

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

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APPLICATION FOR BENEFICIAL WATER USE PERMIT NO. 43Q 30162460 BY) BIGHORN DRYWALL & CONSTRUCTION) LLC)	PRELIMINARY DETERMINATION TO GRANT PERMIT
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On November 29, 2023, Bighorn Drywall and Construction LLC (Applicant) submitted Application for Beneficial Water Use Permit No. 43Q 30162460 to the Billings Water Resources Office of the Department of Natural Resources and Conservation (Department or DNRC) for 252.55 GPM (0.56 CFS) flow rate and 70.51 AF volume for multiple domestic and lawn and garden purposes. The Department published receipt of the Application on its website. The Department met with Jessica Dais and Steven Carreiro, Consultants for the Applicant, on May 12, 2023, for a pre-application meeting. Mark Elison, Chris Schweigert, and Jill Lippard were present for the Department. The application was determined to be correct and complete as of April 16, 2024. An Environmental Assessment for this application was completed on April 16, 2024.

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:
 - Water demand and peak flow calculations
 - Aquifer Test Data Form 633 in electronic format for two 8-hour pumping tests
- Maps:
 - Site layout map for Gresham Subdivision

Information Received after Application Filed

- Email correspondence from December 6, 2023, though April 8, 2024, between Water Resource Specialist, Jill Lippard, and Consultant, Jessica Dais, regarding additional information required to process the application
- Map showing locations of wells used for 8-hour pumping tests and monitoring

- Addenda:
 - Aquifer Testing Addendum, Form 600-ATA
- Well logs for six production wells (five of the wells were used for 8-hour pumping tests and one was used as a monitoring well)
- Aquifer Test Data Form 633 in electronic format for five 8-hour pumping tests including updated Form 633s for the two 8-hour pumping tests originally submitted
- Aquifer testing variance request memo dated September 19, 2023, from Ian Magruder, Consultant, to Mark Elison, Billings Regional Manager
- Variance request approval letter dated September 28, 2023, from Mark Elison, Billings Regional Manager, granting variances for ARM 36.12.121 (3)(d, e, h, and j)
- Variance Request Form 653 received April 8, 2024, requesting a variance for ARM 36.12.121 (3)(a)
- Variance request approval letter dated April 16, 2024, from Kathy Olsen, Regional Operations Manager, granting variance for ARM 36.12.121 (3)(a)

Information within the Department's Possession/Knowledge

- Groundwater Permit Application Technical Report by Jill Lippard, Water Resource Specialist, dated April 16, 2024
- Groundwater Permit Report by Madeline McKeefry, Groundwater Hydrologist, dated March 25, 2024
- Hydrology of the West Billings Area: Impacts of Land-Use Changes on Water Resources, John Olson & Jon Reiten (2002), Montana Bureau of Mines and Geology, Report of Investigation 10
- DNRC Water Calculation Guide
- DNRC water rights database
- Water right file for Provisional Permit 43Q 30068497
- DNRC Canyon Creek @ Zoo Montana Gage 43Q_05900 (period of record from May 2016 through March 2024)
- DNRC Hogans Slough above Shiloh Conservation Area Gage 43Q_06300 (period of record from May 2021 through June 2023)
- 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.

- DNRC Technical Memorandum: Variance – Yellowstone River Terrace Level 3 Aquifer Properties Memo, dated March 1, 2022

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). For the purposes of this document, Department of 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 35 wells from January 1 to December 31 for multiple domestic use and from April 1 to October 31 for lawn and garden use. Groundwater will be diverted from January 1 to December 31 at a combined flow rate of 252.55 GPM (0.56 CFS) up to 70.51 AF, from 35 points of diversion in the SESW Section 17, T1S, R25E, Yellowstone County, to serve Gresham Subdivision on a parcel currently described as Miller Farm Sub Lot 2. The subdivision proposal is for 35 residential lots each served by an individual well. The proposed period of use for multiple domestic is January 1 to December 31 and the proposed period of use for lawn and garden is April 1 to October 31. The proposed volume for multiple domestic use is 11.76 AF. The proposed volume for lawn and garden irrigation of 23.5 AC is 58.75 AF. The place of use is in the SESW Section 17, T1S, R25E, Yellowstone County, to the west of Billings.
2. The proposed appropriation lies approximately 2,500 feet (0.5 miles) north of Canyon Creek and 7,360 feet (1.4 miles) southwest of Hogans Slough.
3. The Applicant requests 70.51 AF of which 42.3 AF will be consumed and 28.21 AF will return to the source aquifer as identified in the Department Groundwater Permit Report.
4. The proposed permit is not supplemental to any other water rights and does not share a place of use with any other water rights.

