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 30162286 BY MASON SHANKS	**)** **)** **)**	**PRELIMINARY DETERMINATION TO GRANT PERMIT**

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On November 27, 2023, Mason Shanks (Applicant) submitted Application for Beneficial Water Use Permit No. 43Q 30162286 to the Billings Water Resources Office of the Department of Natural Resources and Conservation (Department or DNRC) for 167.32 GPM (0.37 CFS) flow rate and 19.55 AF volume for multiple domestic and lawn and garden purposes. The Department published receipt of the Application on its website. The Department met with Taylor Kasperick, Consultant for the Applicant, on November 9, 2023, for a pre-application meeting. Mark Elison, Chris Schweigert, Veronica Corbett, and Jill Lippard were present for the Department. The application was determined to be correct and complete as of March 27, 2024. An Environmental Assessment for this application was completed on March 27, 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
- Addenda:
    - Aquifer Testing Addendum, Form 600-ATA
- Attachments:
    - Water demand and peak flow calculations
    - Well log reports for GWIC ID 325349 and 325350
    - Aquifer Test Data Form 633 in electronic format for one 8-hour pumping test and one 72-hour aquifer test
    - Variance Request Approval Letter from Mark Elison, Billings Regional Manager, to Taylor Kasperick, Consultant, dated November 21, 2022
- Maps:
    - USGS Quad map showing parcel location of proposed project

- Preliminary plat map, dimensioned site layout map, and overall site layout map for The Waters Subdivision

Information Received after Application Filed

- Email dated November 30, 2023, from Consultant, Taylor Kasperick, to Water Resource Specialist, Jill Lippard, clarifying that the 5.04 AC-FT requested for multiple domestic use is based on 3 people per lot (0.34 AC-FT per residence), not 2.5 people per lot as was originally indicated on the Water Demand Calculation sheet
- Email dated April 1, 2024, from Consultant, Taylor Kasperick, to Water Resource Specialist, Jill Lippard, regarding well locations and slight revision to the lot layout

Information within the Department's Possession/Knowledge

- Groundwater Permit Application Technical Report by Jill Lippard, Water Resource Specialist, dated March 27, 2024
- Groundwater Permit Report by Kim Bolhuis, Groundwater Hydrologist, dated February 28, 2024, and revised March 22, 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 Hogans Slough above Shiloh Conservation Area Gage 43Q_06300 (period of record from May 2021 through June 2023)
- DNRC Hogans Slough below Shiloh Drain Gage 43Q_06400 (period of record from May 2021 through June 2023)
- Email correspondence dated February 27, 2024, through March 1, 2024, between Surface Water Section Supervisor, Todd Blythe, and Water Resource Specialist, Jill Lippard, regarding the gage data for Hogans Slough
- Email dated April 15, 2024, from Jill Lippard, Water Resource Specialist, to Kim Bolhuis, Groundwater Hydrologist, regarding correction to the IWR Billings column on Table 4 of the Groundwater Permit Report
- Email dated October 21, 2022, from Consultant, Taylor Kasperick, to Billings Regional Manager, Mark Elison, requesting a variance from aquifer testing requirements

- 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 from January 1 to December 31 for multiple domestic use and from May 1 to September 30 for lawn and garden use. Groundwater will be diverted by means of 16 wells from January 1 to December 31 at a combined flow rate of 167.32 GPM (0.37 CFS) up to 19.55 AF, from 16 points of diversion in the NWNE Section 9, T1S, R25E, Yellowstone County, to serve The Waters Subdivision (COS 2713 Tract 1B). The proposed subdivision will have 15 residential lots and 1 park each served by an individual well. The Applicant proposes a total of 5.806 AC (rounded to 5.81 AC) of lawn and garden irrigation distributed as 4.85 AC for residential lawn and garden irrigation and 0.956 AC (rounded to 0.96 AC) of park lawn irrigation. The proposed annual volume for multiple domestic use is 5.04 AF. The proposed volume for lawn and garden irrigation is 14.51 AF distributed as 12.12 AF for residential lawn and garden irrigation and 2.39 AF for park lawn irrigation. The place of use is generally located in the NWNE Section 9, T1S, R25E, Yellowstone County for The Waters Subdivision (COS 2713 Tract 1B), to the west of Billings.

