

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

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APPLICATION TO CHANGE WATER RIGHT NO. 41D 30162270 by ABCW, LLC	}	PRELIMINARY DETERMINATION TO GRANT CHANGE
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On December 21, 2023, ABCW, LLC (Applicant) submitted Application to Change Water Right No. 41D 30162270 to change Statement of Claim 41D 191122-00 to the Bozeman Regional Office of the Department of Natural Resources and Conservation (Department or DNRC) after having a preapplication meeting on November 8, 2023. The Department published receipt of the application on its website. The Department sent the Applicant a deficiency letter under §85-2-302, Montana Code Annotated (MCA), dated June 18, 2024. The Applicant responded with information dated September 16, 2024. The Application was determined to be correct and complete as of December 12, 2024. The Department met with the Applicant's consultant (Water Rights, Inc.) on December 18, 2024. An Environmental Assessment for this application was completed on March 20, 2025.

INFORMATION

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

Application as filed:

- Irrigation Application for Change of Appropriation Water Right, Form 606-IR
- Attachments:
 - Appendix 2: Case 41D-144 Closing Order
 - Appendix 2: ABCW Soil Map Unit Descriptions
 - Appendix 2: August 11, 2023, Photoplate
 - Appendix 3: Larson-Narancich Ditch Manning's Equation
 - Appendix 3: 41D 191122-00 Center Ditch Manning's Equation
 - Appendix 3: 41D 191122-00 Field Ditches Manning's Equation
 - Appendix 4: 41D 191122-00 Pre-Application Meeting Form
 - Appendix 4: IWR Estimates Twin Bridges
 - Appendix 4: IWR Estimates 4_15 to 11_14
 - Appendix 4: Burma Golf Club Irrigation Design
 - Appendix 4: Toro Infinity Sprinkler Nozzle Chart

- Maps:

- 41D 191122-00 1954 WRS Irrigation Map IR.2.C Map: Historical Map, map produced by Water Rights, Inc, base map 1954 Madison County WRS
- 41D 191122-00 September 7, 1979, Aerial IR.2.C Historical Use Map: Historical Map, map produced by Water Rights, Inc, base map 9/7/1979, USDA
- 41D 191122-00 September 11, 2002, Aerial IR.2.C Historical Use Map: Historical Map, map produced by Water Rights, Inc, base map 9/11/2002
- 41D 191122-00 August 6, 2005, Aerial IR.2.C Historical Use Map: Historical Map, map produced by Water Rights, Inc, base map 8/6/2005, NAIP
- 41D 191122-00 July 18, 2011, Aerial IR.2.C Historical Use Map: Historical Map, map produced by Water Rights, Inc, base map 7/18/2011, NAIP
- 41D 191122-00 July 21, 2019, Aerial IR.2.C Historical Use Map: Historical Map, map produced by Water Rights, Inc, base map 7/21/2019, NAIP
- 41D 191122-00 New Irrigation Map: Proposed Use Map, map produced by Water Rights, Inc, base map 9/27/2021, NAIP
- 41D 191122-00 Ditches Soils Map: map produced by Water Rights, Inc, base map 9/27/2021, NAIP
- Claim 41D 191122-00 IR.2.E Map: Proposed Use Map, map produced by Water Rights, Inc, base map 9/27/2021, NAIP
- 41D 191122-00 Retired Ditches Map: map produced by Water Rights, Inc, base map 9/27/2021, NAIP
- 41D 191122-00 Pivot Sprinkler Irrigation IR.3.F Map: map produced by Water Rights, Inc, base map 9/27/2021, NAIP

Information Received after Application Filed

- Email chain between Applicant, consultant, and Department (Lyra Reynolds) dated May 6, 2024, RE: Application Status (status update and shapefile request)
- Email chain between Applicant, consultant, and Department (Lyra Reynolds) dated June 12, 2024, RE: ABCW Change Authorizations (application status update)
- Email chain between consultant and Department (Lyra Reynolds) dated September 26, 2024, RE: ABCW 606 Deficiency Responses
- Email chain between Applicant, consultant, and Department (Lyra Reynolds) dated October 30, 2024, RE: Change Application Clarification Question (acres clarification)

- Email from consultant dated November 12, 2024, RE: Water Court Filed 41D 191123 00 VMA (verified motion to amend Claim 41D 191123-00)
- Email chain between Applicant, consultant, and Department (Lyra Reynolds) dated December 10, 2024, RE: ABCW LLC Correct & Complete Determination
- Email chain between Applicant, consultant, and Department (Lyra Reynolds) dated December 13, 2024, RE: Correct and Complete – Change Applications 41D 30162270 & 41D 30162271 (requesting meeting following Technical Reports)
- Email chain between consultant and Department (Lyra Reynolds) dated December 19, 2024, RE: Correct and Complete – Change Applications 41D 30162270 & 41D 30162271 (meeting follow-up)

