

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

APPLICATION TO CHANGE WATER RIGHT NO. 41D 30155185 BY CROWSFOOT LLC)))	PRELIMINARY DETERMINATION TO GRANT CHANGE
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On April 29, 2022, Crowsfoot LLC (Applicant) submitted Application to Change Water Right No. 41D 30155185 to change Water Right Claim No. 41D 4735-00 to the Bozeman Regional Office of the Department of Natural Resources and Conservation (Department or DNRC). The Department published receipt of the Application on its website. The Application was determined to be correct and complete as of August 10, 2022. An Environmental Assessment for this Application was completed on November 3, 2022.

INFORMATION

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

Application as filed:

- Application to Change Water Right, Form 606-IR
- Attachments
 - Munro LP Series 3/4hp – 5hp pump specifications and pump curve
- Maps:
 - Aerial imagery from years 1942, 1951, 1977, 1979, 1995, 2005, 2011, 2014, 2017, 2018, and 2019 depicting the historical place of use
 - Madison County Water Resources Survey map 1954
 - Aerial imagery from 2019 depicting the proposed point of diversion

Information within the Department's Possession/Knowledge

- Existing Water Right File 41D 4735-00
- Water Resource Survey, Madison County, 1954

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 Bozeman Regional Office at 406-586-3136 to request copies of the following documents.

- Consumptive Use Methodology Memo, dated March 17, 2010
- Historic Diverted Volume Memo, dated September 13, 2012
- Change in Method of Irrigation Policy Memo, dated December 2, 2015
- Return Flow Policy Memo dated April 1, 2016.
- Distributing Conveyance Loss on Multiple User Ditches Memo, dated February 14, 2020.

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, part 4, MCA).

WATER RIGHTS TO BE CHANGED

FINDINGS OF FACT

1. The Applicant proposes to add two points of diversion to Statement of Claim 41D 4735-00. Statement of Claim 41D 4735-00 has a decreed flow rate of 1.52 CFS for irrigation of 34 acres located in the NWNW Section 6, T04S R06W, Madison County. The point of diversion is located on the Big Hole River in the NWNWSE Section 1, T04S R07W, Madison County at the Seyler-Harvey Ditch.

Table 1: Water rights proposed for change.

WR Number	Priority Date	Purpose	Flow Rate	Volume	Period of Use	Point of Diversion	Place of Use	Acres	Ditch Name
41D 4735-00	6/7/1894	Irrigation	1.52 CFS	- ¹	4/15-9/30	NWNWSE SECTION 1, T04S R07W, MADISON COUNTY	NWNW SECTION 6, T04S R06W, MADISON COUNTY	34	Seyler-Harvey Ditch

¹The total volume of this water right shall not exceed the amount put to historical and beneficial use.

2. The Applicant is the only water right owner of record for Statement of Claim 41D 4735-00. Statement of Claim 41D 4735-00 is for irrigation of 34 acres located entirely on land owned by the Applicant.

3. No supplemental water rights exist for Statement of Claim 41D 4735-00 proposed for change. The Applicant is also the owner of Statement of Claim 41D 101133-00 that shares the same historical point of diversion at the Seyler-Harvey Ditch for irrigation of 9 acres in Govt Lot 9 W2SWNW Section 6, T04S R06W, Madison County. The place of use is located adjacent to and to the south of the place of use for Statement of Claim 41D 4735-00 proposed for change (Figure 1). The Applicant stated in the Application Materials that they are changing all water rights associated with the place of use for Statement of Claim 41D 4735-00 (Application, IR.1.G).

4. The Seyler-Harvey Ditch subject of this change application was analyzed by the Department in a recent change authorization. Change Authorization 41D 30122404 by Cobb T P Jr Inter Vivos Trust was issued on June 23, 2020, and authorized the addition of three points of diversion to Statement of Claim 41D 196337-00 at three pumps from the Big Hole River. The Applicant for Change Application 41D 30155185 analyzed in this Preliminary Determination referenced information from Change Application 41D 30122404 as these water rights share the same ditch system and have similar historical irrigation practices.