2. The proposed appropriation lies approximately 3,400 feet (0.6 miles) northeast of Hogans Slough and 7,400 feet (1.4 miles) west of Shiloh Drain.

3. The Applicant requests 19.55 AF of which 10.66 AF will be consumed and 8.89 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.

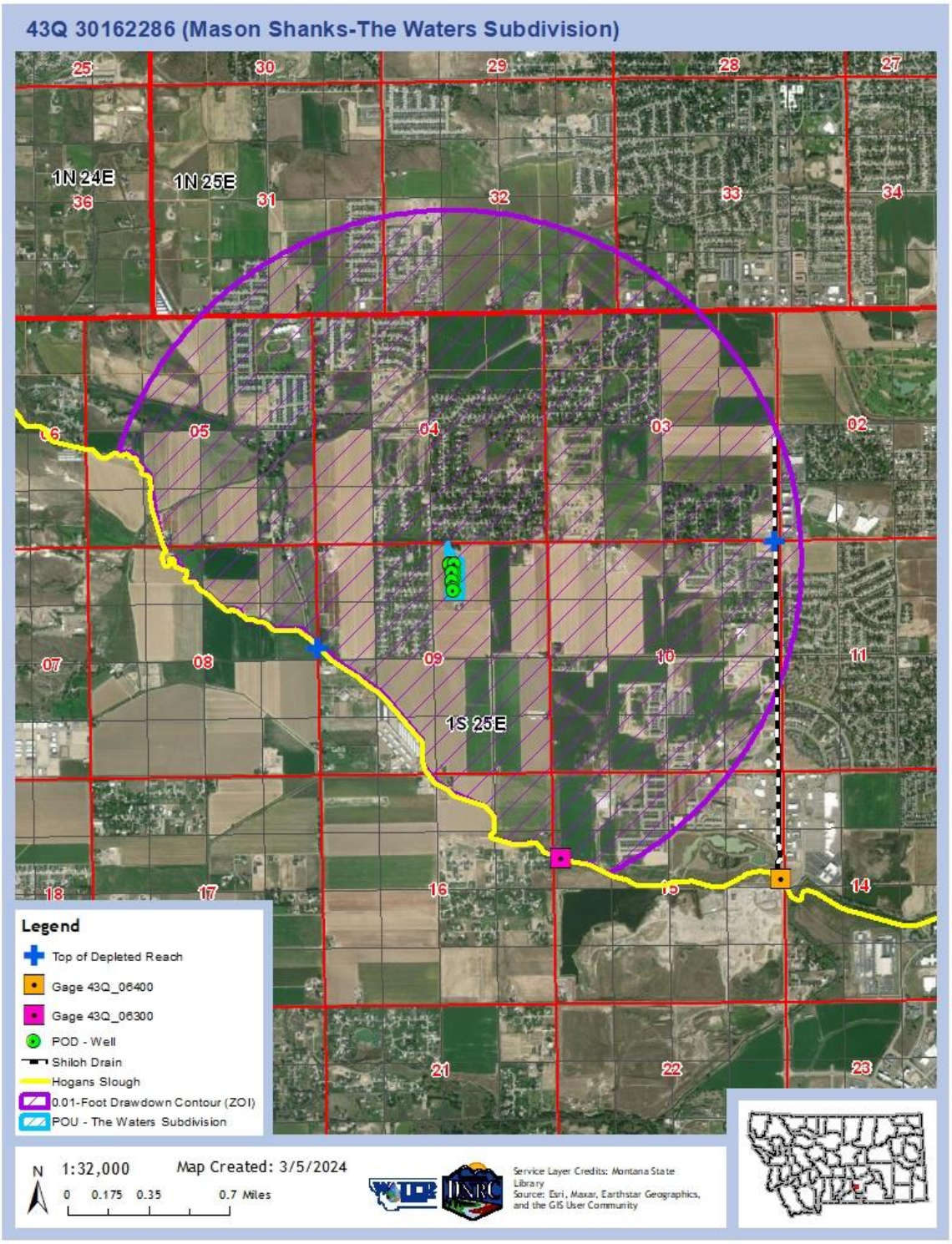

Figure 1. Project area for Groundwater Permit Application No. 43Q 30162286

§ 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, Starner*, 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 ARM 36.12.121 on October 13, 2022. The Applicant requested the variance because of recent nearby aquifer tests and because the proposed project meets parameters defined in DNRC's Yellowstone River Terrace Level 3 (Qat3) Aquifer Properties Memo. The Department granted a variance for Administrative Rule of Montana (ARM) 36.12.121 (2)(c, d, e, & f) and (3)(a, b, d, e, g, & j) aquifer test requirements on November 21, 2022.

