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

*** * * * * * ***

| | | |
|---|---|---|
| **APPLICATION FOR BENEFICIAL WATER USE PERMIT NO. 41K 30150582 BY POWER-TETON COUNTY WATER & SEWER DISTRICT** | ) ) ) ) ) | **PRELIMINARY DETERMINATION TO GRANT APPLICATION** |

On 12/23/2020, Power-Teton Water & Sewer District (Applicant) submitted an Application for Beneficial Water Use Permit No. 41K 30150582(Application) to the Havre Water Resources Office of the Department of Natural Resources and Conservation (Department or DNRC). The Permit (41K 30150582) is for Municipal use from a groundwater source; The Department published receipt of the Application on its website. The Department sent Applicant a deficiency letter under § 85-2-302, Montana Code Annotated (MCA), dated 05/20/2021. The Applicant responded with information dated 09/17/2021. The Applicant provided clarifications and additional information regarding specific basin closure exceptions on 02/14/2022. The Application was determined to be correct and complete as of 08/05/2022. An Environmental Assessment was completed on 09/06/2022. A waiver of 120-day statutory deadline to issue a preliminary determination was signed by the Applicant on 12/02/2022.

## INFORMATION

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

Application as filed:

- Application for Beneficial Water Use Permit, Form 600-GW
- Form 633, Aquifer Test Data
- Aquifer Testing Addendum
- Basin Closure Addendum & Hydrogeologic Assessment
- Maps: Map depicting the proposed point of diversion, conveyance, and municipal place of use

Information Received after Application Filed

- Deficiency Letter Response dated January 19, 2021. Received by DNRC on September 17, 2021
- Additional Basin Closure Information dated February 14, 2022
- Aquifer Testing Variance Request and Grant dated June 06, 2022
- Waiver of 120-day statutory deadline to issue a preliminary determination dated 12/02/2022.

Information within the Department's Possession/Knowledge

- Department Technical Report August 5, 2022, including Revised Groundwater Depletion and Aquifer Testing Report dated August 31, 2022 (Department Technical Report)

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).

## BASIN CLOSURE

FINDINGS OF FACT

1. This permit application seeks to appropriate groundwater for Municipal use. This application is located within the Upper Missouri River Basin Legislative Closure, which was closed effective April 16, 1993.

2. The Applicant submitted a hydrogeologic assessment with the original application materials. A variance request from aquifer testing requirements ARM 36.12.121(3)(b), 3(f), 3(e), 3(j) and 3(k) was submitted on June 6, 2022. The variance request was granted on June 06, 2022, because the Department determined it had sufficient information to determine aquifer characteristics from available data.

3. The Applicant submitted revised basin closure exception information on February 14, 2022 as supporting evidence as to how the Application(s) can be processed as exceptions to the basin closure exceptions set forth in §85-2-343.

4. As requested under ARM 36.12.120(2), the Applicant asserts that the following information explains how the Power-Teton beneficial use permit application meets the "basin closure" exceptions and why the application may be processed. First the application is for an appropriation of groundwater which is an express exception to the "closure" under §85-2-343(2)(a). Second, even if surface water is implicated under the application, the Applicant asserts that under the closure statute use of surface water by a municipality is still authorized under §85-2-343 (2)(c)(iii). Finally, specific to Muddy Creek, the Applicant asserts that depletions to that specific source are exempted under both the above section (§85-2-343(2)(c)) and §85-2-343(2)(e). As such under these several exceptions, the Power-Teton application meets the terms of the basin closure statutory exceptions and may be processed by DNRC. Further, under 85-2-360(1) not all groundwater applications are required to have mitigation plans or aquifer recharge plans. Mitigation or recharge is only necessary with a groundwater application if required to address adverse effect to surface water rights. In the instance of Muddy Creek, as noted above, depletions of surface water are authorized by statute. As such, it cannot be presumed by DNRC that any depletions calculable by groundwater pumping will automatically require mitigation. Accordingly, the Applicant asserts that Application may be processed by DNRC without a presumption that a mitigation plan is required.

5. The Department findings regarding the applicability of the various basin closure exceptions are found in the Legal Availability section of this Preliminary Determination document.

CONCLUSIONS OF LAW

6. DNRC cannot grant an application for a permit to appropriate water within the Upper Missouri River Basin until final decrees have been issued in accordance with Title 85, chapter 2, part 2, MCA, for all the sub-basins of the upper Missouri River basin. §85-2-343(1), MCA. The Upper Missouri River Basin consists of the drainage area of the Missouri River and its tributaries above Morony Dam. (§ 85-2-342(4), MCA). In this case, the Application is for the use of Groundwater located within the upper Missouri River basin.

7. Pursuant to § 85-2-362, MCA, an application for new appropriations of groundwater in a closed basin shall consist of a hydrogeologic assessment with an analysis of net depletion, a mitigation plan or aquifer recharge plan if required, an application for a beneficial water use permit or permits, and an application for a change in appropriation right or rights if necessary. A combined application must be reviewed as a single unit. A beneficial water use permit may not be granted unless the accompanying application for a change in water right is also granted. A denial of either results in a denial of the combined application. § 85-2-363, MCA. ARM 36.12.120. E.g., *In the Matter of Application No. 76H-30046211 for a Beneficial Water Use Permit and Application No.76H-30046210 to Change a Non-filed Water Right by Patricia Skergan and Jim Helmer* (DNRC Final Order 2010, Combined Application)(combined application under §85-2-363, MCA, reviewed as a single unit).

8. In reviewing an application for groundwater in a closed basin, the District Court in Sitz Ranch v. DNRC observed:

> The basin from which applicants wish to pump water is closed to further appropriations by the legislature. The tasks before an applicant to become eligible for an exception are daunting. The legislature set out the criteria discussed above (§ 85-2-311, MCA) and placed the burden of proof squarely on the applicant. The Supreme Court has instructed that those burdens are exacting. It is inescapable that an applicant to appropriate water in a closed basin must withstand strict scrutiny of each of the legislatively required factors.

Sitz Ranch v. DNRC, DV-10-13390, Montana Fifth Judicial District Court, *Order Affirming DNRC Decision*, (2011) Pg. 7.

9. A basin closure exception does not relieve the Department of analyzing § 85-2-311, MCA criteria. Qualification under a basin closure exception allows the Department to accept an application for processing. The Applicant must still prove the requisite criteria. E.g., *In The Matter of Application for Beneficial Water Use Permit No. 41K-30043385 by Marc E. Lee* (DNRC Final Order 2011); *In The Matter of Application for Beneficial Water Use Permit No. 41K-30045713 by Nicholas D. Konen*, (DNRC Final Order 2011)

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

GENERAL CONCLUSIONS OF LAW

10. 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 . . .

11. 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 permitholder to satisfy effluent limitations of a permit issued in accordance with Title 75, chapter 5, part 4, will not be adversely affected.

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

To meet the preponderance of evidence standard, "the applicant, in addition to other evidence demonstrating that the criteria of subsection (1) have been met, shall submit hydrologic or other evidence, including but not limited to water supply data, field reports, and other information

developed by the applicant, the department, the U.S. geological survey, or the U.S. natural resources conservation service and other specific field studies." § 85-2-311(5), MCA (emphasis added). The determination of whether an application has satisfied the § 85-2-311, MCA criteria is committed to the discretion of the Department. Bostwick Properties, Inc. v. Montana Dept. of Natural Resources and Conservation, 2009 MT 181, ¶ 21. The Department is required to 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.

12. 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 in 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.

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

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

See also, Wesmont Developers v. DNRC, CDV-2009-823, Montana 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).

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

15. 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).