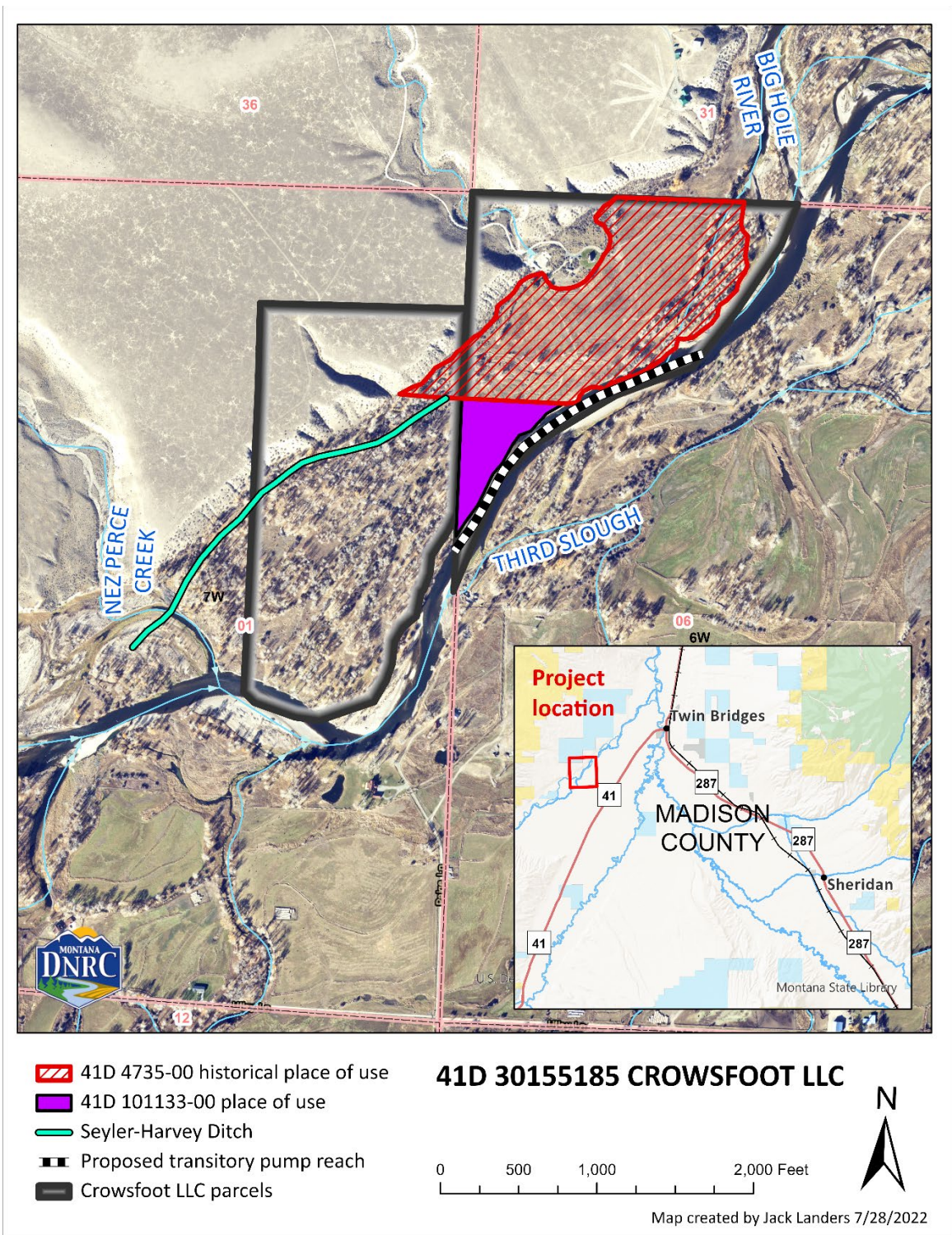


Figure 1: Map of the proposed project. The proposed portable pumps will be located in a 2,100-foot reach of the Big Hole River, shown adjacent to the Applicant's property. The place of use for 41D 101133-00 owned by the Applicant is shown for comparison, as it is also conveyed in the Seyler-Harvey Ditch but has not been used in combination with the water right proposed for change.

CHANGE PROPOSAL

FINDINGS OF FACT

5. The Applicant proposes to add two points of diversion to Statement of Claim 41D 4735-00. The proposed points of diversion consist of two portable pumps located in a 2,100-foot reach of the Big Hole River along the Applicant's property in Govt Lots 4 and 5 of the W2NW Section 6, T04S R06W, Madison County. No change in purpose, storage, or place of use is proposed, and the place of use will remain in the NWNW Section 6, T04S R07W, Madison County for irrigation of 34 acres. The Applicant is retaining the historical point of diversion at the Seyler-Harvey Ditch located in the NWNWSE Section 1, T04S R07W, Madison County. The source is the Big Hole River, and the project is located in Madison County.
6. The authorization will be subject to the following terms and conditions:

IMPORTANT INFORMATION

AT TIMES WHEN WATER IS DIVERTED AT THE SEYLER-HARVEY DITCH UNDER STATEMENT OF CLAIM 41D 4735-00, THE AUTHORIZED PORTABLE PUMPS CANNOT BE USED. SIMULTANEOUS OPERATION OF THE POINTS OF DIVERSION WILL BE CAUSE FOR REVOCATION OF THIS AUTHORIZATION.

CHANGE CRITERIA

7. The Department is authorized to approve a change if the applicant meets its burden to prove the applicable § 85-2-402, MCA, criteria by a preponderance of the evidence. Matter of Royston, 249 Mont. 425, 429, 816 P.2d 1054, 1057 (1991); Hohenlohe v. DNRC, 2010 MT 203, ¶¶ 33, 35, and 75, 357 Mont. 438, 240 P.3d 628 (an applicant's burden to prove change criteria by a preponderance of evidence is "more probably than not."); Town of Manhattan v. DNRC, 2012 MT 81, ¶8, 364 Mont. 450, 276 P.3d 920. Under this Preliminary Determination, the relevant change criteria in §85-2-402(2), MCA, are:

(2) Except as provided in subsections (4) through (6), (15), (16), and (18) and, if applicable, subject to subsection (17), the department shall approve a change in appropriation right if the appropriator proves by a preponderance of evidence that the following criteria are met:

(a) The proposed change in appropriation right will not adversely affect the use of the existing water rights of other persons or other perfected or planned uses or developments for which a permit or certificate has been issued or for which a state water reservation has been issued under part 3.

(b) The proposed means of diversion, construction, and operation of the appropriation works are adequate, except for: (i) a change in appropriation right for instream flow pursuant to 85-2-320 or 85-2-436; (ii) a temporary change in appropriation right for instream flow pursuant to 85-2-408; or (iii) a change in appropriation right pursuant to 85-2-420 for mitigation or marketing for mitigation.

(c) The proposed use of water is a beneficial use.

(d) 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 change involves 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. This subsection (2)(d) does not apply to: (i) a change in appropriation right for instream flow pursuant to 85-2-320 or 85-2-436; (ii) a temporary change in appropriation right for instream flow pursuant to 85-2-408; or (iii) a change in appropriation right pursuant to 85-2-420 for mitigation or marketing for mitigation.

8. The evaluation of a proposed change in appropriation does not adjudicate the underlying right(s). The Department's change process only addresses the water right holder's ability to make a different use of that existing right. *E.g., Hohenlohe*, at ¶¶ 29-31; *Town of Manhattan*, at ¶8; *In the Matter of Application to Change Appropriation Water Right No.41F-31227 by T-L Irrigation Company* (DNRC Final Order 1991).

HISTORICAL USE AND ADVERSE EFFECT

FINDINGS OF FACT - Historical Use

9. Statement of Claim 41D 4735-00 has a priority date of June 7, 1894, historically filed by the King Mining Company. The original claim of 40 acres and flow rate of 5 CFS by Robert Seyler filed on August 6, 1980, has been amended to 34 acres and a flow rate of 1.52 CFS during the basin adjudication.