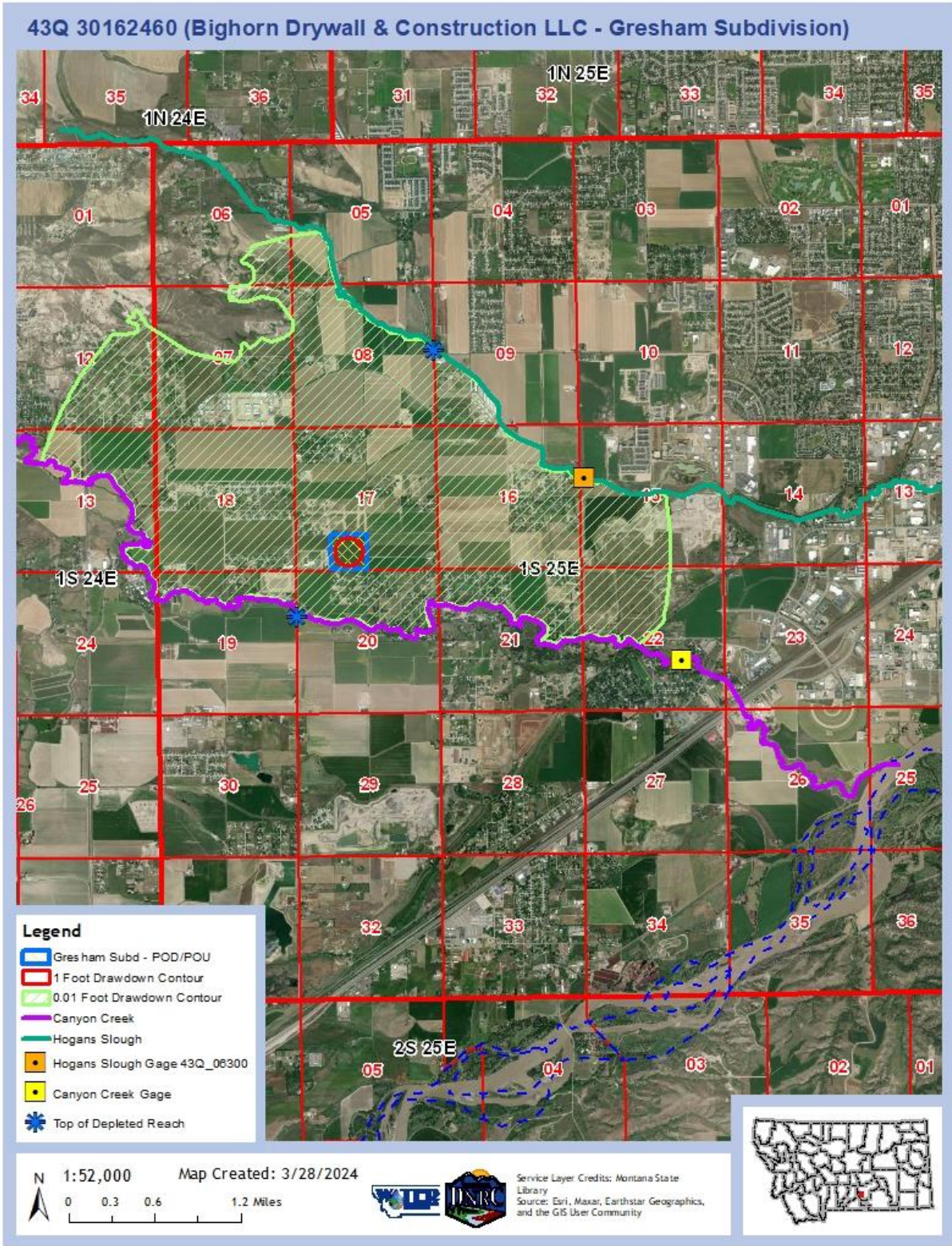


Figure 1. Project area for Groundwater Permit Application No. 43Q 30162460

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

GENERAL CONCLUSIONS OF LAW

5. The Montana Constitution expressly recognizes in relevant part that:
- (1) All existing rights to the use of any waters for any useful or beneficial purpose are hereby recognized and confirmed.
 - (2) The use of all water that is now or may hereafter be appropriated for sale, rent, distribution, or other beneficial use . . . shall be held to be a public use.
 - (3) All surface, underground, flood, and atmospheric waters within the boundaries of the state are the property of the state for the use of its people and are subject to appropriation for beneficial uses as provided by law.

Mont. Const. Art. IX, § 3. While the Montana Constitution recognizes the need to protect senior appropriators, it also recognizes a policy to promote the development and use of the waters of the state by the public. This policy is further expressly recognized in the water policy adopted by the Legislature codified at § 85-2-102, MCA, which states in relevant part:

- (1) Pursuant to Article IX of the Montana constitution, the legislature declares that any use of water is a public use and that the waters within the state are the property of the state for the use of its people and are subject to appropriation for beneficial uses as provided in this chapter. . . .
- (3) It is the policy of this state and a purpose of this chapter to encourage the wise use of the state's water resources by making them available for appropriation consistent with this chapter and to provide for the wise utilization, development, and conservation of the waters of the state for the maximum benefit of its people with the least possible degradation of the natural aquatic ecosystems. In pursuit of this policy, the state encourages the development of facilities that store and conserve waters for beneficial use, for the maximization of the use of those waters in Montana . . .

6. Pursuant to § 85-2-302(1), MCA, except as provided in §§ 85-2-306 and 85-2-369, MCA, a person may not appropriate water or commence construction of diversion, impoundment, withdrawal, or related distribution works except by applying for and receiving a permit from the Department. See § 85-2-102(1), MCA. An Applicant in a beneficial water use permit proceeding must affirmatively prove all of the applicable criteria in § 85-2-311, MCA. Section § 85-2-311(1) states in relevant part:

- ... the department shall issue a permit if the Applicant proves by a preponderance of evidence that the following criteria are met:
- (a) (i) there is water physically available at the proposed point of diversion in the amount that the Applicant seeks to appropriate; and
 - (ii) water can reasonably be considered legally available during the period in which the Applicant seeks to appropriate, in the amount requested, based on the records of the department and other evidence provided to the department. Legal availability is determined using an analysis involving the following factors:
 - (A) identification of physical water availability;
 - (B) identification of existing legal demands on the source of supply throughout the area

of potential impact by the proposed use; and

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

(b) the water rights of a prior appropriator under an existing water right, a certificate, a permit, or a state water reservation will not be adversely affected. In this subsection (1)(b), adverse effect must be determined based on a consideration of an Applicant's plan for the exercise of the permit that demonstrates that the Applicant's use of the water will be controlled so the water right of a prior appropriator will be satisfied;

(c) the proposed means of diversion, construction, and operation of the appropriation works are adequate;

(d) the proposed use of water is a beneficial use;

(e) the Applicant has a possessory interest or the written consent of the person with the possessory interest in the property where the water is to be put to beneficial use, or if the proposed use has a point of diversion, conveyance, or place of use on national forest system lands, the Applicant has any written special use authorization required by federal law to occupy, use, or traverse national forest system lands for the purpose of diversion, impoundment, storage, transportation, withdrawal, use, or distribution of water under the permit;

(f) the water quality of a prior appropriator will not be adversely affected;

(g) the proposed use will be substantially in accordance with the classification of water set for the source of supply pursuant to 75-5-301(1); and

(h) the ability of a discharge permit holder to satisfy effluent limitations of a permit issued in accordance with Title 75, chapter 5, part 4, will not be adversely affected.

(2) The Applicant is required to prove that the criteria in subsections (1)(f) through (1)(h) have been met only if a valid objection is filed. A valid objection must contain substantial credible information establishing to the satisfaction of the department that the criteria in subsection (1)(f), (1)(g), or (1)(h), as applicable, may not be met. For the criteria set forth in subsection (1)(g), only the department of environmental quality or a local water quality district established under Title 7, chapter 13, part 45, may file a valid objection.

