modeled monthly depletions in flow rate (GPM) and volume (AF)

Month	Consumption (AF)	Depletion (AF)	Depletion (GPM)
January	1.4	2.8	20.6
February	1.8	2.8	22.3
March	2.3	2.8	20.3

April	1.6	2.6	20.0
May	2.2	2.6	19.2
June	3.5	2.9	21.8
July	7.4	3.8	27.4
August	7.9	4.5	32.5
September	5.3	4.4	33.5
October	3.2	4.0	29.0
November	2.1	3.5	26.5
December	1.2	3.1	22.5
Total	39.8	39.8	

20. The USGS has multiple gages on the Yellowstone River including a downstream (~99 miles) gage at Billings, MT and an upstream (~40 miles) gage at Livingston, MT. The Department analyzed physical availability in the depleted reach using both the Drainage Area Ratio method and 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, the Department decided that the results of the Interpolation method were reasonable although the size of ungaged area is outside the suggested parameters of $0.5A_g - 1.5A_g$ for the Billings gaged area.

21. 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: $\log Q_u = \log Q_{g1} + (\log Q_{g2} - \log Q_{g1} / \log A_{g2} - \log A_{g1}) * (\log A_u - \log A_{g1})$ 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

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Yellowstone River at Livingston (gage no. 06192500) and for the Yellowstone River at Billings (gage no. 06214500), are in the file under the Processing Information and Correspondence Flag.

Table 4. Flow at ungaged site (beginning of depleted reach) – using USGS gages at Livingston and Billings (CFS)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Median at gage 1 (Livingston – upstream)	1,194	1,187	1,297	1,903	7,220	13,165	7,490	3,361	2,279	1,917	1,644	1,363
Median at gage 2 (Billings – downstream)	2,533	2,534	2,895	3,962	12,890	23,740	12,590	4,633	3,747	3,919	3,590	2,809
Interpolated Flow at ungaged site	1,473	1,467	1,623	2,335	8,489	15,522	8,659	3,676	2,347	2,341	2,044	1,668

22. The area of potential impact on the Yellowstone River is from the western section line of Sec. 20, T1N, R14E approximately six miles downstream to the confluence of the Yellowstone and Boulder Rivers. There are nine existing water rights in that stretch of river that may be affected by the proposed appropriation. The table below is a list of those water rights.

Table 5. Existing legal demands in depleted reach

Water Right No.	Owners	Flow Rate (CFS)	Volume (AF)
43B 194350-00	Montana Fish Wildlife and Parks	2,000	112,747.71
43B 194349-00	Montana Fish Wildlife and Parks	1,200	65,835.67
43B 33302-00	Sweet Grass County Fairgrounds	1.59	44
43B 7298-00	Starr-Moore LLP	2.11	23.32
43B 56226-00	Sweet Grass Conservation District, David and Carmen Hodges	4	71.33
43B 33261-00	Dale and Susan Spartas	1.52	55.87
43B 30132359	44 Big Sky Farms LLC	0.08	1.28
43B 30137243	RGK Ranch LLC	0.00	1.91
43B 30137436	Edith Kull	0.00	0.18
*43B 17159-00	44 Big Sky Farms LLC	12.5	2,011.20
*43B 175-00	Edith Kull	1.21	134.08

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*43B 107224-00	Norem Farms LLC; Wilson Trust	0.00	3.94
*43B 1868-00	Terri Bollman; Tracy Cross; GBC Legacy Prop LLC; Paluch, David & Rhona Trust	0.00	5.27

*Legal demands that were excluded from original analysis. Water rights for livestock direct are taken as 0.08 CFS (35 GPM) for the first right and zero for all others.

23. Below is a comparison of the physical water supply and the current legal demands in the area of effect.

Table 6. Comparison of physically available water to legal demands (CFS) on Yellowstone River*

Month	Physical Availability	Existing Legal Demands	Physical - Legal
January	1,473.25	1,200.08	273.17
February	1,467.19	1,200.08	267.11
March	1,623.24	1,200.08	423.16
April	2,335.79	2,013.79	322.00
May	8,489.38	2,021.49	6,467.89
June	15,522.93	2,023.01	13,499.92
July	8,659.79	2,023.01	6,636.78
August	3,676.38	2,023.01	1,653.37
September	2,347.30	2,019.90	327.40
October	2,341.01	2,016.58	324.43
November	2,044.96	1,200.08	844.88
December	1,668.23	1,200.08	468.15

*Corrected analysis

24. The amount of water physically available minus the existing legal demands exceeds the proposed depletion in all months.