Information within the Department's Possession/Knowledge

- DNRC Irrigation Change Application 41D 30162270 Technical Report, dated December 12, 2024
- DNRC Irrigation Change Application 41D 30162270 Surface Water Change Report, dated December 4, 2024
- Application to Change Existing Water Right No. 41D 30162271 by ABCW, LLC
- DNRC Irrigation Change Application 41D 30162271 Technical Report, dated December 12, 2024
- DNRC Irrigation Change Application 41D 30162271 Surface Water Change Report, dated December 4, 2024
- Water Resources Survey, Madison County, 1965
- Statement of Claim 41D 191122-00 file
- Statement of Claim 41D 191123-00 file
- Change Authorization 41D 19112200 file
- Change Authorization 41D 19112201 file
- 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.
 - "Technical Memorandum: Distributing Conveyance Loss on Multiple User Ditches" (Water Management Bureau, 2020)
 - "Development of Standardized Methodologies to Determine Historic Diverted Volume" (Roberts and Heffner, 2012)

- “Technical Memorandum - Assessment of new consumptive use and irrecoverable losses associated with change applications” (Heffner and Roberts, 2013)
- “Technical Memorandum: Calculating Return Flows” (Levens, Groen, Zundel, and Holmes, 2019)

The Department has fully reviewed and considered the evidence and argument submitted in this Application and preliminarily determines the following pursuant to the Montana Water Use Act (Title 85, chapter 2, part 3, part 4, MCA).

For the purposes of this document, Department of DNRC means the Department of Natural Resources & Conservation; Claim means Statement of Claim; CFS means cubic feet per second; GPM means gallons per minute; AF means acre-feet. Values seen in tables were calculated using the Department standard Irrigation and Conveyance Loss Calculator and may differ up to 0.1 due to rounding.

WATER RIGHTS TO BE CHANGED

FINDINGS OF FACT

1. Applicant seeks to change the place of use (POU) of Statement of Claim 41D 191122-00 in this Application. Claim 41D 191122-00 is diverted from the Big Hole River at a flow rate of 12.50 CFS from April 15 to November 14 through a headgate in the SESWNE Section 36, T4S, R8W, Madison County. The claim is used for irrigation of 321.2 acres in Sections 28, 29, and 31, T4S, R7W, Madison County from 4/15 to 11/14. The claim is also diverted into three ponds for wildlife-waterfowl use in SWSWSW, SWSWNE, and NESWNE Section 29, T4S, R7W, Madison County from January 1 to December 31. Claim 41D 191122-00 is conveyed to the POUs via the Larson-Narancich Ditch. The water right proposed for change is seen in Table 1.

Table 1. Water right proposed for change

Water Right No.	Purpose	Flow Rate	Volume	Period of Use	Point of Diversion	Place of Use	Priority Date	Acres
41D 191122-00	Irrigation Wildlife- Waterfowl	12.50 CFS	N/A	4/15-11/14 1/1-12/31	SESWNE Section 36, T4S, R8W, Madison County	W2NWNW Section 28, Section 29, & NE Section 31, T4S, 7W, Madison County SWSWSW, SWSWNE, NESWNE Section 29, T4S, R7W, Madison County	April 10, 1900	321.2

2. Claim 41D 191122-00 is supplemental to Claim 41D 191123-00. The water rights are supplemental on 301.2 acres irrigated in Section 29 and Section 31, T4S, R7W, Madison County. Claim 41D 191123-00 is part of concurrent Change Application No. 41D 30162271. No other water rights irrigate the historical place of use. Stockwater Permit 41D 97962-00 is associated

with the water right proposed for change as it is for stock use on the 3.8 surface acre pond in the SWSWSW Section 29, T4S, R7W, Madison County. Permit 41D 97962-00 allows year-round stock use from the existing pond already authorized under Claims 41D 191122-00 and 41D 191123-00.

3. The water right proposed for change has undergone two previous change authorizations, Authorization Nos. 41D 19112200 and 41D 19112201. Change Authorization No. 41D 19112200, issued on December 18, 1995, changed the purpose and POU of a portion of Claims 41D 191122-00 and 41D 191123-00. This change retired 3.8 acres in the SWSWSW Section 29, T4S, R7W, Madison County to add a 7.6 AF capacity wildlife-waterfowl pond to the water rights. This pond is also used by Stockwater Permit 41D 97962-00 for stock use.

4. The second change, Change Authorization No. 41D 19112201 issued on July 29, 1999, changed the POU of a portion of Claims 41D 191122-00 and 41D 191123-00. This change retired an additional 10 acres to add an additional two wildlife-waterfowl ponds, one 8 AF capacity pond and one 5.8 AF capacity pond. Both previous change authorizations have been certified.

5. Ownership is clear, and the water right proposed for change is not part of a divided interest.

CHANGE PROPOSAL

FINDINGS OF FACT

6. The Applicant proposes to change the POU of Statement of Claim 41D 191122-00. Water will continue to be diverted from the Big Hole River via the historical POD and conveyance system from 4/15 to 11/14 for irrigation and wildlife-waterfowl use. The proposed POU is a 63.5-acre golf course in the SW Section 21, NW Section 28, and NE Section 29, all in T4S, R7W, Madison County. Of the 63.5-acre course, approximately 32.3 acres are outside the historical POU, and 31.2 acres are within the historical POU of Claim 41D 191122-00. The Applicant proposes to retire 72 acres in Sections 28 and 29, T4S, R7W, Madison County as part of the change. Historical acres not retired will remain in use. No change in POD, purpose, or places of storage are proposed. Following the change, Claim 41D 191122-00 will continue to be supplemental to Claim 41D 191123-00 and Stockwater Permit 41D 97962-00. The proposed change can be seen in Figures 1 and 2.