10. Statement of Claim 41D 4735-00 has a decreed flow rate of 1.52 CFS for irrigation of 34 acres in the NWNW Section 6, T04S R06W, Madison County. The following information was provided by the Applicant or obtained by the Department to support the historical use of Statement of Claim 41D 4735-00:

- The 1954 Madison County Water Resources Survey map shows most of the historical place of use irrigated, totaling 28 acres.

- Aerial photograph CXK-2B-82, dated August 3, 1942, shows 31 acres of the historical place of use irrigated.
- Aerial photograph 2-137, dated July 30, 1977, shows 34 acres of the historical place of use irrigated.
- Aerial photograph 178-79, dated September 7, 1979, shows 34 acres of the historical place of use irrigated.

The Department finds the maximum historical use of Statement of Claim 41D 4735-00 is 34 acres.

Flow Rate

11. Statement of Claim 41D 4735-00 has a decreed flow rate of 1.52 CFS. The maximum capacity of the Seyler-Harvey Ditch was estimated using ditch geometry measurements provided in Change Application 41D 30122404 by Cobb T P Jr Inter Vivos Trust and referenced by the Applicant for the Change Application subject of this Preliminary Determination. The Manning equation was used to model maximum ditch capacity and hydraulic parameters at the decreed flow rate. Model parameters and results are shown in Table 2 and Table 3 below. The maximum modeled capacity of the Seyler-Harvey Ditch demonstrates that the ditch is adequate for conveying the total decreed flow rate of 5.65 CFS for all water rights conveyed in this structure.

Table 2: Input parameters for Manning equation.

	Top width (ft)	Depth (ft)	Slope (ft/ft)	Manning N
Seyler-Harvey Ditch	15.00	4.50	0.02	0.034

Table 3: Modeled hydraulic parameters of the Seyler-Harvey Ditch for the total decreed flow rate and the maximum ditch capacity.

	Wetted width (ft)	Wetted perimeter (ft)	Area (ft²)	Hydraulic radius (ft)	Discharge (CFS)
Solution for the decreed flow rate	15.00	15.38	2.83	0.18	5.65
Maximum ditch capacity	15.00	24.00	67.50	2.81	831.29

Historical Consumptive Use

12. Statement of Claim 41D 4735-00 has historically been used to irrigate primarily alfalfa. The Applicant stated that water was historically diverted from the Big Hole River for flood irrigation throughout the entire period of use (May 15-Sept 30).

13. The Applicant elected to use the Department's standard consumptive use methodology per ARM 36.12.1902(16) and described further in DNRC Consumptive Use Methodology memo, updated March 17, 2010.

14. The net irrigation requirements (NIR) from the NRCS Irrigation Water Requirements program output for the Twin Bridges weather station is 16.98 inches. A Madison County pre-1973 management factor of 65.2% for flood irrigation (from ARM 36.12.1902) results in a historical crop consumptive use on 34 acres of 31.4 AF. An estimated field efficiency of 60% for contour ditch flood irrigation results in a total historical field applied volume of 52.3 AF. Irrecoverable losses resulting from flood irrigation are assumed to be 5%, or 2.6 AF, of the total 52.3 AF field applied volume, per the Department's Irrecoverable Loss Memo, dated April 15, 2013. The total historical consumptive use for flood irrigation of 34 acres is 34.0 AF (crop consumptive use plus irrecoverable losses).

Historical Diverted Volume

15. The Applicant elected to use the Department's standard methodology for calculating historical diverted volume per ARM 36.12.1902(10). The Applicant states that irrigation occurred for 7-day periods with a 3-day rest between each period. Irrigation stopped for a period of 10 days for the first cutting of hay in early July and for 10 days for the second cutting of hay in the middle of August. Irrigation resumed after the second cutting for pasture regrowth prior to winter. The decreed period of diversion for Statement of Claim 41D 4735-00 is April 15 to September 30. This results in 98 total days irrigated, accounting for the rest periods described above.

16. Several other water rights have historically been conveyed in the Seyler-Harvey Ditch. For ditches with multiple users, the Department distributes the total conveyance loss to each water right based on the proportion of the total flow rate, as described in the Technical Memorandum: Distributing Conveyance Loss on Multiple User Ditches dated February 14, 2020. According to the Department's records, the total flow rate conveyed in the Seyler-Harvey Ditch is 5.65 CFS

(Table 4). The Applicant's fields are served by the first secondary diversion points on the ditch and the total decreed flow rate of 5.65 CFS was conveyed in this section of ditch. Therefore, conveyance loss attributed to the water right proposed for change is 27% of the total flow rate conveyed in the Seyler-Harvey Ditch.

Table 4: Proportion of the total flow rate for water rights conveyed in the Seyler-Harvey Ditch.

Water right number	Flow rate (CFS)	Proportion of total flow rate
41D 101133 00	0.72	0.13
41D 134011 00	0.72	0.13
41D 196337 00	2.66	0.47
41D 196338 00	0.03	0.01
41D 4735 00	1.52	0.27
Total	5.65	1.00

17. The Manning equation was used to model hydraulic parameters of the ditch at the decreed flow rate of 5.65 CFS for purposes of estimating historical conveyance loss (Table 3). The total historical conveyance loss volume for the Seyler-Harvey Ditch to the Applicant's field is 129.42 AF. A breakdown of the calculations for the individual conveyance loss components is shown below.

Seepage loss

Seepage loss = wetted perimeter x ditch length x ditch loss rate x days irrigated / 43,560 ft³ per AF

The ditch loss rate is 1.4 ft³/ft²/day for loam, sandy loam soil type (Soil Conservation Service, Web Soil Survey).

Seepage loss = 15.4 ft x 2,560 ft x 1.4 ft³/ft²/day x 98 / 43,560 ft³ per AF = 124.01 AF

Vegetation loss

Vegetation loss = % loss/mile x flow rate x days irrigated x ditch length x 2

The Department's standard rate of 0.75% loss/mile was used to calculate vegetation loss.

Vegetation loss = 0.75% x 5.65 CFS x 98 x 0.48 mi x 2 = 4.03 AF

Evaporation

Evaporation = surface area x adjusted evaporation constant / 43,560 ft² per acre

Evaporation constant = 3.35 ft (Potts, 1988) for the Philipsburg weather station, adjusted to reflect 98 days per year. The adjusted evaporation value used is 1.55 ft. The Philipsburg weather station was selected because this is the most representative weather stations listed in Potts, 1988 and is consistent with Change Authorization 41D 30122404.