12. A 72-hour aquifer test (Production Well 1 - GWIC ID 325349) and an 8-hour drawdown and yield test (Production Well 2 - GWIC ID 325350) were submitted by the Applicant. The observation well (GWIC ID 167842) used for both tests is located 198 ft from Production Well 1 and 211 feet from Production Well 2. Production Well 1 was pumped at 103.5 GPM for the entirety of the 72-hour aquifer test and Production Well 2 was pumped at a flow rate of 103 GPM for the entirety of the 8-hour drawdown and yield test.

13. Department Groundwater Hydrologist, Kim Bolhuis, modeled physical availability using aquifer properties based on the Billings Aquifer Variance Memo in lieu of the values derived from the 72-hour aquifer test submitted by the Applicant because the memo values are representative of the regional aquifer properties of the Qat3 aquifer. The 16 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 ft^2/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 12.11 GPM (flow rate to produce the requested volume over the proposed period of diversion), the modeled 0.01-foot drawdown

contour (zone of influence, or ZOI) occurs at 5,700 feet from the proposed wells. The drawdown contour is truncated along the length of Hogans Slough because the slough represents 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 11,400 feet) and i is the groundwater gradient (0.004 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 262,400 ft^3/day or 2,200 AF/YR.

14. The Department finds that the amount of groundwater physically available at the proposed point of diversion is 2,200 AF/YR. The Applicant proposes to use 19.55 AF/YR. The Department finds groundwater is physically available in the amount requested during the proposed period of diversion.

LEGAL AVAILABILITY

FINDINGS OF FACT

15. Department Groundwater Hydrologist Kim Bolhuis 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 (ZOI) would occur at 5,700 feet from the proposed point of diversion. Based on a 0.01-foot drawdown contour at 5,700 feet from the proposed wells truncated along the length of Hogans Slough, the Groundwater Permit Report identified 231 active groundwater rights within the zone of influence. A list of these water rights is in the file under the Processing Information and Correspondence Flag. Of those, 204 are Groundwater Certificates, 3 are Exempt Rights, 14 are Statements of Claim and 10 are Provisional Permits. This includes 24 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 2.85 AF representing the average volume of the 180 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 1,599.32 AF/YR. Table 1 is a comparison of 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)
2,200	1,599.32	600.68

16. The amount of groundwater available is 2,200 AF/YR and the existing legal demands of groundwater total 1,599.32 AF/YR. The Department finds that the comparison shows that groundwater is legally available for the amount requested by the Applicant (2,200 AF – 1599.32 AF = 600.68 AF).

17. The Groundwater Permit Report by Department Groundwater Hydrologist, Kim Bolhuis, dated February 28, 2024, concludes that Hogans Slough and Shiloh Drain are hydraulically connected to the source aquifer and would be depleted by this groundwater application. The surface water depletion from the proposed wells is distributed as 83% to Hogans Slough and 17% to Shiloh Drain. The depleted reach of Hogans Slough is downstream of the northwestern boundary of Section 9, T1S, R25E. The depleted reach of Shiloh Drain is downstream of the southern boundary of Section 3, T1S, R25E. The estimated monthly depletions to Hogans Slough and Shiloh Drain are shown in Table 2.

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

Month	Total Consumption (AF)	Hogans Slough Depletion (AF)	Hogans Slough Depletion (GPM)	Shiloh Drain Depletion (AF)	Shiloh Drain Depletion (GPM)
January	0.04	0.80	5.82	0.14	1.03
February	0.04	0.73	5.31	0.12	0.88
March	0.04	0.80	5.82	0.14	1.03
April	0.04	0.77	5.60	0.13	0.96
May	1.25	0.78	5.68	0.14	1.03
June	2.17	0.74	5.38	0.13	0.96
July	2.95	0.75	5.46	0.14	1.03
August	2.66	0.74	5.38	0.14	1.03
September	1.33	0.71	5.16	0.13	0.96
October	0.04	0.74	5.38	0.14	1.03
November	0.04	0.73	5.31	0.13	0.96
December	0.04	0.78	5.68	0.14	1.03
Total	10.66	9.02		1.63	

18. 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 3. 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 4. 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

19. 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.