7. This change application was submitted concurrently with Change Application No. 41D 30162271 to change the POU of supplemental water right Claim 41D 191123-00.

8. This Application is subject to the following condition:

IMPORTANT INFORMATION

IRRIGATION USE ON THE 63.5-ACRE GOLF COURSE MAY ONLY OCCUR 4/15 TO 11/10.

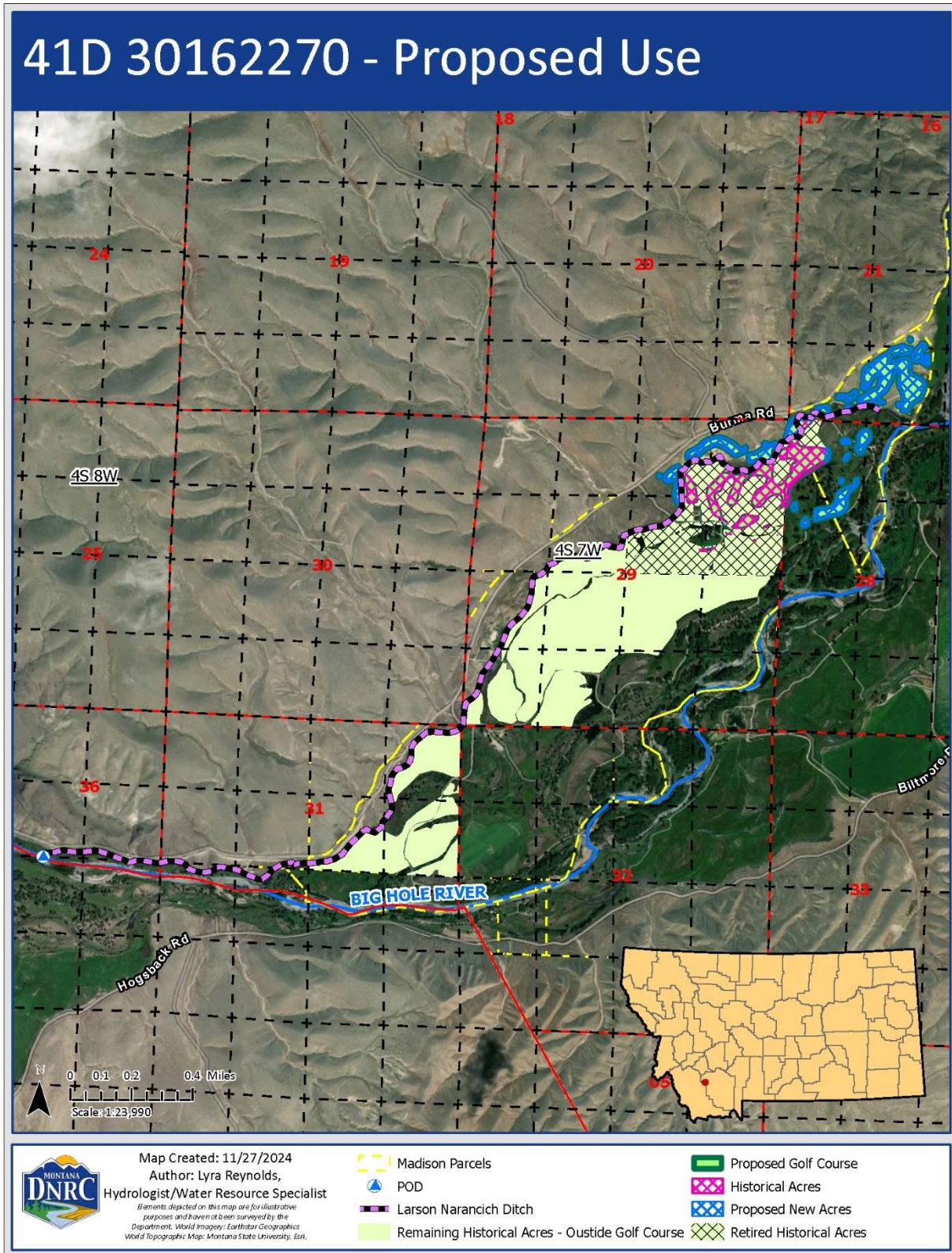


Figure 1. Map of proposed Change Application No. 41D 30162270

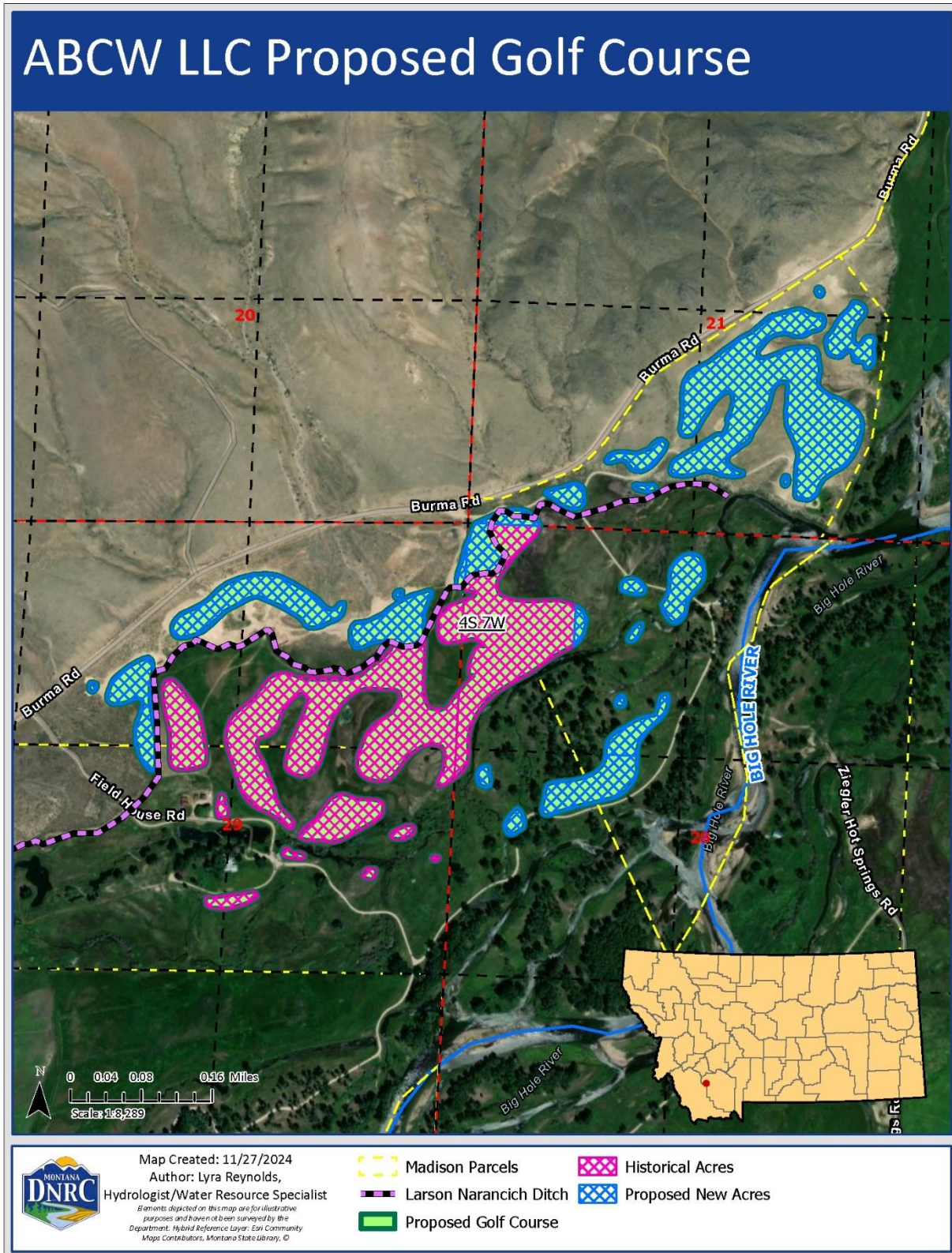


Figure 2. Proposed golf course area

CHANGE CRITERIA

9. 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 probable 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.

10. 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*, ¶¶ 29-31; *Town of Manhattan*, ¶ 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

11. Claim 41D 191122-00 is a filed right with a priority date of April 10, 1900. Claim 41D 191122-00 was part of the Temporary Preliminary Decree for Basin 41D. Claim 41D 191122-00 has undergone two previous change authorizations: Authorization Nos. 41D 19112200 and 41D 19112201.

Period of Diversion and Period of Use

12. Claim 41D 191122-00 was filed with a period of use from 4/15 to 11/10. During the Temporary Preliminary Decree for Basin 41D, DNRC examination allowed a conversion limitation of 11/14 instead of 11/10 to remain, so 4/15 to 11/14 was decreed. The Applicant stated in the application materials that the diversions and irrigation of the historical POU typically started on 4/15 and ceased by 11/14. A period of diversion and irrigation use of 4/15 to 11/14 is similar to the periods of the water rights supplemental to Claim 41D 191122-00, which are also diverted through the historical POD of Claim 41D 191122-00. This period of diversion and use does fall outside the irrigation standard in ARM 36.12.112 for Climatic Area IV, but the Applicant stated a period of diversion and use from 4/15 to 11/14 closely mirrors the historical pre-July 1, 1973, use of Claim 41D 191122-00.

13. The period of use for the water right was modified by the previous change authorizations, as the wildlife-waterfowl purpose has a year-round period of use. The period of use may differ from the period of diversion for this purpose as water is impounded for this use. The Applicant provided information in the application materials stating the historical irrigation purpose period of use is 4/15 to 11/14 and the wildlife-waterfowl purpose period of use is 1/1 to 12/31. The Department finds the historical period of diversion for Claim 41D 191122-00 is 4/15 to 11/14, the period of use for irrigation is 4/15 to 11/14, and the period of use for wildlife-waterfowl use is 1/1 to 12/31.