## PROPOSED APPROPRIATION

## BENEFICIAL WATER USE PERMIT NO. 41K 30150582

FINDINGS OF FACT

16. Through this Application, the Applicant proposes to appropriate groundwater from two wells located in the NWSESE and the NESESE of Sec. 4, Twp. 22 North, Rge.1 West,

approximately 3.0 miles southwest of Power, Montana, Teton County. The proposed purpose is Municipal use. The flow rate requested is 170 Gallons per Minute (GPM) up to a maximum diverted volume of 91 Acre Feet (AF) per year. The Period of Diversion and period of use requested is January 1 to December 31. The Place of Use is to be in the SW of Section 25, Twp. 23N, Rge.1W, Teton County and commonly referred to as the Town of Power.

17. The Applicant currently has an unperfected Provisional Permit No. 41K 30049120 with a Maximum Flow Rate of 70 GPM up to 40.0 AF for municipal use from Muddy Creek.

18. The Application materials and information incorporated in the Department's Technical Report including Groundwater Depletion and Aquifer Testing Report describe the proposed wells that will be completed horizontally in a shallow sand and gravel aquifer at approximately 21 feet below the ground surface; and an Unnamed Tributary of Muddy Creek is the hydraulically connected surface water source that will experience net depletion.

19. The proposed wells are approximately 500 feet from an unnamed tributary of Muddy Creek. The water levels in the source aquifer are similar to the surface elevation of the unnamed tributary and this suggests the source aquifer is hydraulically connected to the unnamed tributary when it is flowing. A pre-application report by TD&H Engineering as part of this Application, states that the tributary flows year-round (according to local landowners) and therefore the tributary is assumed to be perennial and the potentially affected surface water. The Department finds that the UT of Muddy Creek is the hydraulically connected surface water source.

20. Information brought forth by the Applicant regarding the proposed consumption and return flows describe water diverted from the new groundwater wells will be pumped to the Municipal place of use. No conveyance losses are anticipated between the well site and the proposed Place of Use. The Applicant states that once the water reaches the Place of Use, in this case, the Town of Power, the water is distributed to the community and there are losses and uses that decrease consumption below 100%, resulting in return flows to an unnamed tributary and Muddy Creek.

21. The Department finds that for the purposes of the depletion analysis, it is assumed that the proposed appropriation is for Municipal use. In this case, wastewater will be collected and sent to a centralized wastewater treatment plant with an evaporation basin. Therefore, the

consumption is expected to be 100 % for the Town of Power's proposed wells and is equal to the requested appropriation of 91.0 AF per annum.

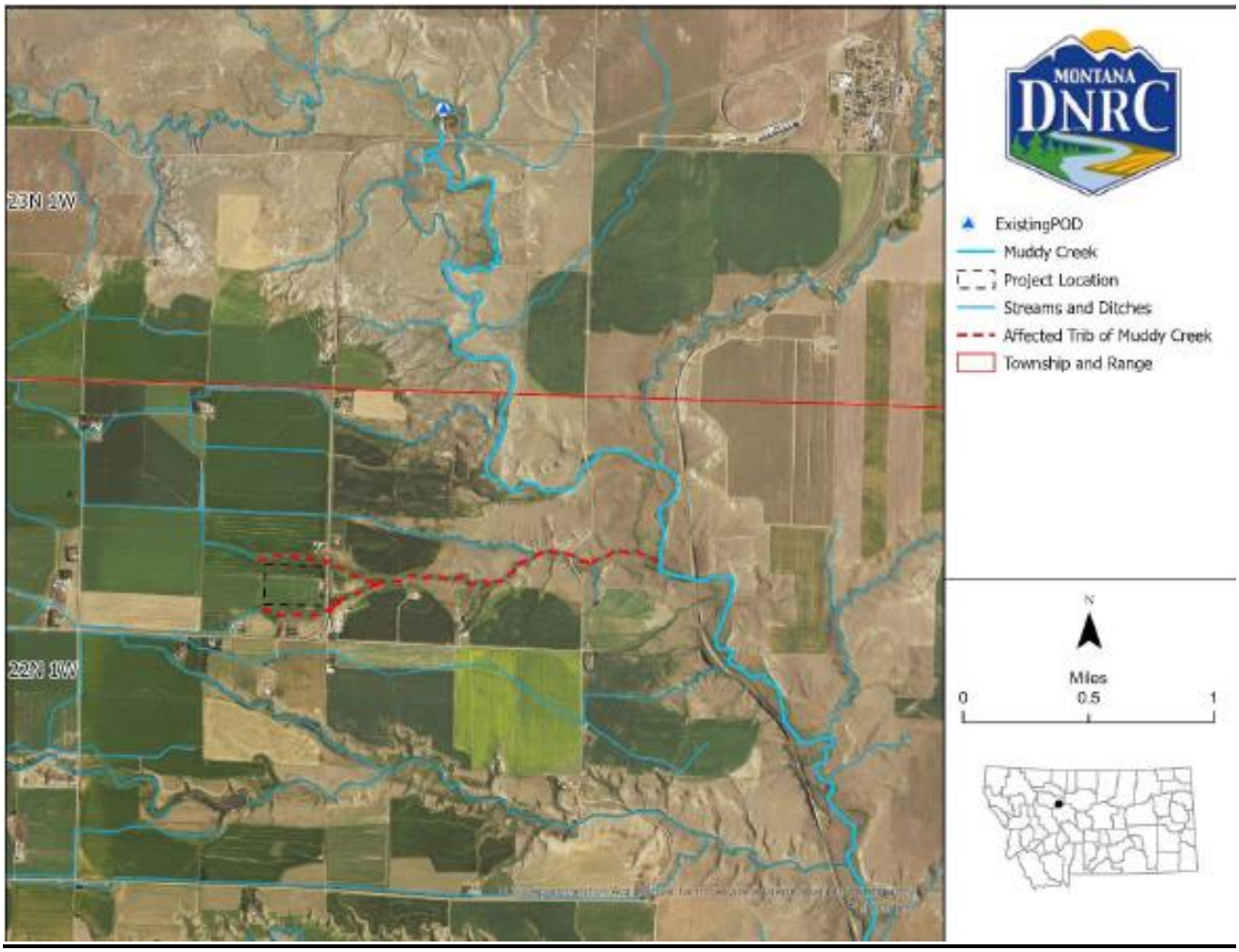


Figure 1: *Potentially affected reach of unnamed tributary to Muddy Creek and mitigated reach of Muddy Creek.*

**Physical Availability**
FINDINGS OF FACT

*Groundwater*

22. A 28-hour aquifer test was conducted by Boland Drilling and TD&H Engineering for the Town of Power located in Teton County. The applicant requests two points of diversion (wells), a total maximum flow rate of 170 gallons per minute (GPM) and 91 acre-ft (AF) for year-round

municipal use. The proposed wells will be completed horizontally in a shallow sand and gravel aquifer at approximately 21 feet below the ground surface and will convey water to an existing distribution system. A variance request was granted by the Havre Regional Office for the following variances related to ARM 36.12.121(3)(a), 3(b), 3(e) and 3(j) and 3(k).

23. Evan Norman, DNRC Water Management Bureau groundwater hydrologist, reviewed the Applicant's aquifer test results and produced a Groundwater Depletion and Aquifer Testing Report included in the Department's Technical Report dated August 5, 2022, and Revised Groundwater Depletion and Mitigation Report dated August 31, 2022.

24. The wellfield is situated on a portion of the Greenfields Bench located between two unnamed tributaries of Muddy Creek. The Greenfields Bench is an erosion surface capped with coarse gravel composed of lithologies found in the Rocky Mountains to the southwest (TD&H Engineering).