To meet the preponderance of evidence standard, “the Applicant, in addition to other evidence demonstrating that the criteria of subsection (1) have been met, shall submit hydrologic or other evidence, including but not limited to water supply data, field reports, and other information developed by the Applicant, the department, the U.S. geological survey, or the U.S. natural resources conservation service and other specific field studies.” Section 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, 357 Mont. 438, 240 P.3d 628.

7. Pursuant to § 85-2-312, MCA, the Department may condition permits as it deems necessary to meet the statutory criteria:

(1) (a) The department may issue a permit for less than the amount of water requested, but may not issue a permit for more water than is requested or than can be beneficially used without waste for the purpose stated in the application. The department may require modification of plans and specifications for the appropriation or related diversion or construction. The department may issue a permit subject to terms, conditions, restrictions, and limitations it considers necessary to satisfy the criteria listed in 85-2-311 and subject to subsection (1)(b), and it may issue temporary or seasonal permits. A permit must be issued subject to existing rights and any final determination of those rights made under this chapter.

E.g., Montana Power Co. v. Carey (1984), 211 Mont. 91, 96, 685 P.2d 336, 339 (requirement to grant applications as applied for, would result in, “uncontrolled development of a valuable natural resource” which “contradicts the spirit and purpose underlying the Water Use Act.”); see also, *In the Matter of Application for Beneficial Water Use Permit No. 65779-76M by Barbara L. Sowers* (DNRC Final Order 1988)(conditions in stipulations may be included if it further compliance with statutory criteria); *In the Matter of Application for Beneficial Water Use Permit No. 42M-80600 and Application for Change of Appropriation Water Right No. 42M-036242 by Donald H. Wyrick* (DNRC Final Order 1994); Admin. R. Mont. (ARM) 36.12.207.

8. The Montana Supreme Court further recognized in *Matter of Beneficial Water Use Permit Numbers 66459-76L, Ciotti: 64988-G76L, Starnier*, 278 Mont. 50, 60-61, 923 P.2d 1073, 1079, 1080 (1996), *superseded by legislation on another issue*:

Nothing in that section [85-2-313], however, relieves an Applicant of his burden to meet the statutory requirements of § 85-2-311, MCA, before DNRC may issue that provisional permit. Instead of resolving doubts in favor of appropriation, the Montana Water Use Act requires an Applicant to make explicit statutory showings that there are unappropriated waters in the source of supply, that the water rights of a prior appropriator will not be adversely affected, and that the proposed use will not unreasonably interfere with a planned use for which water has been reserved.

See also, *Wesmont Developers v. DNRC*, CDV-2009-823, First Judicial District Court,

Memorandum and Order (2011). The Supreme Court likewise explained that:

.... unambiguous language of the legislature promotes the understanding that the Water Use Act was designed to protect senior water rights holders from encroachment by junior appropriators adversely affecting those senior rights.

Montana Power Co., 211 Mont. at 97-98, 685 P.2d at 340; see also Mont. Const. art. IX §3(1).

9. An appropriation, diversion, impoundment, use, restraint, or attempted appropriation, diversion, impoundment, use, or restraint contrary to the provisions of § 85-2-311, MCA is

invalid. An officer, agent, agency, or employee of the state may not knowingly permit, aid, or assist in any manner an unauthorized appropriation, diversion, impoundment, use, or other restraint. A person or corporation may not, directly or indirectly, personally or through an agent, officer, or employee, attempt to appropriate, divert, impound, use, or otherwise restrain or control waters within the boundaries of this state except in accordance with this § 85-2-311, MCA. Section 85-2-311(6), MCA.

10. The Department may take notice of judicially cognizable facts and generally recognized technical or scientific facts within the Department's specialized knowledge, as specifically identified in this document. ARM 36.12.221(4).

PHYSICAL AVAILABILITY

FINDINGS OF FACT

11. The Applicant submitted a variance request to waive aquifer testing requirements in Administrative Rule of Montana (ARM) 36.12.121 on September 19, 2023. The Applicant requested the variance because the proposed project meets the parameters defined in DNRC's Yellowstone River Terrace Level 3 (Qat3) Aquifer Properties Memo. The Department granted a variance for ARM 36.12.121 (3)(d, e, h, and j) aquifer testing requirements on September 28, 2023. The Department still required by the Applicant to conduct 8-hour pumping tests on production wells until the total requested flow rate could be demonstrated. Since the 8-hour pumping tests were not maintained at a constant discharge rate, an additional variance was requested on April 8, 2024, and granted on April 16, 2024, for ARM 36.12.121 (3)(a).

12. Department Groundwater Hydrologist, Madeline McKeefry, modeled physical availability using aquifer properties based on the Billings Aquifer Variance Memo. The 35 proposed wells were modeled as one well using the Theis (1935) unconfined solution. Recommended values for transmissivity (T) and specific yield (S_y) are $T = 6,000 \text{ ft}^2/\text{day}$, based on aquifer properties for Yellowstone River Terrace Level 3 (Qat3) and $S_y = 0.1$, taken as a literature value for unconfined sand and gravel aquifers (Lohman, 1972). Using a constant pumping rate of 43.7 GPM (flow rate required to produce the requested volume over the proposed period of diversion), the modeled 0.01-foot drawdown contour (zone of influence) occurs at 12,000 feet from the proposed wells. The drawdown contour is truncated to the shale bedrock unit to the northwest and Terrace 3 scarps to the southeast, and along the length of Canyon Creek to the southwest and Hogans Slough to the northeast because these surface water sources are hydraulically connected and create a constant head boundary. The volume of total aquifer flux each year within the zone of

influence is given by the equation $Q = TWi$, where T is transmissivity, W is the width of the zone of influence (taken at 23,000 feet) and i is the groundwater gradient (0.003 ft/ft from Olson, 2005). The volume of total aquifer flux each year within the zone of influence as defined by 0.01-foot of drawdown is 414,000 ft³/day or 3,469 AF/YR.

13. The Department finds that the amount of groundwater physically available at the proposed point of diversion is 3,469 AF/YR. The Applicant proposes to use 70.51 AF/YR. The Department finds groundwater is physically available in the amount requested during the proposed period of diversion.