Evaporation = (15 ft x 2,560 ft) x 1.55 ft / 43,560 ft² per acre = 1.38 AF

Total conveyance loss

Total conveyance loss = seepage loss + vegetation loss + evaporation

Total conveyance loss = 124.01 AF + 4.03 AF + 1.38 AF = 129.42 AF

18. As described previously, the water right proposed for change represents 0.27 of the total decreed flow rate for the Seyler-Harvey Ditch. Per the Department’s memo titled “Distributing Conveyance Loss on Multiple User Ditches”, dated February 14, 2020, the total ditch conveyance loss was distributed to each field based on the proportion of the total flow rate. Therefore, the conveyance loss volume attributed to Statement of Claim 41D 4735-00 is 34.82 AF (129.42 AF x 0.27 = 34.82 AF).

19. The total diverted volume for the water right proposed for change is the field application volume on 34 acres (52.3 AF) plus the conveyance loss volume (34.82 AF) equal to 87.1 AF.

20. The Department finds the following historical use:

WR No.	Priority Date	Owner Name	Flow Rate (GPM)	Diverted Volume (AF)	Consump. Volume (AF)	Acres	Place of Use	Point of Diversion
41D 4735-00	6/7/1894	Crowsfoot LLC	1.52 CFS	87.1	34.0	34	NWNW SECTION 6, T04S R06W, MADISON COUNTY	NWNWSE SECTION 1, T04S R07W, MADISON COUNTY

FINDINGS OF FACT – Adverse Effect

21. The Applicant proposes to change the point of diversion for Statement of Claim 41D 4735-00 to add two portable pumps to a reach of the Big Hole River. No change in purpose or place of use is proposed. The proposed transitory pump reach is 2,100 feet long located along the Applicant’s property in Govt Lots 4 and 5 of the W2NW Section 6, T04S R06W, Madison County.

22. No change in place of use is proposed, and the Applicant will continue to irrigate the same 34 acres irrigated historically. Per the Department’s Change in Method of Irrigation policy memo, dated December 2, 2015, the proposed consumptive use is equal to the historical consumptive use of 34.0 AF.

23. The Applicant proposes to add two portable pumps to Statement of Claim 41D 4735-00. The pumps will be moved within a 2,100-foot reach of the Big Hole River along the Applicant’s property to supply a sprinkler irrigation system for irrigation of 34 acres. No conveyance loss is associated with the proposed points of diversion and the new diverted volume using the pumps

is less than the historical diverted volume, equal to the historical field application volume of 52.3 AF.

24. No conveyance loss is associated with the proposed points of diversion and the Applicant intends to retain the original point of diversion at the Seyler-Harvey Ditch. The historical conveyance loss volume of 34.82 AF attributed to Statement of Claim 41D 4735-00 will remain available at the original point of diversion.

25. The Applicant does not plan to measure the diverted flow rate and volume. The proposed pumps have a combined capacity of 230 GPM, or 0.51 CFS. The Applicant stated in the Application Materials that the historical point of diversion and the proposed pumps will not be operated simultaneously in order to ensure that the decreed flow rate of 1.52 CFS is not exceeded. The proposed pumps will require less diverted volume and flow rate to irrigate the same 34 acres irrigated historically. The proposed operation plan for not simultaneously using the historical point of diversion and the proposed pumps will ensure that the historical flow rate and diverted volume are not exceeded.

26. No change in purpose or place of use is proposed and return flows from irrigation of 34 acres will continue to accrue to the Big Hole River as they did historically. Per the Department's Return Flow Policy memo dated April 1, 2016, a quantification of the monthly volume returning to hydraulically connected surface water was not conducted.

27. No supplemental water rights exist for Statement of Claim 41D 4735-00. Statement of Claim 41D 101133-00, owned by the Applicant, shares a point of diversion at the Seyler-Harvey Ditch for irrigation of 9 acres in Govt Lot 9 W2SWNW Section 6, T04S R06W, Madison County. The place of use is located adjacent to and to the south of the place of use for Statement of Claim 41D 4735-00 proposed for change (Figure 1).

28. Eight intervening water rights between the historical and proposed points of diversion were identified by the Department. A total of five water rights share a point of diversion at the Seyler-Harvey Ditch; two of which are owned by the Applicant. Four water rights for stock drinking directly from the Big Hole River exist between the historical and proposed points of diversion, one of which is owned by the Applicant. Two water rights for stock and irrigation have a point of diversion at the Smith Ditch in the SWSWNW Section 6, T04S R06W, Madison County. One Montana Fish, Wildlife, and Parks instream flow Water Reservation exists on the Big Hole River from the mouth to Divide Dam and includes the proposed transitory pump reach. When the proposed pumps are

in use, the proposed pumps will require less diverted volume and flow rate and will not adversely affect the intervening water rights.

29. The Department finds there will be no adverse effect from the proposed change under the terms and conditions set out in this Preliminary Determination. The authorization will be subject to the following condition:

IMPORTANT INFORMATION

AT TIMES WHEN WATER IS DIVERTED AT THE SEYLER-HARVEY DITCH UNDER STATEMENT OF CLAIM 41D 4735-00, THE AUTHORIZED PORTABLE PUMPS CANNOT BE USED. SIMULTANEOUS OPERATION OF THE POINTS OF DIVERSION WILL BE CAUSE FOR REVOCATION OF THIS AUTHORIZATION.

BENEFICIAL USE

FINDINGS OF FACT

30. The Applicant proposes to use water for irrigation, which is a recognized beneficial use of water in the State of Montana. The Applicant also provided evidence of the necessity for the change in point of diversion due to the deterioration of the historical ditch and original point of diversion. The migration of the Big Hole River channel creates chronic disruption to the original diversion structure and has prevented the operation of the ditch at times. The proposed project will provide flexibility to adapt to changing geomorphological conditions and for continued irrigation of 34 acres.