25. The wells are completed in the Alluvial Terrace Deposit of Greenfield Bench (QTatg) that is underlain by shale and its aerial extent is mapped by Vuke et al. (2002). The aquifer in the Alluvial Terrace Deposit of Greenfield Bench is the most productive in this area and serves as the sole source of drinking water for three public water supplies and more than 400 private wells (Miller et al., 2002).

26. Drawdown from the proposed well field will propagate to the nearest hydraulically connected surface water prior to the source aquifer pinching out to the east. Groundwater flow paths converge at the coulees, drains, springs, and seeps that constitute groundwater discharge areas (Miller et al., 2002). The source aquifer is recharged by ditch and stream losses, leakage from irrigation practices, and precipitation.

27. A well efficiency of 100% was assigned to the production wells considering the large radius and area of exposed perforations cause low inflow velocities and minimize turbulent flow (Todd, 1980). The last row in Table 1. below gives the remaining available water column for the production wells equal to the available drawdown above the bottom of the wells minus total

actual drawdown and well interference drawdown.

| Month | Diverted Volume (AF) | Total Diverted Flow Rate (gpm) | Diverted Flow Rate per well (gpm) |
|---|---|---|---|
| January | 6.0 | 44.1 | 22.0 |
| February | 5.5 | 44.1 | 22.0 |
| March | 6.0 | 44.1 | 22.0 |
| April | 5.8 | 44.1 | 22.0 |
| May | 6.0 | 44.1 | 22.0 |
| June | 10.7 | 81.0 | 40.5 |
| July | 11.1 | 81.0 | 40.5 |
| August | 11.1 | 81.0 | 40.5 |
| September | 10.7 | 81.0 | 40.5 |
| October | 6.0 | 44.1 | 22.0 |
| November | 5.8 | 44.1 | 22.0 |
| December | 6.0 | 44.1 | 22.0 |
| Total | 91.0 | | |

Table 1: *Assumed monthly pumping schedule for the infiltration gallery*

28. An evaluation of physical groundwater availability for evaluating legal availability was done by calculating groundwater flow through a Zone of Influence (ZOI) corresponding to the 0.01-foot drawdown contour using the Theis (1935) solution, a T= 1,000 ft2/day, Sy = 0.1 and a constant pumping rate of 56.4 GPM for one year. The horizontal wells are modeled as one well to due to the estimated proximity of the two production wells. The groundwater gradient of the source aquifer was determined from a water surface elevation map in a hydrogeologic report completed by TD&H Engineering. The 0.01-foot drawdown extends 20,000 feet from the proposed production wells.

29. The calculation for groundwater flow (Q) through the delineated area is given by the following Equation 1 and is 436,000 ft3/day or 3,653 AF/year.

Equation 1.

Q = TWi Equation 1

where:

T = Transmissivity = 1,000 ft2/day

W = Width of Zone of Influence = 40,000 ft

i = Groundwater gradient (TD&H Engineering) = 0.0109 ft/ft

*Surface Water*

30. The proposed wells are approximately 500 feet from an unnamed tributary of Muddy Creek. The water levels in the source aquifer are similar to the surface elevation of the unnamed tributary and this suggests the source aquifer is hydraulically connected to the unnamed tributary when it is flowing. A pre-application report by TD&H Engineering as part of the permit application, states that the tributary flows year-round (local landowners) and therefore the Unnamed Tributary of Muddy Creek is determined to be the potentially affected surface water source.

31. The Applicant is not aware of any streamflow data for the Unnamed Tributary. The Applicant reviewed the hydrology of the tributary to estimate flows to supplement the availability review. The Applicant states that according to local landowners, the Unnamed Tributary flows all year and may be perennial. At the well site, the tributary is split into a reach north and south of the Applicant's property where the wells are located.

32. The following Figure 2. identifies the various reaches of both the tributary and Muddy Creek in the project vicinity.

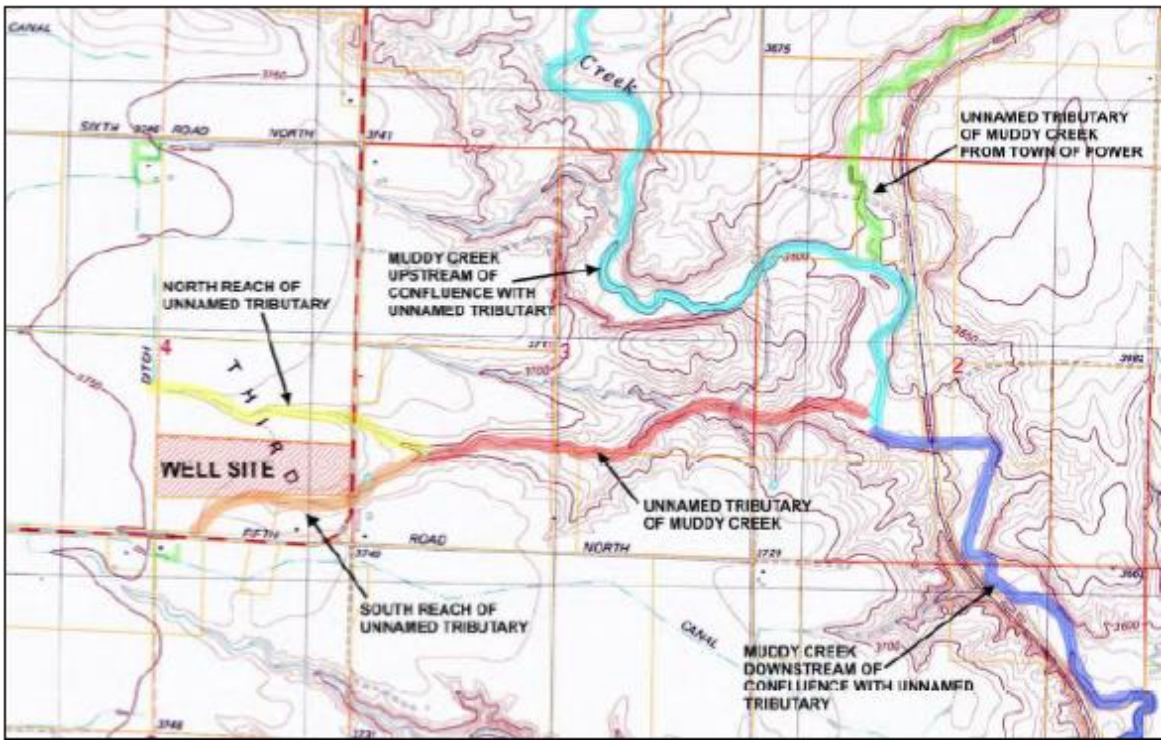


Figure 2. *Note: Unnamed tributary highlighted in red (plus the north and south reaches in its headwaters) is the tributary affected by net depletion, as identified by the Department*

33. The Applicant found that the north reach of the Unnamed Tributary has a significantly larger drainage basin than the south reach; the south reach appears to be largely fed by field irrigation and stormwater runoff. The north reach accounts for 86% of the drainage basin with approximately 1.9 square miles where the reach crosses Highway 431. There is a reservoir on the south reach just east of Highway 431. Basins were delineated using the USGS StreamStats tool; the reports are included in the Application materials. The following Table 2. presents the Applicant's StreamStats results and the calculations.