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. 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.

28. 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);

29. 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 16-24)

Adverse Effect

FINDINGS OF FACT

30. The Applicant’s plan to not create adverse effect is to fill in the pits, cover them with tarps or cover them with black floating balls (also called Shade balls, which help reduce evaporation) if a valid call is made by a senior appropriator.

31. Attila Fohnagy, Department Groundwater Hydrologist, in the Aquifer Test Report, modeled drawdown in other wells using the aquifer properties above and a monthly evaporation rate calculated using the methodology described in the Department Technical Memorandum: Pond and Wetland Evaporation/Evapotranspiration dated November 8, 2019. Each of the six pits was assigned a respective portion of the evaporation based on its size. Drawdown in excess of 1 foot occurs in the source aquifer within 2 feet and 7 feet from the two largest pits after 5 years of evaporation; however, there are no water rights in the source aquifer within the 1-foot drawdown contours. Table 7, below, shows the calculated evaporation rate from the proposed pits.

Table 7. Assumed monthly evaporation rate from proposed pits

Month	Net Evaporation (AF)	Net Evaporation (GPM)
January	1.4	9.9
February	1.8	14.1
March	2.3	16.9
April	1.6	11.9
May	2.2	16.0

June	3.5	26.2
July	7.4	54.3
August	7.9	57.8
September	5.3	40.0
October	3.2	23.1
November	2.1	15.8
December	1.2	8.7
Total	39.8	

32. The water rights listed in Table 3 (FOF 19) and in Table 5 (FOF 22) were considered for adverse effect. The amount of water physically available exceeds the flow rate and volume of both surface and groundwater rights in the areas of affect throughout the proposed period of appropriation.

CONCLUSIONS OF LAW

33. 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.

34. 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).

35. 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.

36. 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.

37. 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.

38. 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.

39. 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 31-32)

Adequate Diversion

FINDINGS OF FACT

40. The proposed means of diversion is six groundwater pits. The Applicants proposed to excavate the pits to a depth of 10 to 14 feet with varying surface areas. The combined total surface area will be 17.55 acres, the combined total capacity will be 92.29 AF. The combined

total net evaporation will be 39.8 AF. The pits are expected to fill with groundwater seeping in from the surrounding alluvial aquifer. The table below outlines the specifications for each proposed pit.

Table 8. Pit specifications

Pit Name	Surface Area (AC)	Depth (ft.)	Capacity (AF)
Big Tree Pond	1.01	10	5.05
Trailer House Pond	3.25	10	16.25
West End Pond	2.27	14	15.89
Water Tank Pond	5.17	10	25.85
Horseshoe Pond	4.14	10	20.70
Entrance Pond	1.71	10	8.55
Totals	17.55		92.29

CONCLUSIONS OF LAW

41. 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.
42. 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.
43. Whether party presently has easement not relevant to determination of adequate means of diversion. *In the Matter of Application to Change a Water Right No. G129039-76D by Keim/Krueger* (DNRC Final Order 1989).
44. Adequate diversions can include the requirement to bypass flows to senior appropriators. *E.g., In the Matter of Application for Beneficial Water Use Permit No. 61293-40C by Goffena* (DNRC Final Order 1989) (design did not include ability to pass flows, permit denied).
45. 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 40).

Beneficial Use

FINDINGS OF FACT

46. The Applicants are requesting a total volume of 132.06 AF for fishery purpose. No flow rate is requested because the diversions are pits and will fill at an unknown rate. Fishery is a beneficial use under the Montana Water Use Act.

47. The requested volume of 132.06 includes one fill plus net evaporation. The combined total surface area is 17.55 AF. Surface area, depth and capacity for each pit can be found in Table 8 (FOF 40). The capacity of the six pits will total 92.29 AF using the formula: surface area in acres times max depth in feet times 0.5 (slope factor for pits). The requested volume is equal to the capacity of the pits plus the annual net evaporation of 39.8 AF.