31. The Applicant proposes to use 87.1 AF diverted volume and 1.52 CFS flow rate for continued irrigation of the 34-acre historical place of use. This amount is determined by the Department's standards found in ARM 36.12.1902 for calculating consumptive and diverted volume for irrigation on 34 acres.

32. The Department finds the proposed 1.52 CFS and 87.1 AF diverted volume for irrigation purpose to be a beneficial use of water.

ADEQUATE DIVERSION

FINDINGS OF FACT

33. The Applicant proposes to add two portable pumps to Statement of Claim 41D 4735-00 to convey water from the Big Hole River for sprinkler irrigation of 34 acres. The proposed pumps are Munro LP Centrifugal Pumps capable of pumping 150 GPM and 80 GPM. The cumulative flow rate for the proposed pumps is 230 GPM, or 0.51 CFS.

34. The proposed pumps will be located within a 2,100-foot reach of the Big Hole River in Govt Lots 4 and 5 of the W2NW Section 6, T04S R06W, Madison County.

35. The Applicant intends to retain the historical point of diversion at the Seyler-Harvey Ditch headgate located in the NWNWSE Section 1, T04S R07W, Madison County. The Seyler-Harvey Ditch has a maximum capacity of 831.29 CFS and is capable of conveying the entire decreed flow rate.

36. The Department finds this diversion infrastructure to be adequate for the proposed irrigation.

POSSESSORY INTEREST

FINDINGS OF FACT

37. The applicant signed the affidavit on 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. (Department file)

CONCLUSIONS OF LAW

HISTORICAL USE AND ADVERSE EFFECT

38. Montana's change statute codifies the fundamental principles of the Prior Appropriation Doctrine. Sections 85-2-401 and -402(1)(a), MCA, authorize changes to existing water rights, permits, and water reservations subject to the fundamental tenet of Montana water law that one may change only that to which he or she has the right based upon beneficial use. A change to an existing water right may not expand the consumptive use of the underlying right or remove the well-established limit of the appropriator's right to water actually taken and beneficially used. An increase in consumptive use constitutes a new appropriation and is subject to the new water use permit requirements of the MWUA. McDonald v. State, 220 Mont. 519, 530, 722 P.2d 598, 605

(1986)(beneficial use constitutes the basis, measure, and limit of a water right); Featherman v. Hennessy, 43 Mont. 310, 316-17, 115 P. 983, 986 (1911)(increased consumption associated with expanded use of underlying right amounted to new appropriation rather than change in use); Quigley v. McIntosh, 110 Mont. 495, 103 P.2d 1067, 1072-74 (1940)(appropriator may not expand a water right through the guise of a change – expanded use constitutes a new use with a new priority date junior to intervening water uses); Allen v. Petrick, 69 Mont. 373, 222 P. 451(1924)(“quantity of water which may be claimed lawfully under a prior appropriation is limited to that quantity within the amount claimed which the appropriator has needed, and which within a reasonable time he has actually and economically applied to a beneficial use. . . . it may be said that the principle of beneficial use is the one of paramount importance . . . The appropriator does not own the water. He has a right of ownership in its use only”); Town of Manhattan, at ¶ 10 (an appropriator’s right only attaches to the amount of water actually taken and beneficially applied); Town of Manhattan v. DNRC, Cause No. DV-09-872C, Montana Eighteenth Judicial District Court, *Order Re Petition for Judicial Review*, Pg. 9 (2011)(the rule that one may change only that to which it has a right is a fundamental tenet of Montana water law and imperative to MWUA change provisions); In the Matter of Application to Change a Water Right No. 41I 30002512 by Brewer Land Co, LLC, DNRC Proposal For Decision and Final Order (2004).¹

39. Sections 85-2-401(1) and -402(2)(a), MCA, codify the prior appropriation principles that Montana appropriators have a vested right to maintain surface and ground water conditions substantially as they existed at the time of their appropriation; subsequent appropriators may insist that prior appropriators confine their use to what was actually appropriated or necessary for their originally intended purpose of use; and, an appropriator may not change or alter its use in a manner that adversely affects another water user. Spokane Ranch & Water Co. v. Beatty, 37 Mont. 342, 96 P. 727, 731 (1908); Quigley, 110 Mont. at 505-11, 103 P.2d at 1072-74; Matter of

¹ DNRC decisions are available at:
http://www.dnrc.mt.gov/wrd/water_rts/hearing_info/hearing_orders/hearingorders.asp

Royston, 249 Mont. at 429, 816 P.2d at 1057; Hohenlohe, at ¶¶43-45.²

40. The cornerstone of evaluating potential adverse effect to other appropriators is the determination of the “historic use” of the water right being changed. Town of Manhattan, at ¶10 (recognizing that the Department’s obligation to ensure that change will not adversely affect other water rights requires analysis of the actual historic amount, pattern, and means of water use). A change applicant must prove the extent and pattern of use for the underlying right proposed for change through evidence of the historic diverted amount, consumed amount, place of use, pattern of use, and return flow because a statement of claim, permit, or decree may not include the beneficial use information necessary to evaluate the amount of water available for change or potential for adverse effect.³ A comparative analysis of the historic use of the water right to the proposed change in use is necessary to prove the change will not result in expansion of the original right, or adversely affect water users who are entitled to rely upon maintenance of conditions on the source of supply for their water rights. Quigley, 103 P.2d at 1072-75 (it is necessary to ascertain historic use of a decreed water right to determine whether a change in use expands the underlying right to the detriment of other water user because a decree only provides a limited description of the right); Royston, 249 Mont. at 431-32, 816 P.2d at 1059-60 (record could not sustain a conclusion of no adverse effect because the applicant failed to provide the Department with evidence of the historic diverted volume, consumption, and return flow); Hohenlohe, at ¶44-45; Town of Manhattan v. DNRC, Cause No. DV-09-872C, Montana Eighteenth Judicial District Court, *Order Re Petition for Judicial Review*, Pgs. 11-12 (proof of historic use is required even when the right has been decreed because the decreed flow rate or volume establishes the maximum appropriation that may be diverted, and may exceed the historical pattern of use, amount diverted or amount consumed through actual use); Matter of