| USGS StreamStats Results | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Location | Basin Area (sq. miles) | Peak Flow (cfs) at Selected Return Intervals | | | | | | |
| | | 1.5-year | 2-year | 5-year | 10-year | 25-year | 50-year | 100-year |
| Muddy Creek at Power WTP Diversion | 99.5 | 66.8 | 116 | 381 | 706 | 1,400 | 2,200 | 3,240 |
| Muddy Creek at Benton Lake Diversion | 119.1 | 72.1 | 125 | 409 | 758 | 1,510 | 2,380 | 3,520 |
| Muddy Creek at Unnamed Tributary Confluence | 122.1 | 73 | 126 | 413 | 766 | 1,530 | 2,410 | 3,570 |
| | | | | | | | | |
| North Reach of Unnamed Tributary at Highway 431 | 1.9 | 9.7 | 19 | 67.5 | 123 | 229 | 336 | 462 |
| Unnamed Tributary East of Highway 431 at North and South Reach Confluence | 2.2 | 10.4 | 20.3 | 71.7 | 131 | 244 | 359 | 496 |
| Unnamed Tributary at Muddy Creek Confluence | 2.9 | 11.8 | 22.8 | 80.4 | 147 | 276 | 408 | 566 |

Table 2. *Note: Unnamed Tributary at Muddy Creek Confluence is the Stream of Interest*

34. The Applicant provided flow estimates for surface water which were calculated for the Unnamed Tributary of Muddy Creek to predict the more common and frequent base flow rates. USGS publication Estimates of Monthly Streamflow Characteristics at Selected Sites in the Upper Missouri River Basin, Montana, Base Period Water Years 1937-86 (WRIR 89-4082) was referenced to estimate mean monthly streamflow. Estimates were completed at two locations on the Unnamed Tributary: at the confluence of the north and south reaches and at the tributary's confluence with Muddy Creek.

35. Table 3 presents the results and the calculations used to derive estimates of physical availability of surface water on the affected Unnamed Tributary of Muddy Creek.

| Mean Monthly Streamflow | | | | |
|---|---|---|---|---|
| Month | Unnamed Tributary East of Highway 431 (Confluence of North and South Reaches) | | Unnamed Tributary at Muddy Creek Confluence | |
| | Mean Annual Precip. = 12.51" | | Mean Annual Precip. = 12.48" | |
| | Drainage Area = 2.2 sq. mi. | | Drainage Area = 2.9 sq. mi. | |
| | Mean Monthly Streamflow | | | |
| October | 0.22 cfs | 13.5 AF | 0.29 cfs | 17.8 AF |
| November | 0.16 cfs | 9.5 AF | 0.21 cfs | 12.5 AF |
| December | 1.18 cfs | 72.6 AF | 1.53 cfs | 94.1 AF |
| January | 0.11 cfs | 6.8 AF | 0.14 cfs | 8.6 AF |
| February | 0.12 cfs | 6.7 AF | 0.16 cfs | 8.9 AF |
| March | 0.18 cfs | 11.1 AF | 0.23 cfs | 14.1 AF |
| April | 0.56 cfs | 33.3 AF | 0.71 cfs | 42.2 AF |
| May | 1.48 cfs | 91.0 AF | 1.86 cfs | 114.4 AF |
| June | 1.27 cfs | 75.6 AF | 1.62 cfs | 96.4 AF |
| July | 0.44 cfs | 27.1 AF | 0.56 cfs | 34.4 AF |
| August | 0.32 cfs | 19.7 AF | 0.41 cfs | 25.2 AF |
| September | 0.25 cfs | 14.9 AF | 0.32 cfs | 19.0 AF |
| Minimum | 0.11 cfs | 6.7 AF | 0.14 cfs | 8.6 AF |
| Maximum | 1.48 cfs | 91.0 AF | 1.86 cfs | 114.4 AF |
| Average | 0.52 cfs | 31.8 AF | 0.67 cfs | 40.6 AF |

Table 3.

36. The Department finds that the Applicant's estimate is generally credible thought it is worth noting that the flow estimates are understated as there are artificial flows with the Muddy Creek drainage that originated form the operations of the Greenfields Irrigation District.

37. The Department finds that the depletions of surface water extend to Muddy Creek from the confluence of the unnamed tributary as previously in Findings of Fact 12-17 to the confluence of the Sun River. The USGS has operated a stream flow gage on Muddy Creek near the confluence of the Sun River (Gage No. 06088500). The flowing is the median of the mean monthly flow expressed in cubic feet per second (CFS) for each month of the year for the period of 1925 to 2023 (Table 4).

| Jan | Feb | Mar | Apr | May | June | July | Augst | Sept | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 34.7 | 33.6 | 39.8 | 36.95 | 129.2 | 225 | 277.8 | 321.9 | 190.85 | 106.95 | 64 | 44 |

Table 4.

CONCLUSIONS OF LAW

38. 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."

39. 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).

40. The Applicant has proven that water is physically available at the proposed point of diversion in the amount Applicant seeks to appropriate. § 85-2-311(1)(a)(i), MCA. (FOF Nos. 22-37)

**Legal Availability:**

FINDINGS OF FACT

Legal Availability of Groundwater

41. Modeling indicates that the 0.01 foot drawdown contour extends a distance of 20,000 feet from the proposed points of diversion. The annual flux through the zone of influence was estimated to be 3,653 AF/year (Department Aquifer Test Report, 2022).

42. The Department's Groundwater Permit Technical Report identified 71 active groundwater rights within the zone of influence for purposes of evaluating legal water availability (Department Technical Report Appendix A).Currently, under § 85-2-306(3)(a)(iii), MCA, the maximum volume allowed under a Ground Water Certificate is 10 AF, so each of the 28 Certificates within the ZOI was assigned a volume of 10 AF for those Groundwater Certificates rights without specific volumes, to conduct a conservative analysis. The remaining 42 water rights are Statements of Claim. Volumes were assigned to these rights using Department

standards in ARM 36.12.115 based on their purposes. Irrigation rights without a volume decreed on the face of the water right abstract were assigned a volume of 2.5 acre-feet per acre, which is the upper end of the Department's standard for diverted volume in Climatic Area III: Moderate Consumptive Use, per ARM 36.12.115. SOCs for stock use that do not have volumes assigned where calculated using the number of animal units served times 30 gallons per day. The existing legal demand within the zone of influence is 513.6 AF per year.

43. The physical amount of groundwater available within the zone of influence is the estimated groundwater flux of 3,653 AF/year. The existing legal demand for groundwater within the zone of influence is 513.6 AF. The amount of water legally available is the difference between physical water availability (3,653 AF/year) and existing legal demand (513.6 AF/year) equal to 73,39.4 AF/year. The Applicant requested a maximum flow rate of 170 GPM and diverted volume of 91.0 AF. Groundwater is legally available in the amount requested.

Legal Availability of Surface Water

44. The Applicant asserts that this Application is for an appropriation of groundwater which is an exception to the "closure" under §85-2-343(2)(a). The Department finds this assertion to be factual.

45. The Applicant further argues even if surface water is implicated under the application, under the closure statute, use of surface water by a municipality is still authorized under §85-2-343(2)(c)(iii). The Department finds that this Application is proposing to appropriate groundwater for municipal use. As such, the exception to utilize surface water for municipal use does not apply to this Application.

46. The Applicant contends that specific to Muddy Creek, depletions to that specific source are exempted under both the above section (§85-2-343(2)(c)) and §85-2-343(2)(e).

47. The Department finds that this Application meets the basin closure exception as described in Finding of Fact 26. above. The Department therefore finds that the Applicant's assertion referring to the remaining basin closure exceptions described in Findings of Fact 27. and 28. and their applicability are not necessary and therefore moot.