20. 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 under the Processing Information and Correspondence Flag.

21. 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.

Table 5. 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 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)	0.80	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 6. 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 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 within the 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

22. The largest modeled monthly depletion to Hogans Slough is 5.82 GPM (0.013 CFS) and 0.80 AF in January and March (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 5 and 6 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 7.

Table 7. 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

23. 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 7, 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 8. 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 9. 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

24. The Department finds that water is legally available on Hogans Slough in excess of modeled monthly depletions.

25. The Department has operated an additional stream gage on Hogans Slough below Shiloh Drain (43Q_06400) in the SESENE Section 15, T1S, R25E, since May 2021. To determine physical availability of water at the top of the depleted reach on Shiloh Drain, the mean monthly flow for the gage above Shiloh Drain (43Q_06300) can be compared to the mean monthly flow

for the gage below Shiloh Drain (43Q_06400). There are no legal demands on Shiloh Drain between the top of the depleted reach and the gage below the confluence of Shiloh Drain with Hogans Slough (43Q_06400). The physical availability of water at the top of the depleted reach is taken as the mean monthly flow of the gage below Shiloh Drain minus the mean monthly flow of the gage above Shiloh Drain. Mean monthly volume is calculated as mean monthly flow times 1.98 times the number of days in the month.

Table 10. Physically available flow on Shiloh Drain 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) on Hogans Slough Below Shiloh Drain 43Q_06400	1.02	1.64	1.27	1.03	8.66	22.50	27.90	28.71	34.66	16.91	1.75	1.23
Mean Monthly Flow (CFS) on Hogans Slough Above Shiloh Drain 43Q_06300	0.74	0.82	0.84	0.81	3.04	8.07	12.34	14.90	16.25	10.57	1.01	1.13
Physical Availability of Water at Top of Depleted Reach (CFS)	0.28	0.82	0.44	0.23	5.62	14.42	15.57	13.82	18.41	6.34	0.74	0.10

Table 11. Physically available volume on Shiloh Drain 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) on Hogans Slough Below Shiloh Drain 43Q_06400	62.3	90.6	78.0	61.2	531.6	1336.3	1712.5	1762.2	2058.5	1037.6	104.0	75.2
Mean Monthly Volume (AF) on Hogans Slough Above Shiloh Drain 43Q_06300	45.1	45.5	51.3	47.8	186.4	479.6	757.1	914.3	965.3	648.8	60.0	69.4

Physical Availability of Water at Top of the Depleted Reach (AF)	17.2	45.2	26.7	13.4	345.2	856.7	955.4	848.0	1093.3	388.8	44.0	5.8

26. The area of potential impact on Shiloh Drain is from the top of the depleted reach to the confluence with Hogans Slough. There are no legal demands on Shiloh Drain between the top of the depleted reach and the confluence with Hogans Slough. Therefore, Tables 10 and 11 above also represent the physical availability of water minus the legal demands on Shiloh Drain. The flow rate and volume of water physically and legally available within the area of potential impact for Shiloh Drain exceeds modeled depletions in all months.

27. The Department finds that water is legally available on Shiloh Drain in excess of modeled monthly depletions.

ADVERSE EFFECT

FINDINGS OF FACT

28. The Applicant proposes to restrict irrigation watering in the event of a water shortage or if valid call is made. Optional restrictions include limiting residential lot irrigation to alternate day watering or establishing specific days of the week that irrigation can occur, up to cessassation of irrigation and restricting residents to domestic water use only.

29. Kim Bolhuis, Department Groundwater Hydrologist, modeled drawdown in existing wells using aquifer properties from the Billings Aquifer Variance Memo in lieu of the values derived from the 72-hour aquifer test submitted by the Applicant because the memo values are representative of the regional properties of the Qat3 aquifer. The drawdown in existing wells was modeled for proposed conditions using the following inputs: Theis (1935) solution, T = 6,000 ft^2/day, S_y = 0.1, and the monthly pumping schedule identified in Table 12 for a period of five years. The proposed wells were modeled as one well at the centroid of the place of use. Modeled drawdown is greatest at the end of July of the fifth year of pumping. After five years of pumping according to the assumed monthly pumping schedule, drawdown would be less than 1 foot, therefore no groundwater rights would experience drawdown equal to or greater than one foot.