² See also Holmstrom Land Co., Inc., v. Newlan Creek Water District, 185 Mont. 409, 605 P.2d 1060 (1979); Lokowich v. Helena, 46 Mont. 575, 129 P. 1063(1913); Thompson v. Harvey, 164 Mont. 133, 519 P.2d 963 (1974)(plaintiff could not change his diversion to a point upstream of the defendants because of the injury resulting to the defendants); McIntosh v. Graveley, 159 Mont. 72, 495 P.2d 186 (1972)(appropriator was entitled to move his point of diversion downstream, so long as he installed measuring devices to ensure that he took no more than would have been available at his original point of diversion); Head v. Hale, 38 Mont. 302, 100 P. 222 (1909)(successors of the appropriator of water appropriated for placer mining purposes cannot so change its use as to deprive lower appropriators of their rights, already acquired, in the use of it for irrigating purposes); and, Gassert v. Noyes, 18 Mont. 216, 44 P. 959(1896)(change in place of use was unlawful where reduced the amount of water in the source of supply available which was subject to plaintiff’s subsequent right).

³A claim only constitutes *prima facie* evidence for the purposes of the adjudication under § 85-2-221, MCA. The claim does not constitute *prima facie* evidence of historical use in a change proceeding under §85-2-402, MCA. For example, most water rights decreed for irrigation are not decreed with a volume and provide limited evidence of actual historic beneficial use. §85-2-234, MCA

Application For Beneficial Water Use Permit By City of Bozeman, Memorandum, Pgs. 8-22 (Adopted by DNRC *Final Order* January 9, 1985)(evidence of historic use must be compared to the proposed change in use to give effect to the implied limitations read into every decreed right that an appropriator has no right to expand his appropriation or change his use to the detriment of juniors).⁴

41. An applicant must also analyze the extent to which a proposed change may alter historic return flows for purposes of establishing that the proposed change will not result in adverse effect. The requisite return flow analysis reflects the fundamental tenant of Montana water law that once water leaves the control of the original appropriator, the original appropriator has no right to its use and the water is subject to appropriation by others. E.g., Hohenlohe, at ¶144; Rock Creek Ditch & Flume Co. v. Miller, 93 Mont. 248, 17 P.2d 1074, 1077 (1933); Newton v. Weiler, 87 Mont. 164, 286 P. 133(1930); Popham v. Holloron, 84 Mont. 442, 275 P. 1099, 1102 (1929); Galiger v. McNulty, 80 Mont. 339, 260 P. 401 (1927); Head v. Hale, 38 Mont. 302, 100 P. 222 (1909); Spokane Ranch & Water Co., 37 Mont. at 351-52, 96 P. at 731; Hidden Hollow Ranch v. Fields, 2004 MT 153, 321 Mont. 505, 92 P.3d 1185; In the Matter of Application for Change Authorization No. G (W)028708-411 by Hedrich/Straugh/Ringer, DNRC Final Order (Dec. 13, 1991); In the Matter of Application for Change Authorization No. G(W)008323-G76l By Starkel/Koester, DNRC Final Order (Apr. 1, 1992); In the Matter of Application to Change a Water Right No. 411 30002512

⁴ Other western states likewise rely upon the doctrine of historic use as a critical component in evaluating changes in appropriation rights for expansion and adverse effect: Pueblo West Metropolitan District v. Southeastern Colorado Water Conservancy District, 717 P.2d 955, 959 (Colo. 1986)("[O]nce an appropriator exercises his or her privilege to change a water right ... the appropriator runs a real risk of requantification of the water right based on actual historical consumptive use. In such a change proceeding a junior water right ... which had been strictly administered throughout its existence would, in all probability, be reduced to a lesser quantity because of the relatively limited actual historic use of the right."); Santa Fe Trail Ranches Property Owners Ass'n v. Simpson, 990 P.2d 46, 55 -57 (Colo., 1999); Farmers Reservoir and Irr. Co. v. City of Golden, 44 P.3d 241, 245 (Colo. 2002)("We [Colorado Supreme Court] have stated time and again that the need for security and predictability in the prior appropriation system dictates that holders of vested water rights are entitled to the continuation of stream conditions as they existed at the time they first made their appropriation); Application for Water Rights in Rio Grande County, 53 P.3d 1165, 1170 (Colo. 2002); Wyo. Stat. § 41-3-104 (When an owner of a water right wishes to change a water right ... he shall file a petition requesting permission to make such a change The change ... may be allowed provided that the quantity of water transferred ... shall not exceed the amount of water historically diverted under the existing use, nor increase the historic rate of diversion under the existing use, nor increase the historic amount consumptively used under the existing use, nor decrease the historic amount of return flow, nor in any manner injure other existing lawful appropriators.); Basin Elec. Power Co-op. v. State Bd. of Control, 578 P.2d 557, 564 -566 (Wyo, 1978) (a water right holder may not effect a change of use transferring more water than he had historically consumptively used; regardless of the lack of injury to other appropriators, the amount of water historically diverted under the existing use, the historic rate of diversion under the existing use, the historic amount consumptively used under the existing use, and the historic amount of return flow must be considered.)

by Brewer Land Co, LLC, DNRC Proposal For Decision and Final Order (2004); Admin. R.M. 36.12.101(56)(Return flow - that part of a diverted flow which is not consumed by the appropriator and returns underground to its original source or another source of water - is not part of a water right and is subject to appropriation by subsequent water users).⁵

42. Although the level of analysis may vary, analysis of the extent to which a proposed change may alter the amount, location, or timing return flows is critical in order to prove that the proposed change will not adversely affect other appropriators who rely on those return flows as part of the source of supply for their water rights. Royston, 249 Mont. at 431, 816 P.2d at 1059-60; Hohenlohe, at ¶¶ 45-6 and 55-6; Spokane Ranch & Water Co., 37 Mont. at 351-52, 96 P. at 731. Noted Montana Water Law scholar Al Stone explained that the water right holder who seeks to change a water right is unlikely to receive the full amount claimed or historically used at the original place of use due to reliance upon return flows by other water users. Montana Water Law, Albert W. Stone, Pgs. 112-17 (State Bar of Montana 1994).