48. The Department finds that net depletion caused by the proposed groundwater wells will occur in an Unnamed Tributary of Muddy Creek identified in Figure 1. Depletions to the

unnamed tributary of Muddy Creek by groundwater pumping from the two proposed wells were determined by the Department and are presented in the following Table 4.

| Month | Consumption (AF) | Depletion (AF) | Depletion (gpm) |
|---|---|---|---|
| January | 6.0 | 6.7 | 48.5 |
| February | 5.5 | 6.4 | 51.4 |
| March | 6.0 | 6.3 | 46.1 |
| April | 5.8 | 6.3 | 47.7 |
| May | 6.0 | 6.3 | 46.1 |
| June | 10.7 | 7.8 | 59.1 |
| July | 11.1 | 9.2 | 67.4 |
| August | 11.1 | 9.7 | 71.1 |
| September | 10.7 | 9.9 | 74.4 |
| October | 6.0 | 8.4 | 61.5 |
| November | 5.8 | 7.1 | 53.8 |
| December | 6.0 | 6.8 | 49.5 |
| Total | 91.0 | 91.0 | |

Table 4. Net Depletion to Unnamed Tributary of Muddy Creek

49. Information in the Application indicates that return flows from the Applicant's municipal system consist of system leakage and lawn irrigation which infiltrate and eventually flow into an unnamed tributary of Muddy Creek located south of Power. This unnamed tributary of Muddy Creek is separate from the tributary where the proposed wells are located nearby. Leakage is an inherent part of all municipal distribution systems and was estimated by the Applicant using District flow distribution data. The Applicant determined that return flows are expected to average 3.3 acre-feet per month since they must infiltrate and then travel to the unnamed tributary through the aquifer. This equates to a total of 39.7 AF of volume over the course of a year.

50. The Department finds that the Applicant's return flow analysis does not account for any water returning to the groundwater source where water is diverted at the proposed well locations. Additionally, the estimate of return flows the Applicant provided does not contemplate any future efficiency improvements to the Applicant's municipal water distribution system. There is no information in the Application regarding how such efficiency improvement would affect the amounts of water that would continue to return to surface water in the Muddy Creek drainage.

51. The Department, as a matter of policy, assumes that municipal systems are 100% consumed from the groundwater source.

52. Therefore, the Department finds that the proposed municipal to be 100% consumptive for the purposes of making a finding of the amount of water depleted from surface water, in this case 91.0 AF.

53. The Department finds that surface water in the amount of 91.0 AF annually would have to be considered legally available in Muddy Creek throughout the entire year when depletions to surface water are occurring.

54. To determine if water is legally available in the identified depleted surface water sources, and assessment of each source water conducted by using the amounts previously found physically available in in both the unnamed tributary of Muddy Creek and the affected reach of the mainstem of Muddy Creek.

*Unnamed Tributary of Muddy Creek Legal Availability*

55. There is one water right of record which is in the depleted reach of the unnamed tributary of Muddy Creek. That water right is Statement of Claim 41K 30127993 which is a year-round instream stock use for 188 animal units. Using Department standards of 30 gallons per day per animal unit equals 3.5 AF. This would require 2.2 gallons per minute or 0.005 CFS to meet this legal demand (Information included in the Application File).

56. The Department found the following amounts to be legally available in the unnamed tributary of Muddy Creek at the confluence with the mainstem of Muddy Creek by subtracting legal demands from the amounts previously found to be physical available located within the depleted reach.

| Month | Jan | Feb | Mar | Apr | May | June | July | Augst | Sept | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Physically Available | 0.14 | 0.16 | 0.23 | 0.71 | 1.86 | 1.62 | 0.56 | 0.41 | 0.32 | 0.29 | 0.21 | 1.53 |
| Legal Demands | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.0005 |
| Legally Available | 0.14 | 0.16 | 0.23 | 0.71 | 1.86 | 1.62 | 0.56 | 0.41 | 0.32 | 0.29 | 0.21 | 1.53 |

Table 5.

57. The Department finds that the flows physically available are more than the legals demands on the unnamed tributary of Muddy Creek.

*Muddy Creek*

58. There are 16 water rights of record located within the depleted reach of Muddy Creek. An index of these water rights is included in the Application file for references purposes.

59. The Department found the following amounts to be legally available in the depleted reach of Muddy Creek from the confluence of the unnamed tributary to near the confluence of the Sun River by subtracting legal demands from the amounts previously found to be physical available located within the depleted reach. The following Table 6 summarizes the amounts found to be legally available by subtracting the legal demands previously identified in Finding of Fact 40. with the amounts the department found to be physically available.

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Physically Available | 34.7 | 33.6 | 39.8 | 36.95 | 129.2 | 225 | 277.8 | 321.9 | 190.85 | 106.95 | 64 | 44 |
| Legal Demands | 13.03 | 13.03 | 13.03 | 14.09 | 23.88 | 24.51 | 24.51 | 24.51 | 20.61 | 20.08 | 13.03 | 13.03 |
| Legally Available | 21.67 | 20.57 | 26.77 | 22.86 | 105.32 | 200.49 | 253.29 | 297.39 | 170.24 | 86.87 | 50.97 | 30.97 |

Table 6.

CONCLUSIONS OF LAW

60. Pursuant to § 85-2-311(1)(a), MCA, an applicant must prove by a preponderance of the evidence that water is legally available during the period in which the applicant seeks to appropriate, in the amount requested based upon a comparative analysis of physical availability of water to the legal demands on the sources impacted by the proposed use. See also ARM 36.12.1704 and 36.12.1705; Montana Power Co., 211 Mont. at 99, 685 P.2d at 340 (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).

61. Montana water law recognizes the that due to the connectivity between surface water and ground water, except for in unique circumstances, the appropriation of groundwater results in the

depletion of surface water through induced infiltration and/or pre-stream capture. Accordingly, an application for applicant groundwater appropriation must prove that the proposed appropriation will not result in surface water depletions or analyze the legal availability of surface water in light of the proposed ground water appropriation. 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 through a comparative analysis of the legal demands and physical availability of water in the impacted surface water sources. Montana Trout Unlimited v. DNRC, 2006 MT 72, 331 Mont. 483, 133 P.3d 224; Westmont Developers v. DNRC, CDV-2009-823, Montana First Judicial District Court, *Memorandum and Order,* (2011) Pgs. 7-8("DNRC properly determined that Westmont 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); 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); 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 Perkins v. Kramer, 148 Mont. 355, 423 P.2d 587 (1966)).

62. A flow of water on a given date does not show that water is legally available without showing that all prior appropriators were diverting all claimed water at that moment. Sitz Ranch, *Order Affirming DNRC Decision,* Pgs. 5-6. A flow of water past a point on a particular date or dates does not demonstrate that water is legally available. Id.

63. In analyzing legal availability for surface water, applicant is required to evaluate legal demands on the source of supply throughout the "area of potential impact" by the proposed use

under § 85-2-311(1)(a)(ii), MCA, not just within the "zone of influence." Sitz Ranch, *Order Affirming DNRC Decision*, (2011) Pg. 6. The Applicant has proven by a preponderance of the evidence that groundwater can reasonably be considered legally available during the period in which the applicant seeks to appropriate, in the amount requested, based on the records of the Department and other evidence provided to the Department. §85-2-311(1)(a)(ii), MCA. (FOF Nos. 41-43)

64. The Department finds surface water is legally available in the Unnamed Tributary of Muddy Creek between January and December (year-round) when depletions to the creek occur from the proposed groundwater pumping, and surface water is legally available in the Muddy Creek between January and December (year-round) when depletions of surface water occur. §85-2-311(1)(a)(ii), MCA. (FOF Nos. 44-59)