Flow Rate

14. Claim 41D 191122-00 has a claimed flow rate of 12.5 CFS. Claim 41D 191122-00 was historically diverted from the Big Hole River via a headage at the Larson-Narancich Ditch in Section 36, T4S, R8W, Madison County for irrigation use. The Applicant provided measurements and capacity calculations of the Larson-Narancich Ditch at the headgate and at a Parshall flume located down-ditch that the Department used to calculate the ditch capacity. The Applicant stated the Parshall flume has a 5-foot throat and included pictures and measurements of the historical structure in the application materials. Using the Bureau of Reclamation Water Measurement Manual, the capacity of the 5-foot Parshall flume is 60.1 CFS. The Larson-Narancich Ditch

conveys three water rights: Claims 41D 191117-00, 41D 191122-00, and 41D 191123-00. The total flow rate conveyed by the ditch is 42.7 CFS, equal to the sum of the flow rates of the water rights in the ditch. The Department finds the capacity of the ditch found at the flume, 60.1 CFS, is sufficient to carry the maximum 42.7 CFS flow rate. The Department finds the maximum flow rate of Claim 41D 191122-00 is 12.5 CFS.

Historical Purposes

15. Claim 41D 191122-00 was originally claimed for irrigation of 335 acres in Sections 28, 29, and 31, T4S, R7W, Madison County. The water right proposed for change has undergone two previous change authorizations, Authorization Nos. 41D 19112200 and 41D 19112201, to change a portion of the water right. The previous change authorizations examined only the portion of the water right proposed for change and did not look at all the historical acres on the water right. For the historical use analysis in this change application (41D 30162270) the Department examined the water right as a whole. The following acres found reflect acres that were historically irrigated prior to the previous change authorizations (pre-July 1, 1973, acres) and the historical acres that remained following the previous change authorizations (post-change acres). The Department found a maximum of 329.9 acres were irrigated prior to the change authorizations using the Madison County Water Resources Survey and Photo 178-50. The previous change authorizations retired a total 13.8 acres from the historical POU in Section 29, T4S, R7W, Madison County, leaving 321.1 acres authorized for irrigation. The Department found a maximum 316.1 acres were irrigated following the previous changes. The historical irrigation of 316.1 acres is supported by 2002 NAPP photo, 2005 NAIP imagery, and 2009 NAIP imagery.

16. The Department found less acres than authorized using historical aerial imagery. These acres were identified in Section 28, T4S, R7W, Madison County, which were historically unchanged acres. The Applicant concurred, in the application materials, with the Department that less acres than authorized were historically irrigated. The Department finds the irrigation POU of Claim 41D 191122-00 is 14.9 acres in W2NWNW Section 28, 246.2 acres in Section 29, and 55 acres in NE Section 31, all in T4S, R7W, Madison County. The Department finds maximum number of acres irrigated by Claim 41D 191122-00 following the previous change authorizations is 316.1 acres.

17. Claim 41D 191122-00 has also been used historically for wildlife-waterfowl purposes. The previous change authorizations added three reservoirs to the POU of the claim: a 7.6 AF capacity pond in the SWSWSW Section 29, an 8 AF capacity pond in the SWSWNE Section 29, and a 5.8 AF capacity pond in the NESWNE Section 29, all in T4S, R7W, Madison County. The wildlife-

waterfowl ponds are visible in historical aerial imagery and the previous changes were completed and certified. The volume attributed to the ponds is equal to the acre-feet per acre volume associated with the acres retired from the historical POU. A total 46.2 AF volume is diverted into the ponds: 16.2 AF for the pond in the SWSWNE Section 29 and 30 AF for the ponds in the SWSWNE and NESWNE Section 29, all in T4S, R7W, Madison County. The ponds are part of a flow-through system where water diverted into the ponds can flow back out to the irrigation ditch system, so the wildlife-waterfowl pond use is considered to be non-consumptive, per standards at the time of the change. The volume of Claim 41D 191122-00 for wildlife/waterfowl purpose has been certified through the previous change authorizations.

Historical Consumptive Volume

18. The Department calculated the historical consumptive volume (HCV) for the irrigation use for Claim 41D 191122-00 using the Department's standard methodology pursuant to ARM 36.12.1902. The water right proposed for change is a Statement of Claim and the previous change authorizations only calculated historical use for the acres to be retired previously. The remaining acres irrigated by Claim 41D 191122-00 are part of the originally claimed POU, so the HCV was found for the acres as they existed prior to July 1, 1973. The Department found a maximum 316.1 acres remained irrigated in the POU following the previous change authorizations, so historical use was found based on these acres.

19. Water was historically diverted from the Big Hole River by a headgate in the SESWNE Section 36, T4S, R8W, Madison County and conveyed via the Larson-Narancich Ditch to flood irrigate a total 316.1 acres in Sections 28, 29, and 31, T4S, R7W, Madison County. The Applicant stated pasture grass, grain, and alfalfa were grown in the historical POU. Claims 41D 191122-00 and 41D 191123-00 were supplementally used to irrigate 301.2 acres in Sections 29 and 31, T4S, R7W, Madison County. Claim 41D 191123-00 is part of concurrent Change Application No. 41D 30162271. The Department calculated historical consumptive use of the POU according to the rules set forth in ARM 36.12.1902 using the following equations and information about historical irrigation practices, summarized in Table 2.

$$\text{Total HCV} = \text{Crop Consumption} + \text{Historical Irrecoverable Losses}$$