30. The volume of groundwater legally available (600.68 AF) is greater than the Applicant's proposed use (19.55 AF).

31. As discussed in the Legal Availability section, Hogans Slough and Shiloh Drain are considered hydraulically connected to the source aquifer. Table 2 shows the modeled monthly depletions to Hogans Slough and Shiloh Drain 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.

32. Based on findings that water availability exceeds legal demands on depleted surface water sources and 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 167.32 GPM and 19.55 AF will not cause adverse effect to other existing water rights or reservations.

ADEQUATE MEANS OF DIVERSION

FINDINGS OF FACT

33. Department Groundwater Hydrologist, Kim Bolhuis, modeled adequacy of diversion using the Theis (1935) solution with a T = 2,202 ft^2/day and S_y = 0.03 (derived from the 72-hour aquifer test and differing from the T used for physical availability and adverse effect analysis). Predicted theoretical drawdown for the proposed wells was modeled for the period of diversion using the monthly pumping schedule identified in Table 12. The Applicant proposes a total of 14.51 AF for irrigation of 5.806 acres of lawn and garden (2.5 AF per acre), which is the DNRC's standard lawn and garden application volume. The lawn and garden use is distributed as 12.12 AF for residential lawn and garden irrigation and 2.39 AF for park lawn irrigation. The Applicant requests 5.04 AF for 15 lots or 0.34 AF per home for multiple domestic use.

34. The lawn and garden irrigation period of use is May 1 through September 30. Estimates for lawn and garden irrigation were made using the monthly net irrigation requirement for pasture grass (DNRC, 2010) for the Billings WSO climate station within the Irrigation Water Requirement (IWR) program (NRCS, 2003). The monthly pumping schedule is obtained by (1) distributing the multiple domestic diverted volume throughout the year based on days in the month, and (2) apportioning the requested diverted lawn and garden irrigation volume based on the net irrigation requirement obtained through the IWR program.

Table 12. Assumed monthly pumping schedule for the domestic/lawn & garden wells and park irrigation well

Month	IWR Billings (in, 80% Dry Year NIR)	Domestic & Lawn & Garden Irrigation (AF)	Domestic & Lawn & Garden Irrigation (GPM)	Park Irrigation (AF)	Park Irrigation (GPM)
January	0.0	0.4	3.1	0.0	0.0
February	0.0	0.4	3.1	0.0	0.0
March	0.0	0.4	3.1	0.0	0.0
April	0.4	0.4	3.1	0.0	0.0
May	2.7	1.9	13.7	0.3	2.1
June	4.8	3.0	22.3	0.5	3.8
July	6.6	3.9	28.5	0.7	5.0
August	6.0	3.6	26.0	0.6	4.5
September	2.9	2.0	14.8	0.3	2.3
October	0.8	0.4	3.1	0.0	0.0
November	0.0	0.4	3.1	0.0	0.0
December	0.0	0.4	3.1	0.0	0.0
Total	24.2	17.2		2.4	

35. The Applicant proposes 15 wells for domestic use (including lawn and garden) and one well for irrigating a park. Production Well 1 and 2 are existing wells and the remaining wells have yet to be completed. Production Well 1 was used to model the maximum predicted drawdown and remaining water column for the park irrigation well as it is located where the proposed park is shown on the preliminary plat for The Waters Subdivision. To model adequacy of diversion for the 15 domestic use wells, it is assumed that the domestic and lawn and garden monthly flow rate is equal for each household. The domestic and lawn and garden flow rate, outlined in Table 12 (column four), is divided equally into three groups of five wells (DW1, DW2, DW3). The well groupings are evenly spaced 400 ft apart along the center line of the proposed subdivision, with the park irrigation well (Production Well 1) location placed in the model at its actual relative location 80 ft perpendicular to the center line. It is assumed that the remaining unfinished domestic wells will have a similar construction to the completed Production Wells 1 and 2. This assumption is reasonable as the construction of Production Wells 1 and 2 is identical, the aquifer has a consistent thickness in the area around the proposed subdivision, and the aquifer is underlain by largely impermeable shales. Production Well 2 was included in the first group of domestic use wells as it will have the same monthly pumping schedule to the other wells. The modeling results for well drawdown analysis and adequacy of diversion are shown in Table 13.