LEGAL AVAILABILITY

FINDINGS OF FACT

14. Department Groundwater Hydrologist Madeline McKeefry modeled the drawdown from the proposed appropriation after five years of pumping. The model predicted that the 0.01-foot drawdown contour or zone of influence would occur at 12,000 feet from the proposed point of diversion truncated by the structure of the aquifer and constant head boundaries. The Groundwater Permit Report identified 310 active groundwater rights within the zone of influence. A list of the water rights is in the file. Of those, 288 are Groundwater Certificates, 3 are Exempt Rights, 11 are Statements of Claim and 8 are Provisional Permits. This includes 53 Groundwater Certificates for which no volume is recorded in the database. The legal demand for the Groundwater Certificates with no recorded volume was taken as 3.27 AF representing the average volume of the 235 Groundwater Certificates for which volumes are recorded. Statements of Claim with no listed volume were assigned volumes based on Department standards. Domestic claims were assigned 1.5 AF and stock claims were assigned 0.034 AF/AU. The total annual legal demand on groundwater within the zone of influence is 1,660.54 AF/YR. Table 1 below compares the water supply and current legal demands for groundwater.

Table 1. Comparison of physically available groundwater to legal demands

Physically Available (AF/year)	Existing Legal Demands (AF/year)	Physically Available minus Existing Legal Demands (AF/year)
3,469	1,660.54	1,808.46

15. The amount of groundwater available is 3,469 AF/YR and the existing legal demands of groundwater total 1,660.54 AF/YR. The Department finds that the comparison shows that groundwater is legally available in excess of the amount requested by the Applicant (3,469 AF – 1,660.54 AF = 1,808.46 AF).

16. The Groundwater Permit Report concludes that Canyon Creek and Hogans Slough are hydraulically connected to the source aquifer and would be depleted by this groundwater appropriation. The surface water depletion from the proposed wells is distributed as 90% to Canyon Creek and 10% to Hogans Slough. The depleted reach of Canyon Creek is downstream of the western boundary of SWNW Section 20, T1S, R25E, and the depleted reach of Hogans Slough is downstream of the western boundary of SWNW Section 9, T1S, R25E, Yellowstone County. The estimated monthly depletions to Canyon Creek and Hogans Slough are shown in Table 2.

Table 2. Modeled monthly depletions in volume (AF) and flow rate (GPM) to Canyon Creek & Hogans Slough

Month	Total Consumed Volume (AF)	Canyon Creek Net Depletion (AF)	Canyon Creek Net Depletion (GPM)	Hogans Slough Net Depletion (AF)	Hogans Slough Net Depletion (GPM)
January	0.1	2.4	17.3	0.3	1.9
February	0.1	2.1	16.7	0.2	1.9
March	0.1	1.8	13.5	0.2	1.5
April	0.8	1.7	13.0	0.2	1.4
May	4.7	2.0	14.4	0.2	1.6
June	8.3	2.8	21.5	0.3	2.4
July	11.3	4.0	29.5	0.4	3.3
August	10.3	5.1	37.3	0.6	4.1
September	5.0	5.3	40.1	0.6	4.5
October	1.4	4.5	33.1	0.5	3.7
November	0.1	3.5	26.8	0.4	3.0
December	0.1	2.8	20.5	0.3	2.3
Total	42.3	38.1		4.2	

17. The Department has operated a stream gage (43Q_05900) on Canyon Creek at Zoo Montana in SENESE Section 22, T1S, R25E since May 2016. There are 7 water rights between the gage and the top of the depleted reach. The volume for irrigation rights with no specified volume was taken as 4.1 AF/AC based on Department standards for 45% efficiency flood irrigation in Climatic Area 1. The distribution of flow rate and volume by month for these water rights is in the file under the Processing Information and Correspondence Flag.

Table 3. Legal Demands on Canyon Creek between the gage and the top of the depleted reach

Water Right Number	Owners	Purposes	Flow Rate (GPM)	Flow Rate (CFS)	Acres	Volume (AF)	Period of Diversion
43Q 8960 00	George L Lambrecht	Irrigation; Stock	596.90	1.33	60.00	175.00	04/30 to 12/01**

43Q 8965 00	Dolores D Grover; George S Grover	Irrigation; Stock	498.16	1.11	10.00	28.00	01/01 to 12/31**
43Q 26726 00	Sally A Saunders	Irrigation	153.00	0.34	9.00	36.90*	06/01 to 09/30
43Q 39516 00	Randolph L Legare; Susan C Legare	Irrigation	264.00	0.58	15.00	61.50*	04/15 to 11/19
43Q 180005 00	Jerry J O'Donnell; Susan R O'Donnell	Irrigation	30.00	0.06	3.00	12.30*	03/01 to 11/30
43Q 214609 00	Catherine McNally; Jim McNally; Judy C McNally; Teresa C McNally	Irrigation	297.50	0.66	17.50	71.75*	03/15 to 11/19
43Q 30067817	Kathleen Katsilas; Zachary Katsilas	Lawn And Garden	6.00	0.01	1.00	2.50	04/15 to 09/30

*Calculated by DNRC **Based on period of use for stock purpose

18. The existing legal demands between the gage and the top of the depleted reach were added to the mean monthly flow at the gage to determine physical availability of water on Canyon Creek at the top of the depleted reach. Volume is calculated as mean monthly flow times 1.98 times the number of days in a month.

Table 4. Physically available flow on Canyon Creek at top of depleted reach by month (CFS)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean Monthly Flow at Gage (CFS)	11.75	13.16	24.02	43.52	132.67	150.63	98.21	109.17	156.60	128.74	26.48	14.07
Legal Demands Between the Gage and Top of Depleted Reach (CFS)	1.11	1.11	1.83	2.42	3.75	4.09	4.09	4.09	4.09	3.74	3.74	1.11
Physical Availability of Water at Top of the Depleted Reach (CFS)	12.86	14.27	25.85	45.94	136.42	154.72	102.30	113.26	160.69	132.48	30.22	15.18

Table 5. Physically available volume on Canyon Creek at top of depleted reach by month (AF)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean Monthly Volume at Gage (AF)	721.1	729.6	1,474.3	2,585.4	8,143.1	8,947.7	6,028.2	6,700.6	9,302.1	7,901.8	1,573.1	863.9

Legal Demands Between Gage and Top of Depleted Reach (AF)	0.1	0.1	6.4	15.9	53.4	60.7	62.7	62.7	60.7	52.9	12.4	0.1
Physical Availability of Water at Top of Depleted Reach (AF)	721.2	729.7	1,480.6	2,601.2	8,196.5	9,008.4	6,090.9	6,763.3	9,362.8	7,954.7	1,585.4	863.9

19. The area of potential impact for Canyon Creek is the entire reach of Canyon Creek from the top of the depleted reach at the western boundary of the SWNW Section 20, T1S, R25E to the confluence with the Yellowstone River. There are 8 water rights on Canyon Creek between the top of the depleted reach and the confluence with the Yellowstone River. The volume for irrigation rights with no specified volume was taken as 4.1 AF/AC based on Department standards for 45% efficiency flood irrigation in Climatic Area 1. The distribution of flow rate and volume by month for these water rights is in the file under the Processing Information and Correspondence Flag.