Crop Consumption

$$= \text{Twin Bridges ET} * \frac{1\text{ft}}{12\text{inches}} * \text{Madison County Management Factor} \\ * \text{Historical Acres}$$

$$\text{Historical Irrecoverable Losses} = \text{Field Applied Volume} * \text{IL\%}$$

$$\text{Field Applied Volume} = \frac{\text{Crop Consumption}}{\text{Field Efficiency}}$$

Table 2. Historical consumptive volume of historical POU

Field ID	Acres	Weather Station	NIR (in)	Management Factor	Field Efficiency	Crop Consumption (AF)	Applied Volume (AF)	IL (AF)	Total Consumed Volume (AF)
Section 28	14.9	Twin Bridges	16.98	0.652	0.6	13.7	22.9	1.1	14.9
Section 29	246.2	Twin Bridges	16.98	0.652	0.6	227.1	378.6	18.9	246.1
Section 31	55	Twin Bridges	16.98	0.652	0.6	50.7	84.6	4.2	55
Total	316.1					291.5	486.1	24.2	316

20. Statement of Claim 41D 191122-00 was supplemental to Claim 41D 191123-00 on 301.2 acres in Sections 29 and 31, T4S, R7W, Madison County. No other water rights irrigated the historical POU of Claim 41D 191122-00. The HCV for the historical POU was distributed to Claim 41D 191122-00 based on its proportion of the total flow rate diverted to the POU; this is summarized in Tables 3 and 4.

Table 3. Historical consumptive volume of supplemental water rights

Water Right No	Field ID	Flow Rate (CFS)	Field Total Flow Rate (CFS)	Proportion	Crop Consumption - Supplemental (AF)	Field Applied - Supplemental (AF)	Consumed Volume - Supplemental (AF)
41D 191122-00	Section 28	12.5	12.5	1	13.7	22.9	14.9
41D 191123-00	Section 29	24.14	36.64	0.66	149.9	249.4	162.1
41D 191122-00	Section 29	12.5	36.64	0.34	77.2	129.2	84
41D 191123-00	Section 31	24.14	36.64	0.66	33.5	55.7	36.2
41D 191122-00	Section 31	12.5	36.64	0.34	17.2	28.9	18.8

Table 4. Historical consumptive volume for water right proposed for change

Water Right No	Crop Consumption - Supplemental (AF)	Applied Volume - Supplemental (AF)	Consumed Volume - Supplemental (AF)
41D 191122-00	108.1	181	117.7

Historical Diverted Volume

21. Historical diverted volume (HDV) is the sum of the pond volumes, historical field applied volume and the seasonal conveyance losses attributed to a water right. Seasonal conveyance losses are the sum of seepage loss, vegetation loss, and losses due to ditch evaporation. Using down-ditch measurements and information provided by the Applicant, the Department calculated seasonal conveyance losses for the Larson-Narancich Ditch. Conveyance losses were distributed to all water rights in the Larson-Narancich Ditch based on the Department's memorandum "Distributing Conveyance Loss on Multiple User Ditches" (Heffner, 2020). The Department used the dimensions of the ditch at the 5-foot Parshall flume to calculate conveyance losses, as the

Applicant stated this measurement was the most representative of the ditch. The following equation was used to calculate conveyance losses:

$$\text{Water Right Conveyance Loss} = \text{Seasonal Conveyance Loss}_{\text{ditch}} * \frac{\text{Flow Rate}_{\text{WR}}}{\text{Total Flow Rate}_{\text{ditch}}}$$

22. The Larson-Narancich Ditch historically conveyed three water rights: Claims 41D 191117-00, 41D 191122-00, and 41D 191123-00. All three claims conveyed through the ditch are irrigation claims and were considered in calculating and distributing conveyance losses. The seasonal conveyance losses in the Larson-Narancich Ditch, shown in Table 5, were calculated using information provided by the Applicant and the equations below. Water was diverted from mid-April (4/15) and ended mid-November (11/14) for Claims 41D 191122-00 and 41D 191117-00; diversions under Claim 41D 191123-00 ceased 11/10. The Applicant stated diversions were paused for haying, but water was continuously diverted for irrigated pasture lands. The conveyance losses were found for 4/15 to 11/10, when all the water rights were being conveyed through the ditch, and for 11/10 to 11/14 to account for losses after Claim 41D 191123-00 was no longer diverted. The conveyance losses were then distributed to the claims based on the flow rate proportion each water right contributed to the ditch flow rate, seen in Table 6.

$$\begin{aligned} \text{Seasonal Conveyance Loss}_{\text{ditch}} \\ = \text{Seepage Loss}_{\text{ditch}} + \text{Vegetation Loss}_{\text{ditch}} + \text{Ditch Evaporation}_{\text{ditch}} \end{aligned}$$

$$\text{Seepage Loss}_{\text{ditch}} = (\text{Wetted Perimeter} * \text{Ditch Length} * \text{Loss Rate} * \text{Days}) * \frac{1 \text{ acre}}{43560 \text{ ft}^2}$$

$$\text{Vegetation Loss}_{\text{ditch}} = (\% \text{ loss per mile}) * (\text{Ditch Length}) * (\text{Flow Rate}) * (\text{Days}) * 2$$