36. The total drawdown is defined as the sum of the interference drawdown and the predicted drawdown with well loss. Interference drawdown is the additional modeled drawdown amount that a well may experience when other nearby wells are pumping. Well loss is the product of the predicted theoretical maximum drawdown divided by the well efficiency percentage. The well efficiency percentage is found by dividing the modeled drawdown by the maximum drawdown observed during the pumping test. Predicted total drawdown is the sum of the interference drawdown and predicted maximum theoretical drawdown that would be experienced by both production wells.

37. The park irrigation well (Production Well 1) would experience a predicted total drawdown of 1.6 ft, leaving 44.6 ft of available water in the well at the end of July of the first year. The domestic use wells in the first and second groups (DW1 and DW2 in Table 13) would individually experience 2.1 ft of total predicted drawdown with 44.4 ft of remaining available water column. The domestic use wells in the third group (DW3 in Table 13) would experience a predicted maximum drawdown of 2.0 ft with 44.5 ft of remaining available water column.

Table 13: Remaining available water column for Production Well 1 and modeled well groups DW1, DW2, and DW3

Drawdown Estimate	Production Well 1 (Park Well)	DW1	DW2	DW3
Total Depth (ft)	60.0	60.0	60.0	60.0
Pre-Test Static Water Level (ft btc)	13.8	13.48	13.48	13.48
Available Drawdown Above Bottom of Well (ft)	46.2	46.5	46.5	46.5
Observed Drawdown of Aquifer Test (ft)	2.0	N/A*	N/A*	N/A*
Modeled Drawdown Using Mean Aquifer Test Rate (ft)	10.6	N/A*	N/A*	N/A*
Well Efficiency (%)	100	100	100	100
Predicted Theoretical Maximum Drawdown at Assumed Monthly Pumping Schedule (ft)	0.6	1.2	1.2	1.2
Predicted Drawdown with Well Loss (ft)	1.6	2.1	2.1	2.0
Interference Drawdown (ft)	1.0	0.9	0.9	0.8

Predicted Total Drawdown at Pumping Schedule Rate (ft)	1.6	2.1	2.1	2.0
Remaining Available Water Column (ft)	44.6	44.4	44.4	44.5

***** Actual available drawdown above the bottom of the well and the observed drawdown during aquifer testing are not applicable for the simulated multiple domestic use well groupings

38. A 72-hour aquifer test (Production Well 1-GWIC ID 325349) and an 8-hour drawdown and yield test (Production Well 2 – GWIC ID 325350) were submitted by the Applicant. Production Well 1 was pumped at 103.5 GPM for the entirety of the 72-hour aquifer test and Production Well 2 was pumped at a flow rate of 103 GPM for the entirety of the 8-hour drawdown and yield test. 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 167.3 GPM is achieved. The submission of the 72-hour and 8-hour aquifer tests satisfies the requirement for 167.3 GPM. The Department finds that the Applicant has demonstrated adequacy of diversion because one well was tested at 103.5 GPM and the other was tested at 103 GPM for a total of 206.5 GPM which exceeds the Applicant's request for 167.3 GPM.

39. All wells will be drilled by a licensed well contractor and will be placed as designated on the subdivision plat. Pitless adapters will be connected to the casing of each well and water will be piped to each residence via a submersible pump and a water service line. A similar configuration will be used for the park well, with water being pumped into the park irrigation system. The entire system was designed by a professional engineer. The current consultant is Performance Engineering of Billings, MT.

40. 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

41. The Applicant requests 167.32 GPM (0.37 CFS) flow rate and 19.55 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.

42. The Applicant proposes multiple domestic use for 15 dwellings and lawn and garden use for 15 residential lots and one park. Water demand for domestic use was calculated with an estimated average of 3 people per home at 100 gallons per person per day. Over one year, this

amounts to 5.04 AF total (15 x 3 x 100 x 365 = 1,642,500 gallons/325,851 = 5.04 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 5.806 AC of total lawn and garden irrigation (includes 4.85 AC for residential lawn and garden irrigation and 0.956 AC for park irrigation). The Department standard for lawn and garden irrigation is 2.5 AF/AC and 5.806 AC requires 14.51 AF of water (5.806 x 2.5 = 14.51 AF). The total proposed volume is 19.55 AF (5.04 + 14.51 = 19.6 AF).