**Adverse Effect**

FINDINGS OF FACT

65. The Department modeled drawdown in existing wells in the source aquifer using the Theis (1935) solution, T= 1,000 ft2/day, Sy= 0.1 and an assumed monthly pumping schedule for a period of five years. Drawdown is largest at the end of September of the fifth year of the assumed monthly pumping schedule. Drawdown more than 1-foot occurs within 3,800 feet of the proposed wells (Table 6.). There are five water rights in the source aquifer, shown in Figure 8., that are predicted to experience drawdown greater than 1-foot.

| WR Number | Owners | Distance (ft) | Well Depth (ft) | Static Water Level (ft) | Predicted Drawdown (ft) | Available Drawdown (ft) |
|---|---|---|---|---|---|---|
| 41K 62706 00 | CLAYTON PERRY; TERRI PERRY | 1470 | 26 | 20 | 3.8 | 2.2 |
| 41K 30127990 | CLAYTON PERRY; TERRI PERRY | 1470 | NA | NA | 3.8 | NA |
| 41K 93585 00 | DIANE K SPECK; WILLIAM O SPECK | 1720 | 27 | 6 | 3.3 | 17.7 |
| 41K 22254 00 | SHERRY DERMOTT | 1910 | 30 | 19 | 3.0 | 8.0 |
| 41K 45517 00 | CHERIENE JOHNSON | 1980 | 17 | NA | 2.9 | NA |

Table 6. *Table of existing water rights experiencing drawdown greater than 1-foot.*

66. The Groundwater Permit Technical Report calculated that groundwater was legally available within the modeled 0.01-foot zone of influence. The Applicant provided information showing that the wellfield can be controlled to prevent adverse effect to prior groundwater appropriators by shutting off the pumps located in the proposed wells.

67. The Department finds that the proposed use of groundwater will not adversely affect other groundwater appropriators.

68. As described previously in this document, the proposed wells are approximately 500 feet from an unnamed tributary of Muddy Creek. The water levels in the source aquifer are similar to the surface elevation of the unnamed tributary and this suggests the source aquifer is hydraulically connected to the unnamed tributary when it is flowing. The total consumption from the proposed use is 91.0 AF per year.

69. The Department has found that of the 91.0 AF of water projected to be consumed by the proposed groundwater appropriation.

70. The Department found that sufficient amounts of surface water are legally available to offset depletions in Muddy Creek and the Unnamed Tributary of Muddy Creek. Legally

available water in this case, would prevent adverse effect to existing water rights located in the depleted reaches of both surface water sources as evidenced in the following Table 7 depicting remaining flows in the unnamed tributary of Muddy Creek and the mainstem of Muddy Creek in Table 8.

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Legally Available | 0.14 | 0.16 | 0.23 | 0.71 | 1.86 | 1.62 | 0.56 | 0.41 | 0.32 | 0.29 | 0.21 | 1.53 |
| Depletions (GPM) | 48.5 | 51.4 | 46.1 | 47.7 | 46.1 | 59.1 | 67.4 | 71.1 | 74.4 | 61.5 | 53.8 | 49.5 |
| Depletions (CFS) | 0.11 | 0.11 | 0.10 | 0.11 | 0.10 | 0.13 | 0.15 | 0.16 | 0.17 | 0.14 | 0.12 | 0.11 |
| Remaing Flow | 0.03 | 0.04 | 0.12 | 0.60 | 1.75 | 1.48 | 0.40 | 0.25 | 0.15 | 0.15 | 0.09 | 1.42 |

*Table 7. Unnamed Tributary of Muddy Creek*

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Legally Available | 21.67 | 20.57 | 26.77 | 22.86 | 105.32 | 200.49 | 253.29 | 297.39 | 170.24 | 86.87 | 50.97 | 30.97 |
| Depletions (GPM) | 48.5 | 51.4 | 46.1 | 47.7 | 46.1 | 59.1 | 67.4 | 71.1 | 74.4 | 61.5 | 53.8 | 49.5 |
| Depletions (CFS) | 0.11 | 0.11 | 0.10 | 0.11 | 0.10 | 0.13 | 0.15 | 0.16 | 0.17 | 0.14 | 0.12 | 0.11 |
| Remaing Flow | 21.56 | 20.46 | 26.67 | 22.75 | 105.22 | 200.36 | 253.14 | 297.23 | 170.07 | 86.73 | 50.85 | 30.86 |

*Table 8. Muddy Creek Mainstem.*

71. In addition to the depleted reaches located in the Muddy Creek drainage, Northwestern Energy has large senior water rights on the mainstem of the Missouri River near Great Falls which are only rarely satisfied. These rights constitute a legal demand upon which the Department must consider making a finding of no adverse effect.

72. The Applicant's plan includes offsetting impacts to the Missouri River caused by the proposed Muddy Creek depletion by purchasing a water service contract from the Bureau of Reclamation at Canyon Ferry Dam as a condition of granting this Application. The Department concurs that the applicant's plan to offset reductions in flows is necessary because of depletions in the Muddy Creek drainage. The Applicant shall secure a contract with BOR for 91 AF per year to mitigate or offset the total annual volume reduction from the Missouri River a result of the Applicant's proposed groundwater appropriation as a condition of permit issuance.

73. The Department finds that the Applicant has proved 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. When the following condition is met:

**MISSOURI RIVER MITIGATION PLAN**

PRIOR TO COMMENCING DIVERSIONS UNDER THIS PERMIT THE APPROPRIATOR SHALL MAKE PROVISION TO MITIGATE ADVERSE EFFECT TO SURFACE WATER RIGHTS BY REPLACING THE FULL VOLUME OF NET DEPLETION OF THE APPROPRIATION. THE APPROPRIATOR SHALL REPLACE AN EQUIVALENT AMOUNT OF WATER TO THE MAINSTEM OF THE MISSOURI RIVER ABOVE RAINBOW DAM IN THE FOLLOWING MANNER: THE APPROPRIATOR SHALL MITIGATE DEPLETIONS TO SURFACE WATER AND PROVIDE FOR LEGAL AVAILABILITY OF SURFACE WATER UNDER THIS PERMIT THROUGH THE PURCHASE OF A U.S. BUREAU OF RECLAMATION (BOR) WATER SERVICE CONTRACT FROM CANYON FERRY RESERVOIR. THE VOLUME OF WATER STATED ON THE CONTRACT MUST BE EQUAL TO THE VOLUME THAT IS DEPLETED FROM THE MUDDY CREEK DRAINAGE IN THIS CASE 91 ACRE FEET ON AN ANNUAL BASIS. DELIVERIES OF WATER UNDER SUCH CONTRACT MUST BE COMMENCED THE CALENDAR YEAR AFTER DIVERSIONS UNDER THIS PERMIT COMMENCE. APPROPRIATORS CONTRACT WITH THE BOR MAY PROVIDE THAT IN THE CALENDAR YEARS SUBSEQUENT TO THE FIRST CALENDAR YEAR IN WHICH WATER IS TO BE PUT TO BENEFICIAL USE, THE CONTRACT VOLUME DELIVERED MAY BE EQUAL TO BUT NOT LESS THAN THE VOLUME OF WATER ACTUALLY DIVERTED BY THE APPROPRIATOR IN THE PREVIOUS CALENDAR YEAR. A DELIVERY SCHEDULE ALLOWED BY THE BOR AND WHICH RESULTS IN THE FULL REPLACEMENT OF THE PRIOR CALENDAR YEARS DIVERSION VOLUME DURING THE FOLLOWING CALENDAR YEAR SHALL BE DEEMED SUFFICIENT UNDER THIS PERMIT. APPROPRIATOR SHALL SUBMIT TO THE HAVRE REGIONAL OFFICE WITH ITS WATER MEASUREMENT RECORDS ON JANUARY 30th OF EACH YEAR PROOF OF THE WATER SERVICE CONTRACT WITH BOR AS DESCRIBED ABOVE. DIVERSION UNDER THIS PERMIT MUST STOP IF ANY PART OF THE REQUIRED MITIGATION CEASES.