$$\text{Ditch Evaporation Loss}_{\text{ditch}} = (\text{Surface Area} * \text{Adjusted Net Evaporation}) * \frac{1 \text{ acre}}{43560 \text{ ft}^2}$$

$$\text{Surface Area} = (\text{Wetted Width ft}) * (\text{Length of Ditch ft})$$

Table 5. Larson-Narancich Ditch conveyance losses

Ditch ID	Length (ft)	Flow Rate (CFS)	Width (ft)	Wetted Perimeter (ft)	Ditch Loss Rate (ft ³ /ft ² /day)	No. of Days Irrigated	Adj. Net Evaporation (in)	Seepage Loss (AF)	Vegetation Loss (AF)	Evaporative Loss (AF)	Total Conveyance Loss (AF)
Larson-Narancich (4/15-11/10)	4587	42.7	5	9	2	210	24.5	398	116.9	1.1	516
Larson-Narancich (11/10-11/14)	4587	18.56	5	9	2	4	0.35	7.58	0.97	0.02	8.56

Table 6. Larson-Narancich Ditch conveyance losses per water right

Water Right No	Ditch ID	WR Flow Rate (CFS)	Proportion	Water Right Conveyance Loss (AF)	Ditch Flow Rate (CFS)
41D 191117-00	Larson-Narancich (4/15-11/10)	6.06	0.14	72.2	42.7
41D 191123-00	Larson-Narancich (4/15-11/10)	24.14	0.57	294.1	42.7
41D 191122-00	Larson-Narancich (4/15-11/10)	12.5	0.29	149.6	42.7
41D 191117-00	Larson-Narancich (11/10-11/14)	6.06	0.33	2.8	18.56
41D 191122-00	Larson-Narancich (11/10-11/14)	12.5	0.67	5.77	18.56

23. The Department calculated the HDV pursuant to ARM 36.12.1902(10) and the Department's standard methodology (Roberts and Heffner, 2012). The Department calculated the HDV based on information provided by the Applicant about the historical irrigation practices, pond operations, and the Larson-Narancich Ditch, as well as information available from the previous change authorizations. The HDV for Claim 41D 191122-00 was found for the water right as it exists following the completion of the previous change authorizations.

24. The Applicant stated water was diverted starting 4/15 and ended around 11/14 under Claim 41D 191122-00. Water was diverted from the Big Hole River via a headgate and conveyed through the Larson-Narancich Ditch to the historical POU. From the Larson-Narancich Ditch, water was conveyed through the POU by multiple lateral ditches. Water that was diverted for the wildlife-waterfowl ponds was conveyed using the same systems as irrigation water; irrigation water would also flow through the ponds prior to being applied to the field. The HDV for Claim 41D 191122-00 is equal to the sum of the historically applied volume, historical conveyance losses, and the non-consumptive flow-through volume of the ponds. The Department used the following equation to calculate the HDV; these calculations are summarized in Table 7.

Water Right HDV

$$= \frac{\text{Water Right Crop Consumption}}{\text{Field Efficiency}} + \text{Water Right Conveyance Loss} \\ + \text{Pond Volume}$$

Table 7. Historical diverted volume

Water Right No	Crop Consumption - Supplemental (AF)	Applied Volume - Supplemental (AF)	Conveyance Losses - Supplemental (AF)	Pond Volume (AF)	Total Diverted Volume (AF)
41D 191122-00	108.1	181	155.37	46.2	382.6

25. The Department finds the following historical use for Claim 41D 191122-00, as shown in Table 8.

Table 8. Summary of historical use findings for Claim 41D 191122-00

Water Right No	Priority Date	Purpose (Total Acres)	Flow Rate	Diverted Volume	Consumptive Use	Place of Use	Point of Diversion
41D 191122-00	April 1, 1900	Irrigation (316.1 Acres) Wildlife-waterfowl	12.5 CFS	382.6 AF	117.7 AF	W2NWNW Section 28, Section 29, & NE Section 31, T4S, 7W, Madison County SWSWSW, SWSWNE, NESWNE Section 29, T4S, R7W, Madison County	SESWNE Section 36, T4S, R8W, Madison County

ADVERSE EFFECT**FINDINGS OF FACT**

26. The Applicant proposes to change the POU of Claim 41D 191122-00 to irrigate 32.3 acres outside of the historical POU. To offset the new consumptive use associated with the new irrigated acres, the Applicant proposes to permanently retire 72 acres of historical irrigation. The Applicant proposes to continue to irrigate 244.1 acres within the historical POU, resulting in a total 276.4 acres irrigated following the proposed change. No changes in POD, purpose, or places of storage are proposed. Claim 41D 191122-00 will also be used along with Claim 41D 191123-00 to irrigate historical and new acres within the POU. Claim 41D 191122-00 will continue to be used for irrigation and wildlife-waterfowl purposes after the proposed change.

27. The proposed POU of Claim 41D 191122-00 includes a 63.5-acre golf course, seen in Figures 1 and 2. Water will continue to be diverted from the Big Hole River via the historical POD from 4/15 to 11/14 for irrigation use. Approximately 32.3 acres of the course are outside the historical POU in Sections 21, 28, and 29, T4S, R7W, Madison County, and 31.2 acres are within the historical POU of Claims 41D 191122-00 and 41D 191123-00. The Applicant proposes to retire 72 acres in Sections 28 and 29 as part of the change. Claims 41D 191122-00 and 41D 191123-00 will be entirely supplemental on the new acres. After the proposed change, Claim 41D 191122-00 will be used to irrigate 276.4 acres in Sections 21, 28, 29, and 31, T4S, R7W, Madison County.