Table 6. Legal Demands on Canyon Creek between the top of the depleted reach and the Yellowstone River

Water Right Number	Owners	Purposes	Flow Rate (GPM)	Flow Rate (CFS)	Acres	Volume (AF)	Period of Diversion
43Q 8960 00	George L Lambrecht	Irrigation; Stock	596.90	1.33	60.00	175.00	04/30 to 12/01**
43Q 8965 00	Dolores D Grover; George S Grover	Irrigation; Stock	498.16	1.11	10.00	28.00	01/01 to 12/31**
43Q 26726 00	Sally A Saunders	Irrigation	153.00	0.34	9.00	36.90*	06/01 to 09/30
43Q 39516 00	Randolph L Legare; Susan C Legare	Irrigation	264.00	0.58	15.00	61.50*	04/15 to 11/19
43Q 180005 00	Jerry J O'Donnell; Susan R O'Donnell	Irrigation	30.00	0.06	3.00	12.30*	03/01 to 11/30
43Q 206480 00	Connie M Hanson; Jerome D Hanson	Irrigation	350.00	0.77	20.00	82.00*	04/15 to 11/04
43Q 214609 00	Catherine McNally; Jim McNally; Judy C McNally; Teresa C McNally	Irrigation	297.50	0.66	17.50	71.75*	03/15 to 11/19

43Q 30067817	Kathleen Katsilas; Zachary Katsilas	Lawn And Garden	6.00	0.01	1.00	2.50	04/15 to 09/30
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*Calculated by DNRC **Based on period of use for stock purpose

20. The legal demands between the top of the depleted reach and the confluence with the Yellowstone River were subtracted from the physically available water at the top of the depleted reach to determine if water was legally available on Canyon Creek.

Table 7. Physically available water minus legal demands on Canyon Creek by month (CFS)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Physical Availability of Water at Top of Depleted Reach (CFS)	12.86	14.27	25.85	45.94	136.42	154.72	102.30	113.26	160.69	132.48	30.22	15.18
Legal Demands within the Depleted Reach (CFS)	1.11	1.11	1.84	3.19	4.52	4.86	4.86	4.86	4.86	4.51	3.74	1.11
Physical Availability of Water Minus Legal Demands (CFS)	11.75	13.16	24.01	42.75	131.90	149.86	97.44	108.40	155.83	127.97	26.48	14.07

Table 8. Physically available water minus legal demands on Canyon Creek by month (AF)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Physical Availability of Water at Top of Depleted Reach (AF)	721.2	729.7	1,480.6	2,601.2	8,196.5	9,008.4	6,090.9	6,763.3	9,362.8	7,954.7	1,585.4	863.9
Legal Demands within the Depleted Reach (AF)	0.1	0.1	6.4	22.3	65.8	72.8	75.2	75.2	72.8	65.4	14.0	0.1
Physical Availability of Water Minus Legal Demands (AF)	721.1	729.6	1,474.3	2,578.9	8,130.6	8,935.6	6,015.7	6,688.1	9,290.1	7,889.3	1,571.5	863.9

21. The flow rate and volume of water physically available minus all legal demands within the area of impact for Canyon Creek exceeds modeled depletions in all months. The Department finds that water is legally available on Canyon Creek in excess of modeled monthly depletions.

22. The Department has operated a stream gage (43Q_06300) on Hogans Slough above Shiloh Conservation Area (above confluence with Shiloh Drain) in the NWSWNW Section 15, T1S, R25E, since May 2021. There is one water right on Hogans Slough between the gage and the top of the depleted reach. Statement of Claim 43Q 184007-00 appropriates 0.56 CFS for irrigation on 15 acres from May 1 to September 30. The volume for this Claim is taken as 61.5 AF/YR (4.1 AF/AC) based on Department standards for 45% efficiency flood irrigation in Climatic Area 1. The distribution of flow rate and volume by month for this water right is in the file under the Processing Information and Correspondence Flag. The existing legal demand between the gage and the top of the depleted reach was added to the mean monthly flow at the gage to determine physical availability of water on Hogans Slough at the top of the depleted reach. Mean monthly volume is calculated as mean monthly flow times 1.98 times the number of days in a month.

Table 9. Physically available flow on Hogans Slough at top of depleted reach by month (CFS)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean Monthly Flow (CFS)	0.74	0.82	0.84	0.81	3.04	8.07	12.34	14.90	16.25	10.57	1.01	1.13
Legal Demands Between the Gage and Top of the Depleted Reach (CFS)	0.00	0.00	0.00	0.00	0.56	0.56	0.56	0.56	0.56	0.00	0.00	0.00
Physical Availability of Water at Top of the Depleted Reach (CFS)	0.74	0.82	0.84	0.81	3.60	8.63	12.90	15.46	16.81	10.57	1.01	1.13

Table 10. Physically available volume on Hogans Slough at top of depleted reach by month (AF)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean Monthly Volume (AF)	45.1	45.5	51.3	47.8	186.4	479.6	757.1	914.3	965.3	648.8	60.0	69.4
Legal Demands Between the Gage and Top of the Depleted Reach (AF)	0.0	0.0	0.0	0.0	12.5	12.1	12.5	12.5	12.1	0.0	0.0	0.0

Physical Availability of Water at Top of the Depleted Reach (AF)	45.1	45.5	51.3	47.8	198.9	491.6	769.6	926.7	977.3	648.8	60.0	69.4
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23. The area of potential impact for Hogans Slough is from the top of the depleted reach at the northwestern boundary of Section 9, T1S, R25E until the confluence with Shiloh Drain in the SESENE Section 15, T1S, R25E. The confluence of Hogans Slough and Shiloh Drain is an appropriate lower end of the affected reach because, during irrigation season, the flow of Hogans Slough more than doubles when Shiloh Drain flows into it.