## CONCLUSIONS OF LAW

74. 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. at 96, 685 P.2d at 331 (purpose of the Water Use Act is to protect senior appropriators from encroachment by junior users); Bostwick I. ¶ 21; Bostwick Properties Inc. v DNRC, 2013 MT 48, ¶¶ 25, 38, 43, 369 Mont. 150, 296 P.3d 1154 (Bostwick II).

75. An applicant must analyze the full area of potential impact under the § 85-2-311, MCA criteria. *In the Matter of Beneficial Water Use Permit No. 76N-30010429 by Thompson River Lumber Company* (DNRC Final Order 2006). While § 85-2-361, MCA, limits the boundaries expressly required for compliance with the hydrogeologic assessment requirement, an applicant is required to analyze the full area of potential impact for adverse effect in addition to the requirement of a hydrogeologic assessment. Id. ARM 36.12.120(8).

76. Applicant must prove that no prior appropriator will be adversely affected, not just the objectors. Sitz Ranch, Pg. 4.

77. Simply asserting that an acknowledged reduction, however small, would not affect those with a prior right does not constitute the preponderance of the evidence necessary to sustain applicant's burden of proof. Wesmont Developers, *Memorandum and Order*, Pg. 11 (Court rejected applicant's argument that net depletion of .15 millimeters in the level of the Bitterroot River could not be adverse effect.); Sitz Ranch, DV-10-13390, *Order Affirming DNRC Decision*, Pgs. 3-4 (Court rejected applicant's arguments that its net depletion (3 and 9 gpm, respectively to Black Slough and Beaverhead River) was "not an adverse effect because it's not measureable," and that the depletion "won't change how things are administered on the source."); *In the Matter of Beneficial Water Use Permit No. 76N-30010429 by Thompson River Lumber Company (DNRC Final Order 2006*)(adverse effect not required to be measureable but must be calculable)*;* After calculating the projected depletion for the irrigation season, the District Court in Sitz Ranch v. DNRC explained:

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

Sitz Ranch, *Order Affirming DNRC Decision*, Pgs. 3-4.

78. The Department can and routinely does, condition a new permit's use on use of that special management, technology or measurement such as augmentation now generally known as mitigation and aquifer recharge. See § 85-2-312; § 85-2-360 et seq., MCA; see, e.g., *In the Matter of Beneficial Water Use Permit No. 107-41I by Diehl Development* (DNRC Final Order 1974) (No adverse effect if permit conditions to allow specific flow past point of diversion.); *In the Matter of Combined Application for Beneficial Water Use Permit No. 76H- 30043133 and Application No. 76H-30043132 to Change Water Right Nos. 76H-121640-00, 76H-131641-00 and 76H-131642-00 by the Town of Stevensville* (DNRC Final Order 2011).

# The requirement for mitigation in closed basins has been codified in § 85-2-360, *et seq.*, MCA. Section 85-2-360(5), MCA provides in relevant part:

> A determination of whether or not there is an adverse effect on a prior appropriator as the result of a new appropriation right is a determination that must be made by the department based on the amount, location, and duration of the amount of net depletion that causes the adverse effect relative to the historic beneficial use of the appropriation right that may be adversely affected.

E.g., *Combined Application for Beneficial Water Use Permit No. 76G-30050801 and Change Authorization 76G-30050805 by Missoula County* (DNRC Final Order 2012)(permit granted conditioned on mitigation of depletion ranging .8 to 7.4 gpm); *In the Matter of Application No. 76H-30046211 for a Beneficial Water Use Permit and Application No.76H-30046210 to Change a Non-filed Water Right by Patricia Skergan and Jim Helmer* (DNRC Final Order 2010, Combined Application)(permit granted conditioned on mitigation).

79. 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).

80. For a permit with mitigation: The Department will evaluate whether an applicant's proposed plan, i.e. mitigation or aquifer recharge, will offset depletions so as to meet § 85-2-311(1)(b), MCA, in the permit proceeding. The applicant's authority to use the water as proposed is assumed for the purposes of the analysis. The authority of the applicant to use the offset water as proposed for the plan is not determined in the permit proceeding but is determined in any required application for change in appropriation. Whether the applicant proves by a preponderance of the evidence that the mitigation/aquifer recharge plan will be effective is determined in the permit proceeding. Thus, the applicant must accurately convey to the Department exactly what it proposes for a mitigation/aquifer recharge plan. E.g., Wesmont Developers, *Memorandum and Order*, Pg. 10 (it was within the discretion of the Department to decline to consider an undeveloped mitigation proposal as mitigation for adverse effect in a permit proceeding); *In the Matter of Beneficial Water Use Permit Nos. 41H 30012025 And 41H 30013629 By Utility Solutions LLC* (DNRC Final Order 2006), *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) , *affirmed*, Montana River Action Network *et al*. v. DNRC *et al.*, Cause No. CDV-2007-602, Montana First Judicial District (2008); *In the Matter of Application for Beneficial Water Use Permit No. 41H 30026244 by Utility Solutions LLC* (DNRC Final Order 2008); § 85-2-360 *et seq.*

81. Pursuant to § 85-2-363, MCA, an applicant whose hydrogeologic assessment conducted pursuant to § 85-2-361, MCA, predicts that there will be a net depletion of surface water shall offset the net depletion that results in the adverse effect through a mitigation plan or an aquifer recharge plan.

82. Pursuant to § 85-2-362, MCA, an aquifer recharge plan must include: evidence that the any required water quality related permits have been granted pursuant to Title 75, chapter 5, and

pursuant to §§75-5-410 and 85-2-364, MCA; where and how the water in the plan will be put to beneficial use when and where, generally, water reallocated through exchange or substitution will be required; the amount of water reallocated through exchange or substitution that is required; how the proposed project or beneficial use for which the aquifer recharge plan is required will be operated; evidence that an application for a change in appropriation right, if necessary, has been submitted; a description of the process by which water will be reintroduced to the aquifer; evidence of water availability; and evidence of how the aquifer recharge plan will offset the required amount of net depletion of surface water in a manner that will offset any adverse effect on a prior appropriator.

83. 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 by the proposed appropriation. The Applicant has proven by a preponderance of the evidence that the mitigation plan is adequate to prevent adverse effect to prior appropriators caused by depletion of hydraulically connected surface waters. § 85-2-311(d), MCA. (FOF Nos. 65-73)

**Adequate Diversion**

FINDINGS OF FACT

84. The new groundwater wells will consist of two infiltration galleries (horizontal wells) consisting of perforated piping with a geotextile-enclosed gravel envelope. Water will be collected in the piping and gravel and then conveyed to a buried caisson. Two submersible pumps in the caisson will convey the water through approximately 12,200 linear feet of new 6-inch PVC water main to the existing distribution system. A pump house at the well site will contain the well controls, flow meter, and all appurtenant piping and valves.

85. GWIC ID 301863 was evaluated by the Department's groundwater hydrologist with a 28-hour aquifer test at an average pumping rate of 20.0 GPM and a maximum drawdown of 5.36 feet below the static water level (swl) of 7.89 feet below top of the well casing (btc). This measured maximum drawdown leaves 0.8 feet above the well bottom. The average flow rate of 20.0 GPM for the 28-hour aquifer test did not exceed the requested maximum flow rate,

however, an 8-hour drawdown and yield test are a condition to establish proof of adequacy of diversion once the horizontal wells are installed.

CONCLUSIONS OF LAW

86. 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. The adequate means of diversion statutory test merely codifies and encapsulates the common 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.