43. In Royston, the Montana Supreme Court confirmed that an applicant is required to prove lack of adverse effect through comparison of the proposed change to the historic use, historic consumption, and historic return flows of the original right. 249 Mont. at 431, 816 P.2d at 1059-60. More recently, the Montana Supreme Court explained the relationship between the fundamental principles of historic beneficial use, return flow, and the rights of subsequent appropriators as they relate to the adverse effect analysis in a change proceeding in the following manner:

The question of adverse effect under §§ 85-2-402(2) and -408(3), MCA, implicates return flows. A change in the amount of return flow, or to the hydrogeologic pattern of return flow, has the potential to affect adversely downstream water rights. There consequently exists an inextricable link between the “amount historically consumed” and the water that re-enters the stream as return flow. . . .

An appropriator historically has been entitled to the greatest quantity of water he can put to use. The requirement that the use be both beneficial and reasonable, however, proscribes this tenet. This limitation springs from a fundamental tenet of western water law-that an appropriator has a right only to that amount of water historically put to beneficial use-developed in concert with the rationale that each subsequent appropriator “is entitled to have the water flow in the same manner as when he located,” and the appropriator may insist that prior appropriators do not

⁵ The Montana Supreme Court recently recognized the fundamental nature of return flows to Montana’s water sources in addressing whether the Mitchell Slough was a perennial flowing stream, given the large amount of irrigation return flow which feeds the stream. The Court acknowledged that the Mitchell’s flows are fed by irrigation return flows available for appropriation. Bitterroot River Protective Ass’n, Inc. v. Bitterroot Conservation Dist. 2008 MT 377, ¶¶ 22, 31, 43, 346 Mont. 508, ¶¶ 22, 31,43, 198 P.3d 219, ¶¶ 22, 31,43(citing Hidden Hollow Ranch v. Fields, 2004 MT 153, 321 Mont. 505, 92 P.3d 1185).

affect adversely his rights.

This fundamental rule of Montana water law has dictated the Department's determinations in numerous prior change proceedings. The Department claims that historic consumptive use, as quantified in part by return flow analysis, represents a key element of proving historic beneficial use.

We do not dispute this interrelationship between historic consumptive use, return flow, and the amount of water to which an appropriator is entitled as limited by his past beneficial use.

Hohenlohe, at ¶¶ 42-45 (internal citations omitted).

44. The Department's rules reflect the above fundamental principles of Montana water law and are designed to itemize the type of evidence and analysis required for an applicant to meet its burden of proof. Admin.R.M. 36.12.1901 through 1903. These rules forth specific evidence and analysis required to establish the parameters of historic use of the water right being changed. Admin.R.M. 36.12.1901 and 1902. The rules also outline the analysis required to establish a lack of adverse effect based upon a comparison of historic use of the water rights being changed to the proposed use under the changed conditions along with evaluation of the potential impacts of the change on other water users caused by changes in the amount, timing, or location of historic diversions and return flows. Admin.R.M. 36.12.1901 and 1903.

45. Applicant seeks to change existing water rights represented by its Water Right Claims. The "existing water rights" in this case are those as they existed prior to July 1, 1973, because with limited exception, no changes could have been made to those rights after that date without the Department's approval. Analysis of adverse effect in a change to an "existing water right" requires evaluation of what the water right looked like and how it was exercised prior to July 1, 1973. In McDonald v. State, the Montana Supreme Court explained:

The foregoing cases and many others serve to illustrate that what is preserved to owners of appropriated or decreed water rights by the provision of the 1972 Constitution is what the law has always contemplated in this state as the extent of a water right: such amount of water as, by pattern of use and means of use, the owners or their predecessors put to beneficial use. . . . the Water Use Act contemplates that all water rights, regardless of prior statements or claims as to amount, must nevertheless, to be recognized, pass the test of historical, unabandoned beneficial use. . . . To that extent only the 1972 constitutional recognition of water rights is effective and will be sustained.

220 Mont. at 529, 722 P.2d at 604; see also Matter of Clark Fork River Drainage Area, 254 Mont. 11, 17, 833 P.2d 1120 (1992).

46. Water Resources Surveys were authorized by the 1939 legislature. 1939 Mont. Laws Ch. 185, § 5. Since their completion, Water Resources Surveys have been invaluable evidence in water right disputes and have long been relied on by Montana courts. In re Adjudication of Existing Rights to Use of All Water in North End Subbasin of Bitterroot River Drainage Area in Ravalli and Missoula Counties, 295 Mont. 447, 453, 984 P.2d 151, 155 (1999)(Water Resources Survey used as evidence in adjudicating of water rights); Wareing v. Schreckendgust, 280 Mont. 196, 213, 930 P.2d 37, 47 (1996)(Water Resources Survey used as evidence in a prescriptive ditch easement case); Olsen v. McQueary, 212 Mont. 173, 180, 687 P.2d 712, 716 (1984) (judicial notice taken of Water Resources Survey in water right dispute concerning branches of a creek).

47. While evidence may be provided that a particular parcel was irrigated, the actual amount of water historically diverted and consumed is critical. E.g., In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC., DNRC Proposal for Decision adopted by Final Order (2005). The Department cannot assume that a parcel received the full duty of water or that it received sufficient water to constitute full-service irrigation for optimum plant growth. Even when it seems clear that no other rights could be affected solely by a particular change in the location of diversion, it is essential that the change also not enlarge an existing right. See MacDonald, 220 Mont. at 529, 722 P.2d at 604; Featherman, 43 Mont. at 316-17, 115 P. at 986; Trail's End Ranch, L.L.C. v. Colorado Div. of Water Resources 91 P.3d 1058, 1063 (Colo., 2004).

48. The Department has adopted a rule providing for the calculation of historic consumptive use where the applicant proves by a preponderance of the evidence that the acreage was historically irrigated. Admin. R. M. 36.12.1902 (16). In the alternative an applicant may present its own evidence of historic beneficial use. In this case Applicant has elected to proceed under Admin. R.M. 36.12.1902. (FOF No. 13).