24. There are two legal demands on Hogans Slough between the top of the depleted reach and the confluence with Shiloh Drain. One is Statement of Claim 43Q 184007-00, as discussed above. The other is Provisional Permit 43Q 30068497 for 359 GPM (0.8 CFS) from January 1 to December 31 for 204 AF for irrigation of wetland and upland vegetation and fishery purposes. The distribution of flow rate and volume by month for these water rights is in the file.

25. The legal demands between the top of the depleted reach and the confluence of Hogans Slough with Shiloh Drain were subtracted from the physically available water at the top of the depleted reach to determine if water was legally available on Hogans Slough.

Table 11. Physically available water minus legal demands on Hogans Slough by month (CFS)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Physical Availability of Water at Top of Depleted Reach (CFS)	0.74	0.82	0.84	0.81	3.60	8.63	12.90	15.46	16.81	10.57	1.01	1.13
Legal Demands within Depleted Reach (CFS)	0.80	0.80	0.80	0.80	1.36	1.36	1.36	1.36	1.36	0.80	0.80	0.80
Physical Availability of Water minus Legal Demands (CFS)	-0.07	0.02	0.03	0.00	2.24	7.27	11.54	14.10	15.45	9.77	0.21	0.33

Table 12. Physically available water minus legal demands on Hogans Slough by month (AF)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Physical Availability of Water at Top of Depleted Reach (AF)	45.1	45.5	51.3	47.8	198.9	491.6	769.6	926.7	977.3	648.8	60.0	69.4

Legal Demands within Depleted Reach (AF)	17.1	15.4	17.1	16.5	29.5	28.6	29.5	29.5	28.6	17.1	16.5	17.1
Physical Availability of Water minus Legal Demands (AF)	28.0	30.0	34.2	31.3	169.3	463.0	740.1	897.2	948.7	631.7	43.5	52.3

26. The largest modeled monthly depletion to Hogans Slough is 4.5 GPM (0.01 CFS) in September and 0.60 AF in August and September (Table 2). The volume of water physically available minus the legal demands within the area of impact exceeds the modeled depletions in all months. The flow rate of water physically available minus the legal demands within the area of impact exceeds the modeled depletion in all months except for January and April. Because the modeled depletions to Hogans Slough appear to exceed the legal availability of water by 0.08 CFS in January and by 0.01 CFS in April, the Department refined analysis of legal demands with respect to Provisional Permit 43Q 30068497. The analysis in Tables 11 and 12 above assumes the maximum flow rate of 0.8 CFS over all months and volume evenly distributed over the period of diversion. The Provisional Permit is for one fill and evaporation from three ponds and irrigation of wetland vegetation. Application materials for Provisional Permit 43Q 30068497 split out the water requirements by month with the exception of filling the ponds. Assuming the water to fill the ponds is evenly distributed from January through December, the volume and flow requirements from the application for 43Q 30068497 are given in Table 13.

Table 13. Monthly Flow Rate and Volume given by Applicant for Provisional Permit 43Q 30068497

Month	Pond Fill (CFS)	Pond Fill (AF)	Evaporation and Crop Requirement (CFS)	Evaporation and Crop Requirements (AF)	Total Demand (CFS)	Total Demand (AF)
January	0.058	3.43	0.01	0.5	0.07	3.9
February	0.058	3.43	0.01	0.7	0.07	4.1
March	0.058	3.43	0.02	1.0	0.08	4.4
April	0.058	3.43	0.05	3.1	0.11	6.5
May	0.058	3.43	0.21	12.9	0.27	16.3
June	0.058	3.43	0.54	33.0	0.60	36.4
July	0.058	3.43	0.75	46.4	0.81	49.8
August	0.058	3.43	0.66	40.6	0.72	44.1

September	0.058	3.43	0.28	17.2	0.34	20.6
October	0.058	3.43	0.06	3.8	0.12	7.2
November	0.058	3.43	0.01	0.8	0.07	4.2
December	0.058	3.43	0.01	0.6	0.07	4.1
TOTAL		41.16		160.5		201.6

27. The monthly flow rates provided in the application materials for Provisional Permit 43Q 30068497 indicate a required flow rate of 0.07 CFS in January and 0.11 CFS in April, which are less than the physically available flow rate on Hogans Slough for January (0.74 CFS) and April (0.81 CFS). Based on legal demands for 43Q 30068497 as provided in Table 13, the flow rate and volume of water physically available minus the legal demands within the area of impact on Hogans Slough exceeds modeled depletions for the proposed groundwater permit in all months.

Table 14. Physically available water minus legal demands on Hogans Slough adjusted per Table 7 (CFS)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Physical Availability of Water at Top of the Depleted Reach (CFS)	0.74	0.82	0.84	0.81	3.60	8.63	12.90	15.46	16.81	10.57	1.01	1.13
Legal Demands within the Depleted Reach (CFS)	0.07	0.07	0.08	0.11	0.83	1.16	1.37	1.28	0.90	0.12	0.07	0.07
Physical Availability of Water minus Legal Demands (CFS)	0.67	0.75	0.76	0.70	2.77	7.47	11.53	14.18	15.91	10.45	0.94	1.06

Table 15. Physically available water minus legal demands on Hogans Slough adjusted per Table 7 (AF)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Physical Availability of Water at Top of the Depleted Reach (AF)	45.1	45.5	51.3	47.8	198.9	491.6	769.6	926.7	977.3	648.8	60.0	69.4
Legal Demands Between the Gage and Top of the Depleted Reach (AF)	3.9	4.1	4.4	6.5	28.8	48.5	62.3	56.6	32.7	7.2	4.2	4.1

Physical Availability of Water at Top of the Depleted Reach (AF)	41.2	41.4	46.9	41.3	157.6	431.1	694.9	857.7	932.6	641.6	55.8	65.3
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28. The Department finds that water is legally available on Hogans Slough in excess of modeled monthly depletions.

29. The Department finds that groundwater is physically and legally available in the amount requested by the Applicant (FOF 13 & 15) and that water is physically and legally available in depleted surface water sources in excess of modelled depletions (FOF 21 & 28).