48. The locations of the requested pits are places where there are existing low spots where water already pools. These areas are not farmable because of the ponding water. The requested surface areas are based on the size of the existing ponded areas. The max depths requested are based on the depth that their excavator can dig and are the minimum depth recommended by FWP for fish to be able to survive over winter. Multiple ponds are requested because each one is designed to support a different species of fish. The Applicant intends to give back to the Big Timber community by providing opportunities to Big Timber Elementary students to learn about fish and fishing. The ponds need to be large enough to allow separation of 30-40 students and provide a high probability of catching fish.

49. The Department calculates net evaporation for applications involving new or existing reservoirs. To determine net evaporation the Department used the monthly evaporation estimates based on data from 1981 through 2010 (inches)(adjusted to 75% of Penman-Linacre in Potts (1988)) for Big Timber, MT. Precipitation data was retrieved from the Big Timber Montana climate station no. 240780 for the period from 1981-2010) from the Western Regional Climate Center online at: <https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?mt0780>. The table below shows the mean monthly precipitation and the net evaporation for the proposed reservoirs.

Table 9. Net Evaporation calculation (inches)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Total
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Big Timber, MT (P/L 0.75)	1.58	1.72	2.52	3.19	4.25	5.18	6.62	6.45	4.81	3.48	2.13	1.49	43.42
Mean Precipitation (inches)	0.65	0.42	0.93	2.11	2.75	2.81	1.53	1.04	1.19	1.32	0.70	0.68	16.23
Net Evap P/L (no ice)	0.93	1.30	1.59	1.08	1.50	2.37	5.09	5.41	3.62	2.16	1.43	0.81	27.19

50. With a combined surface area of 17.55 acres and 27.19 inches per acre of net evaporation per year, the total annual evaporation will be 39.8 AF ($17.55 \times 27.19 / 12 = 39.8$).

51. The total beneficial use for a reservoir is equal to the beneficial use plus one fill plus evaporation. The proposed beneficial use is non-consumptive (fishery), so the beneficial use is $92.29 + 39.8 = 132.06$ AF.

52. The Applicants cited Fish Wildlife and Parks biologist Mike Ruggles saying that 300 2-inch fish/acre or 150 10-inch fish per acre are adequate for optimal fish habitat for Rainbow or Cutthroat Trout. With 17.55 acres proposed, the ponds potentially would support 2,632 to 5,265 trout. Actual stocking rates and species will be determined by the stocking permit issued by FWP.

CONCLUSIONS OF LAW

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

54. 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

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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).

55. 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).

56. 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.

57. Applicant proposes to use water for fishery which is a recognized beneficial use. § 85-2-102(5), MCA. Applicant has proven by a preponderance of the evidence fishery is a beneficial use and that 132.06 AF of diverted volume of water requested is the amount needed to sustain the beneficial use. § 85-2-311(1)(d), MCA. (FOF 46-52)

Possessory Interest

FINDINGS OF FACT

58. The Applicants signed the application form affirming the applicants have possessory interest, or the written consent of the person with the possessory interest, in the property where the water is to be put to beneficial use.

CONCLUSIONS OF LAW

59. 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.

60. 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.

61. 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 58)

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. 43B 30151818 should be GRANTED.

The Department determines the Applicant may divert groundwater, by means of six pits, from January 1 through December 31, up to 132.06 AF for fishery use from January 1 through

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December 31. The points of diversion and places of use are shown in the table below; all are in Sweet Grass County.

Table 10. Pit names and locations

Pit name	Gov't Lot/Quarter Section	Section, Township and Range
Big Tree Pond	S2SWNW	Sec. 21, T1N, R14E
Trailer House Pond	S2SENE	Sec. 20, T1N, R14E
West End Pond	Gov't Lot 4 and NENESW	Sec. 20, T1N, R14E
Water Tank Pond	Gov't Lots 7 and 8; NENWSE and NWNESW	Sec. 16, T1N, R14E
Horseshoe Pond	N2NWSW	Sec. 15, T1N, R14E
Entrance Pond	Gov't Lot 6 and N2NESW	Sec. 15, T1N, R14E

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 18th day of January 2022.

/Original signed by Mark Elison/

Mark Elison, Manager
Billings Regional Office
Department of Natural Resources and Conservation

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CERTIFICATE OF SERVICE

This certifies that a true and correct copy of the PRELIMINARY DETERMINATION TO GRANT was sent to Central Office to be posted on the DNRC website on this 18th day of January 2022.

CHRISTINE SCHWEIGERT

DATE