49. If an applicant seeks more than the historic consumptive use as calculated by Admin.R.M .36.12.1902 (16), the applicant bears the burden of proof to demonstrate the amount of historic consumptive use by a preponderance of the evidence. The actual historic use of water could be less than the optimum utilization represented by the calculated duty of water in any particular case. E.g., Application for Water Rights in Rio Grande County 53 P.3d 1165 (Colo., 2002) (historical use must be quantified to ensure no enlargement); In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC., supra; Orr v. Arapahoe Water and Sanitation Dist. 753 P.2d 1217, 1223 -1224 (Colo., 1988)(historical use of a water right could

very well be less than the duty of water); Weibert v. Rothe Bros., Inc., 200 Colo. 310, 317, 618 P.2d 1367, 1371 - 1372 (Colo. 1980) (historical use could be less than the optimum utilization “duty of water”).

50. Based upon the Applicant’s evidence of historical use, the Applicant has proven by a preponderance of the evidence the historic use of Water Right Claim No. 41D 4735-00 of 87.1 AF diverted volume and 1.52 CFS flow rate with a consumptive use of 34.0 acre-feet. (FOF Nos. 9—20)

51. Based upon the Applicant’s comparative analysis of historic water use and return flows to water use and return flows under the proposed change, the Applicant has proven that the proposed change in appropriation right will not adversely affect the use of the existing water rights of other persons or other perfected or planned uses or developments for which a permit or certificate has been issued or for which a state water reservation has been issued. §85-2-402(2)(b), MCA. (FOF Nos. 21—29)

BENEFICIAL USE

52. A change applicant must prove by a preponderance of the evidence the proposed use is a beneficial use. §§85-2-102(4) and -402(2)(c), MCA. Beneficial use is and has always been the hallmark of a valid Montana water right: “[T]he amount actually needed for beneficial use within the appropriation will be the basis, measure, and the limit of all water rights in Montana . . .” McDonald, 220 Mont. at 532, 722 P.2d at 606. The analysis of the beneficial use criterion is the same for change authorizations under §85-2-402, MCA, and new beneficial permits under §85-2-311, MCA. Admin.R.M. 36.12.1801. The amount of water that may be authorized for change 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 (2003) (*affirmed on other grounds*, 2005 MT 60, 326 Mont. 241, 108 P.3d 518); Worden v. Alexander, 108 Mont. 208, 90 P.2d 160 (1939); Allen v. Petrick, 69 Mont. 373, 222 P. 451(1924); Sitz Ranch v. DNRC, DV-10-13390, Montana Fifth Judicial District Court, *Order Affirming DNRC Decision*, Pg. 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); Toohey v. Campbell, 24 Mont. 13, 60 P. 396 (1900)(“The policy of the law is to prevent a person from acquiring exclusive control of a stream, or any part thereof, not for present and actual beneficial use, but for mere future speculative profit or

advantage, without regard to existing or contemplated beneficial uses. He is restricted in the amount that he can appropriate to the quantity needed for such beneficial purposes.”); §85-2-312(1)(a), MCA (DNRC is statutorily prohibited from issuing a permit for more water than can be beneficially used).

53. The Applicant proposes to use water for irrigation which is a recognized beneficial use. §85-2-102(5), MCA. The Applicant has proven by a preponderance of the evidence that irrigation is a beneficial use and that 87.1 AF of diverted volume and 1.52 CFS flow rate of water requested is the amount needed to sustain the beneficial use and is within the standards set by DNRC Rule. §85-2-402(2)(c), MCA (FOF Nos. 30—32)

ADEQUATE MEANS OF DIVERSION

54. Pursuant to §85-2-402 (2)(b), MCA, the Applicant must prove by a preponderance of the evidence that the proposed means of diversion, construction, and operation of the appropriation works are adequate. This codifies the prior appropriation principle that the means of diversion must be reasonably effective for the contemplated use and may not result in a waste of the resource. Crowley v. 6th Judicial District Court, 108 Mont. 89, 88 P.2d 23 (1939); In the Matter of Application for Beneficial Water Use Permit No. 41C-11339900 by Three Creeks Ranch of Wyoming LLC (DNRC Final Order 2002)(information needed to prove that proposed means of diversion, construction, and operation of the appropriation works are adequate varies based upon project complexity; design by licensed engineer adequate).

55. Pursuant to §85-2-402 (2)(b), MCA, 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. (FOF Nos. 33—36)

POSSESSORY INTEREST

56. Pursuant to §85-2-402(2)(d), MCA, the 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. See also Admin.R.M. 36.12.1802

57. 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. (FOF Nos. 37)

PRELIMINARY DETERMINATION

Subject to the terms and analysis in this Preliminary Determination Order, the Department preliminarily determines that this Application to Change Water Right No. 41D 30155185 should be granted subject to the following.

The Applicant is authorized to add two new points of diversion to Statement of Claim 41D 4735-00. The authorized additional points of diversion are two portable pumps located within a 2,100-foot reach of the Big Hole River in Govt Lots 4 and 5 of the W2NW Section 6, T04S R06W, Madison County. The original point of diversion at the Seyler-Harvey Ditch will remain on the water right but will not be used simultaneously with the additional pumps. No change in purpose or place of use is authorized and irrigation will continue to occur on 34 acres located in the NWNW Section 6, T04S R06W, Madison County with a maximum flow rate of 1.52 CFS, diverted volume of 87.1 AF, and consumed volume of 34.0 AF with a period of diversion and period of use from April 15 to September 30.

The Authorization will be subject to the following condition:

IMPORTANT INFORMATION

AT TIMES WHEN WATER IS DIVERTED AT THE SEYLER-HARVEY DITCH UNDER STATEMENT OF CLAIM 41D 4735-00, THE AUTHORIZED PORTABLE PUMPS CANNOT BE USED. SIMULTANEOUS OPERATION OF THE POINTS OF DIVERSION WILL BE CAUSE FOR REVOCATION OF THIS AUTHORIZATION.

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 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. E.g., §§85-2-310, -312, MCA.

DATED this 29th day of November 2022.

/Original signed by Kerri Strasheim/
Kerri Strasheim, Manager
Bozeman 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 29th day of November 2022, by first class United States mail.

CROWSFOOT LLC
PO BOX 111
TWIN BRIDGES, MT 59754-0111

Regional Office, (406) 586-3136