ADVERSE EFFECT

FINDINGS OF FACT

30. The Applicant proposes that lot owners within Gresham Subdivision will implement water saving methods during times of water shortage by adhering to restrictions to be specified in the Declarations of Covenants, Conditions, and Restrictions. The proposed water saving methods include 1.) Lawn and garden watering will be restricted to even lot numbers on Tuesdays and odd numbers on Fridays; 2.) The lot owner(s) shall remain conscious of their domestic use in a reasonable and responsible manner to minimize additional water shortage.

31. Madeline McKeefry, Department Groundwater Hydrologist, modeled drawdown in existing wells using aquifer properties from the Billings Aquifer Variance Memo (DNRC, 2022). The drawdown in existing wells was modeled for proposed conditions using the following inputs: Theis (1935) solution, $T = 6,000 \text{ ft}^2/\text{day}$, $S_y = 0.1$ (Lohman, 1972), and the monthly pumping schedule identified in Table 16, below, for a period of five years. The proposed wells were modeled as one well at the centroid of the place of use. Modeled drawdown was greatest at the end of July of the fifth year using the proposed pumping schedule. After five years of the assumed monthly pumping schedule, well drawdown equal to or greater than one foot occurs within 550 feet of the production wells. No water rights exist within the 1-foot drawdown contour.

32. The volume of groundwater legally available (1,808.46 AF) is greater than the Applicant’s proposed use (70.51 AF).

33. As discussed in the Legal Availability section, Canyon Creek and Hogans Slough are considered hydraulically connected to the source aquifer. Table 2 shows the modeled monthly depletions to Canyon Creek and Hogans Slough by volume and flow rate. Physical availability of

water in the depleted reach exceeds all legal demands and the modeled depletions in all months within the period of diversion for both sources.

34. Based on findings that water availability exceeds legal demands on depleted surface water sources, that groundwater modeling indicates no water rights would experience drawdown equal to or in excess of one foot, and the Applicant’s plan to prevent adverse effect through proposed limits on irrigation during times of water shortage or if valid call is made, the Department finds that the proposed appropriation of up to 252.55 GPM and 70.51 AF will not cause adverse effect to other existing water rights or reservations.

ADEQUATE MEANS OF DIVERSION

FINDINGS OF FACT

35. Department Groundwater Hydrologist, Madeline McKeefry, modeled adequacy of diversion using the Theis (1935) solution with a $T = 6,000 \text{ ft}^2/\text{day}$ and $S_y = 0.1$ (Lohman, 1972). Predicted theoretical drawdown for the proposed wells was modeled for the period of diversion using the monthly pumping schedule identified in Table 16. The Applicant requests 58.75 AF for irrigation of 23.5 acres of lawn and garden (2.5 AF per acre), which is the DNRC’s standard lawn and garden application volume. The Applicant requests 11.76 AF or 0.34 AF per home for domestic use, which is consistent with MT DEQ standards. The requested lawn and garden irrigation volume was apportioned April through October (requested period of diversion) according to the monthly net irrigation requirement for the Billings WSO weather station (MT0807) listed in the Irrigation Water Requirement (IWR) program (NRCS, 2003).

Table 16. Assumed monthly pumping schedule for the domestic/lawn & garden wells

Month	IWR Billings (in, 80% Dry Year NIR)	Irrigation and Multiple Domestic Diverted Volume (AF)	Irrigation and Multiple Domestic Diverted Flow Rate (GPM)
January	0.0	1.0	7.3
February	0.0	1.0	8.1
March	0.0	1.0	7.3
April	0.4	2.0	15.1
May	2.7	7.5	54.8
June	4.8	12.6	95.2
July	6.6	17.0	124.3
August	6.0	15.5	113.3
September	2.9	8.0	60.4
October	0.8	2.9	21.2
November	0.0	1.0	7.6

December	0.0	1.0	7.3
Total	24.2	70.5	

36. The Applicant proposes 35 wells for domestic and lawn and garden use. Six production wells have been completed and the remaining wells have yet to be completed. The Applicant submitted 8-hour drawdown and yield tests conducted on five of the completed wells. The average pumping rate varied, ranging from 37-60 GPM with a maximum drawdown in the production wells ranging from 7.75 feet to 16.71 feet. It is assumed that the remaining unfinished domestic wells will have a similar construction to the completed production wells. This assumption is reasonable since the completed production wells are constructed to a similar depth, ranging from 40 to 44 feet, the aquifer has a consistent thickness in the area around the proposed subdivision, and the aquifer is underlain by largely impermeable shales.

37. Production Well 5 was selected for analysis of remaining available water column since this well produced the largest drawdown during the 8-hour aquifer test compared to the other wells tested. Five wells were evenly distributed throughout the proposed subdivision for forward modeling to represent the extent of the 35 wells and to simulate the effects of interference drawdown. The assumed monthly pumping schedule shown in Table 16 was evenly distributed to the five wells. The modeling results for well drawdown analysis and adequacy of diversion are in Table 17.

38. As identified in Table 17, total drawdown is the sum of interference drawdown and predicted drawdown with well loss. Well loss is calculated by dividing the predicted theoretical maximum drawdown by a well efficiency value. Well efficiency is calculated by dividing the modeled maximum drawdown for the aquifer test by the maximum observed drawdown of the aquifer test. Interference drawdown was determined by the difference in drawdown observed in well one compared to the drawdown in the four additional wells. The aquifer adjacent to Production Well 5 would experience a predicted total drawdown of 20.3 feet at the end of July of the first year of pumping leaving 11.1 feet of available water column above the bottom of the well.

Table 17. Remaining available water column for Production Well 5

Drawdown Estimate	Production Well 5
Total Depth at Bottom of Perforated Interval (ft)	40.0
Pre-Test Static Water Level (ft bgs)	8.6
Available Drawdown Above Bottom of Well (ft)	31.4
Observed Drawdown of Aquifer Test (ft)	16.7
Modeled Drawdown Using Mean Aquifer Test Rate (ft)	1.5

Well Efficiency (%)	9
Predicted Theoretical Maximum Drawdown at Assumed Monthly Pumping Schedule (ft)	1.8
Predicted Drawdown with Well Loss (ft)	20.1
Interference Drawdown (ft)	0.2
Total Drawdown (ft)	20.3
Remaining Available Water Column (ft)	11.1

39. Five 8-hour pumping tests were submitted by the Applicant for production wells within the proposed subdivision. As required in ARM 36.12.121 (3)(b and f), 8-hour drawdown and yield tests must be conducted on the production wells until the proposed maximum flow rate of 252.55 GPM is achieved. The submission of the 8-hour aquifer tests satisfies this requirement. The Department finds that the Applicant has demonstrated adequacy of diversion because the pumping tests demonstrated that the five wells were capable of pumping at a combined flow rate of up to 266 GPM which exceeds the Applicant's request for 252.55 GPM.