87. Applicant has proven by a preponderance of the evidence that the proposed means of diversion, construction, and operation of the appropriation works are adequate for the proposed beneficial use. § 85-2-311(1)(c), MCA. (FOF Nos. 84-85)

**Beneficial Use**

FINDINGS OF FACT

88. The Applicant proposes to use water for municipal use. Municipal use is defined as a beneficial use of water pursuant to §85-2-102(5)(a), MCA.

89. A Preliminary Engineering Report (PER) has been completed that analyzes the Applicant's current and the projected future 20-year anticipated water needs. Based on the historic population data presented in the PER, annual growth has increased by 0.46% from 2000 to 2010 and decreased by 0.28% from 2010 to 2015. The Applicant expects rapid growth once a suitable and reliable water supply is available; they anticipate an additional 180 persons by the year 2040.

90. The PER therefore projects a 2040 population in Power of 359 people, Average Day Demand of 80,400 gallons per day (gpd), and Maximum Day Demand of 241,200 gpd. Water usage will be for domestic and commercial needs. The volume requested, 91.0 AF, corresponds to the projected Average Day Demand and the requested flow rate of 170 GPM corresponds to the Maximum Day Demand.

CONCLUSIONS OF LAW

91. Under § 85-2-311(1)(d), MCA, an applicant must prove by a preponderance of the evidence the proposed use is a beneficial use. An appropriator may appropriate water only for a beneficial use. See also, §§ 85-2-301 and 402(2)(c), MCA. It is a fundamental premise of Montana water law that beneficial use is the basis, measure, and limit of the use. E.g., McDonald, supra; Toohey v. Campbell (1900), 24 Mont. 13, 60 P. 396.

The amount of water under a water right is limited to the amount of water necessary to sustain the beneficial use. E.g., Bitterroot River Protective Association v. Siebel, *Order on Petition for Judicial Review*, Cause No. BDV-2002-519, Montana First Judicial District Court, Lewis and Clark County (2003), *affirmed on other grounds*, 2005 MT 60, 326 Mont. 241, 108 P.3d 518;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). Sitz Ranch, *Order Affirming DNRC Decision*, Pg. 3 (citing BRPA v. Siebel, 2005 MT 60, and rejecting applicant's argument that it be allowed to appropriate 800 acre-feet when a typical year would require 200-300 acre-feet).

92. Applicant proposes to use water for Municipal use which is a recognized beneficial use. § 85-2-102(5), MCA. The Applicant has proven by a preponderance of the evidence that Municipal use is a beneficial use and that 91.0 AF of diverted volume, and 170 GPM of water requested is the amount needed to sustain the beneficial use. (FOF Nos. 88-90)

**Possessory Interest**

FINDINGS OF FACT

93. This application is for a municipal use. It is clear that the ultimate user will not accept the supply without consenting to the use of water. 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.

CONCLUSIONS OF LAW

94. 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. For municipal uses, the possessory interest criterion is satisfied does not requiring written consent at the time of application where 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. ARM 36.12.1802(b).

95. The Applicant has proven by a preponderance of the evidence that this permit is for municipal use and the ultimate user will not accept the supply without consenting to the use of water at the place of use. Accordingly, the possessory interest criterion is satisfied. (FOF 93)

## PRELIMINARY DETERMINATION

Subject to the terms and analysis in this Order, the Department preliminarily determines that this Application for Beneficial Water Use Permit No. 41K 30150582 should be **GRANTED.** The Applicant has proven by a preponderance of the evidence that net depletion of surface water can reasonably be considered legally available during the period in which the applicant seeks to appropriate, in the amount necessary, in the Muddy Creek drainage where depletions will occur. The Applicant has proven by a preponderance of the evidence that unmitigated net depletion that will accumulate in Muddy Creek are legally available year-round. 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 by the proposed appropriation when the following condition is met:

**MISSOURI RIVER MITIGATION PLAN**

PRIOR TO COMMENCING DIVERSIONS UNDER THIS PERMIT THE APPROPRIATOR SHALL MAKE PROVISION TO MITIGATE ADVERSE EFFECT TO SURFACE WATER RIGHTS BY REPLACING THE FULL VOLUME OF NET DEPLETION OF THE APPROPRIATION. THE APPROPRIATOR SHALL REPLACE AN EQUIVALENT AMOUNT OF WATER TO THE MAINSTEM OF THE MISSOURI RIVER ABOVE RAINBOW DAM IN THE FOLLOWING MANNER: THE APPROPRIATOR SHALL

MITIGATE DEPLETIONS TO SURFACE WATER AND PROVIDE FOR LEGAL AVAILABILITY OF SURFACE WATER UNDER THIS PERMIT THROUGH THE PURCHASE OF A U.S. BUREAU OF RECLAMATION (BOR) WATER SERVICE CONTRACT FROM CANYON FERRY RESERVOIR. THE VOLUME OF WATER STATED ON THE CONTRACT MUST BE EQUAL TO THE VOLUME THAT IS DEPLETED FROM THE MUDDY CREEK DRAINAGE IN THIS CASE 91 ACRE FEET ON AN ANNUAL BASIS. DELIVERIES OF WATER UNDER SUCH CONTRACT MUST BE COMMENCED THE CALENDAR YEAR AFTER DIVERSIONS UNDER THIS PERMIT COMMENCE. APPROPRIATORS CONTRACT WITH THE BOR MAY PROVIDE THAT IN THE CALENDAR YEARS SUBSEQUENT TO THE FIRST CALENDAR YEAR IN WHICH WATER IS TO BE PUT TO BENEFICIAL USE, THE CONTRACT VOLUME DELIVERED MAY BE EQUAL TO BUT NOT LESS THAN THE VOLUME OF WATER ACTUALLY DIVERTED BY THE APPROPRIATOR IN THE PREVIOUS CALENDAR YEAR. A DELIVERY SCHEDULE ALLOWED BY THE BOR AND WHICH RESULTS IN THE FULL REPLACEMENT OF THE PRIOR CALENDAR YEARS DIVERSION VOLUME DURING THE FOLLOWING CALENDAR YEAR SHALL BE DEEMED SUFFICIENT UNDER THIS PERMIT. APPROPRIATOR SHALL SUBMIT TO THE HAVRE REGIONAL OFFICE WITH ITS WATER MEASUREMENT RECORDS ON JANUARY 30th OF EACH YEAR PROOF OF THE WATER SERVICE CONTRACT WITH BOR AS DESCRIBED ABOVE. DIVERSION UNDER THIS PERMIT MUST STOP IF ANY PART OF THE REQUIRED MITIGATION CEASES.

## NOTICE

This Department will provide public notice of this Application and the Department's Preliminary Determination to Grant pursuant to §§ 85-2-307, MCA. The Department will set a deadline for objections to this Application pursuant to §§ 85-2-307, and -308, MCA. If this Application receives no valid objection or all valid objections are unconditionally withdrawn, the Department will grant this Application as herein approved. If this Application receives a valid

objection, the Application and objection will proceed to a contested case proceeding pursuant to Title 2 Chapter 4 Part 6, MCA, and § 85-2-309, MCA. If valid objections to an Application are received and withdrawn with stipulated conditions and the Department preliminarily determined to grant the Application, the Department will grant the Application subject to conditions necessary to satisfy applicable criteria based on the preliminary determination.

DATED this 4th day of October 2023.

/Original signed by Matt Miles/
Matt Miles, Manager
Havre 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 5th Day of October 2023, by first class United States mail.

POWER-TETON COUNTY WATER & SEWER DISTRICT; ROSS H. FITZGERALD, PRESIDENT
P.O. BOX 176
POWER, MT 59468

_____

KAILEE INGALLS