43. The Applicant requests a maximum flow rate of 167.32 GPM (0.37 CFS) for the proposed subdivision. The maximum flow rate of 167.32 GPM is based upon predicted peak flows associated with residential and lawn and garden uses. Based on domestic peaking factors, the peak flow is 60 GPM for domestic water use. Based on calculated watering intervals for lawn and garden use over a 24-hour period during the 153-day watering season, the peak flow is 107.32 GPM. Based on predicted peak flows, the total flow rate to support the multiple domestic and lawn and garden uses is 167.32 GPM (60 + 107.32 = 167.32 GPM).

44. The Department finds the proposed multiple domestic and lawn and garden uses are beneficial and the requested flow rate of 167.32 GPM and volume of 19.6 AF are reasonably justified per ARM 36.12.1801(3).

POSSESSORY INTEREST

FINDINGS OF FACT

45. 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

46. 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.”

47. It is the Applicant’s burden to produce the required evidence. *In the Matter of Application for Beneficial Water Use Permit No. 27665-41I 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).

48. 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).

49. 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 11-14)

LEGAL AVAILABILITY

50. 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).

51. 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.

52. 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).

53. 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.

54. 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*.

55. 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 15-27)

ADVERSE EFFECT

56. 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.

57. 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).

58. 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).

59. 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).

60. 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.

61. 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).

62. 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 28-32)

ADEQUATE DIVERSION

63. 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.

64. 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.

65. Water wells must be constructed according to the laws, rules, and standards of the Board of Water Well Contractors to prevent contamination of the aquifer. *In the Matter of Application for Beneficial Water Use Permit No.* 41I-105511 *by Flying J Inc.* (DNRC Final Order 1999).

66. 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 33-40)

BENEFICIAL USE

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

68. 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).

69. 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).

70. 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*.

71. 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 19.55 AF of diverted volume and 167.32 GPM (0.37 CFS) flow rate requested is the amount needed to sustain the beneficial use. Section 85-2-311(1)(d), MCA. (FOF 41-44)

POSSESSORY INTEREST

72. Pursuant to § 85-2-311(1)(e), MCA, an Applicant must prove by a preponderance of the evidence that it has a possessory interest or the written consent of the person with the possessory interest in the property where the water is to be put to beneficial use, or if the proposed use has a point of diversion, conveyance, or place of use on national forest system lands, the Applicant has any written special use authorization required by federal law to occupy, use, or traverse national forest system lands for the purpose of diversion, impoundment, storage, transportation, withdrawal, use, or distribution of water under the permit.

73. Pursuant to ARM 36.12.1802:

(1) An Applicant or a representative shall sign the application affidavit to affirm the following:
(a) the statements on the application and all information submitted with the application are true and correct and
(b) except in cases of an instream flow application, or where the application is for sale, rental, distribution, or is a municipal use, or in any other context in which water is being supplied to another and it is clear that the ultimate user will not accept the supply without consenting to the use of water on the user's place of use, the Applicant has possessory interest in the property where the water is to be put to beneficial use or has the written consent of the person having the possessory interest.
(2) If a representative of the Applicant signs the application form affidavit, the representative shall state the relationship of the representative to the Applicant on the form, such as president of the corporation, and provide documentation that establishes the authority of the representative to sign the application, such as a copy of a power of attorney.
(3) The department may require a copy of the written consent of the person having the possessory interest.

74. The 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 45)

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 30162286 should be GRANTED.

The Department determines the Applicant may divert groundwater, by means of 16 wells approximately 60 feet deep, from January 1 to December 31 at 167.32 GPM (0.37 CFS) up to 19.55 AF, from 16 point of diversion in proposed The Waters Subdivision (COS 2713 Tract 1B) in the NWNE Section 9, T1S, R25E, Yellowstone County, for multiple domestic use from January 1 to December 31 and lawn and garden use from May 1 to September 30. The Applicant may irrigate lawn and garden on 5.81 AC (rounded up from 5.806 AC). The place of use is located in in proposed The Waters Subdivision (COS 2713 Tract 1B) in the NWNE Section 9, 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 6th day of May, 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 6th day of May, 2024, by first class United States mail.

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