40. All wells will be drilled by a licensed well contractor in accordance with current regulations and will be placed as designated on the subdivision plat approved by the Montana Department of Environmental Quality (DEQ). The lot owner will be responsible for installation and proper connection to the well for domestic and lawn and garden use according to the system design and current regulations. The entire system was designed by a professional engineer. The current consultant is Performance Engineering of Billings, MT.

41. The Department finds that the proposed means of diversion and conveyance are capable of diverting the proposed volume and flow rate.

BENEFICIAL USE

FINDINGS OF FACT

42. The Applicant requests 252.55 GPM (0.56 CFS) flow rate and 70.51 AF volume for multiple domestic and lawn and garden uses. Multiple domestic and lawn and garden are recognized as beneficial uses under the Montana Water Use Act. §85-2-102 (5), MCA.

43. The Applicant proposes multiple domestic use for 35 dwellings and lawn and garden use for 35 residential lots. Water demand for domestic use was calculated with an estimated average of three people per home at 100 gallons per person per day. Over one year, this amounts to 11.76 AF total ($35 \times 3 \times 100 \times 365 = 3,832,500$ gallons/ $325,851 = 11.76$ AF) or 0.34 AF per residence for multiple domestic use. The DNRC Water Calculation Guide lists 100

gallons per day (GPD) per person for single family homes which is consistent with the requested volume. The Applicant proposes 23.5 AC of total lawn and garden irrigation. The Department standard for lawn and garden irrigation is 2.5 AF/AC and 23.5 AC requires 58.75 AF of water ($23.5 \times 2.5 = 58.75$ AF). The total proposed volume is 70.51 AF ($11.76 + 58.75 = 70.51$ AF).

44. The Applicant requests a maximum flow rate of 252.55 GPM (0.56 CFS) for the proposed subdivision. The maximum flow rate of 252.55 GPM is based upon predicted peak flows associated with residential and lawn and garden uses. Based on domestic peaking factors, the peak flow is 30.95 GPM for domestic water use. Based on calculated watering intervals for lawn and garden use over an 8-hour period during the 180-day watering season, the peak flow is 221.6 GPM for lawn and garden use. Based on predicted peak flows, the total flow rate to support the multiple domestic and lawn and garden uses is 252.55 GPM ($30.95 + 221.6 = 252.55$ GPM).

45. The Department finds the proposed multiple domestic and lawn and garden uses are beneficial, and the requested flow rate of 252.55 GPM and volume of 70.51 AF are reasonably justified per ARM 36.12.1801(3).

POSSESSORY INTEREST

FINDINGS OF FACT

46. 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

PHYSICAL AVAILABILITY

47. 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.”

48. 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).

49. 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).

50. The Applicant has proven that water is physically available at the proposed point of diversion in the amount Applicant seeks to appropriate. Section 85-2-311(1)(a)(i), MCA. (FOF 11-13)

LEGAL AVAILABILITY

51. 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).

52. 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.

53. 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).

54. 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. Section 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.

55. 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*, 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*, 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*.

56. 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. Section 85-2-311(1)(a)(ii), MCA. (FOF 14-29)

ADVERSE EFFECT

57. 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.*, 211 Mont. 91, 685 P.2d 336 (1984) (purpose of the Water Use Act is to protect senior appropriators from encroachment by junior users); *Bostwick Properties, Inc.*, ¶ 21.

58. 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(5).

59. 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*, 4 (2011).

60. 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*, 249 Mont. 425, 816 P.2d 1054 (1991).

61. 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*, 7 (2011) (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). 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.

62. 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*, 8 (2011).

63. 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. Section 85-2-311(1)(b), MCA. (FOF 30-34)

ADEQUATE DIVERSION

64. 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.

65. 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.

66. 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. 411-105511 by Flying J Inc.* (DNRC Final Order 1999).

67. 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. Section 85-2-311(1)(c), MCA. (FOF 35-41)

BENEFICIAL USE

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; 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*, 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*, 3 (2011) (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. *Bostwick Properties, Inc. v. DNRC*, 2013 MT 48, ¶ 22, 369 Mont. 150, 296 P.3d 1154 ("issuance of the water permit itself does not become a clear, legal duty until [the applicant] proves, by a preponderance of the evidence, that the required criteria have been satisfied"); *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 multiple domestic and lawn and garden purposes which are recognized beneficial uses. Section 85-2-102(5), MCA. Applicant has proven by a preponderance of the evidence multiple domestic and lawn and garden purposes are beneficial uses and that 70.51 AF of diverted volume and 252.55 GPM (0.56 CFS) flow rate requested is the amount needed to sustain the beneficial use. Section 85-2-311(1)(d), MCA. (FOF 42-45)

POSSESSORY INTEREST

73. 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.

74. 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.

75. 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. Section 85-2-311(1)(e), MCA. (FOF 46)

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. 43Q 30162460 should be GRANTED.

The Department determines the Applicant may divert groundwater, by means of 35 wells approximately 42 feet deep, from January 1 to December 31 at 252.55 GPM (0.56 CFS) up to 70.51 AF, from 35 point of diversion in the proposed Gresham Subdivision (Miller Farm Sub Lot 2) the SESW Section 17, T1S, R25E, Yellowstone County, for multiple domestic use from January 1 to December 31, and lawn and garden use from April 1 to October 31. The Applicant may irrigate lawn and garden on 23.5 AC. The place of use is located in the proposed Gresham Subdivision (Miller Farm Sub Lot 2) the SESW Section 17, T1S, R25E, Yellowstone County.

NOTICE

The 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 a valid objection, it will proceed to a contested case proceeding pursuant to Title 2 Chapter 4 Part 6, MCA, and § 85-2-309, 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(s) and the valid objection(s) are conditionally withdrawn, the Department will consider the proposed condition(s) and grant the application with such conditions as the Department decides necessary to satisfy the applicable criteria. Sections 85-2-310, -312, MCA.

DATED this 30th day of April, 2024.

/Original signed by Mark Elison/

Mark Elison, Regional 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 30 day of April, 2024, by first class United States mail.

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