28. The consumptive use associated with the proposed place of use will change from the historical consumptive use. The Applicant proposes to plant Idaho Fescue in the new acres and irrigate the 63.5-acre golf course using sprinkler irrigation from 4/15 to 11/10. Water will continue to be diverted and used from 4/15 to 11/14 for the remaining historical acres, as done historically. In the application materials, the Applicant finds proposed use using the Department's Consumptive Use Methodology – Turf Grass (New Projects) memorandum along with the proposed use management factor found in ARM 36.12.1902 for calculating the consumptive volume for the new acres. The Department utilized the Turf Grass memorandum to find the Net

Irrigation Requirement (NIR) for the consumptive use associated with the proposed POU. The NIR was adjusted for the period of use for the proposed POU, and a management factor was applied to the proposed acres to find the consumptive use of the proposed POU. The consumptive volume associated with the new 32.3 acres was found and distributed to Claims 41D 191122-00 and 41D 191123-00 based on the proportion of flow rate each water right contributes to the total flow rate diverted to the POU. The consumptive volume of the new acres for Claim 41D 191122-00 was added to the historical consumptive volume associated with the remaining 244.1 historical acres to find the total proposed consumptive use following the proposed change. The proposed consumptive volume of Claim 41D 191122-00 is summarized in Tables 9-13.

Table 9. Proposed consumptive volume of new acres

Field ID	Acres	Weather Station	Adjusted NIR (in)	Management Factor	Field Efficiency	Crop Consumption (AF)	Applied Volume (AF)	IL (AF)	Total Consumed Volume - New Acres (AF)
Golf Course - Section 21 New	17.4	Twin Bridges	19.03	0.833	0.7	23	32.8	3.3	26.3
Golf Course - Section 28 New	6.9	Twin Bridges	19.03	0.833	0.7	9.1	13	1.3	10.4
Golf Course - Section 29 New	8	Twin Bridges	19.03	0.833	0.7	10.6	15.1	1.5	12.1
Total	32.3					42.7	60.9	6.1	48.8

Table 10. Proposed consumptive volume of supplemental water rights

Water Right No	Field ID	Flow Rate (CFS)	Field Total Flow Rate (CFS)	Proportion	Crop Consumption - Supplemental (AF)	Field Application - Supplemental (AF)	Consumed Volume - Supplemental (AF)
41D 191123-00	Golf Course - Section 21 New	24.14	36.64	0.66	15.18	21.6	17.3
41D 191122-00	Golf Course - Section 21 New	12.5	36.64	0.34	7.82	11.2	9
41D 191123-00	Golf Course - Section 28 New	24.14	36.64	0.66	6.006	8.6	6.9
41D 191122-00	Golf Course - Section 28 New	12.5	36.64	0.34	3.094	4.4	3.5
41D 191123-00	Golf Course - Section 29 New	24.14	36.64	0.66	6.996	9.9	8
41D 191122-00	Golf Course - Section 29 New	12.5	36.64	0.34	3.604	5.2	4.1

Table 11. Historical consumptive volume of remaining acres

Field ID	Acres	Weather Station	NIR (in)	Management Factor	Field Efficiency	Crop Consumption (AF)	Applied Volume (AF)	IL (AF)	Total Consumed Volume - Remaining Acres (AF)
Section 28 - Remaining ¹	10.7	Twin Bridges	16.98	0.652	0.6	9.9	16.5	0.8	10.7
Section 31 - Remaining	55	Twin Bridges	16.98	0.652	0.6	50.7	84.6	4.2	55
Section 29 - Remaining	178.4	Twin Bridges	16.98	0.652	0.6	164.6	274.3	13.7	178.3
Total	244.1					225.2	375.4	18.7	244

Table 12. Historical consumptive volume of supplemental water rights on remaining acres

Water Right No	Field ID	Flow Rate (CFS)	Field Total Flow Rate (CFS)	Proportion	Crop Consumption - Supplemental (AF)	Field Application - Supplemental (AF)	Consumed Volume - Supplemental (AF)
41D 191123-00	Section 28 - Remaining	24.14	36.64	0.66	6.534	10.9	7
41D 191122-00	Section 28 - Remaining	12.5	36.64	0.34	3.366	5.6	3.7
41D 191123-00	Section 31 - Remaining	24.14	36.64	0.66	33.462	55.7	36.2
41D 191122-00	Section 31 - Remaining	12.5	36.64	0.34	17.238	28.9	18.8
41D 191122-00	Section 29 - Remaining	12.5	36.64	0.34	55.964	93.6	60.8
41D 191123-00	Section 29 - Remaining	24.14	36.64	0.66	108.636	180.7	117.5

Table 13. Proposed consumptive volume of Claim 41D 191122-00

Water Right No	Crop Consumption - Supplemental All Proposed Acres (AF)	Applied Volume - Supplemental All Proposed Acres (AF)	Consumed Volume - Supplemental All Proposed Acres (AF)
41D 191122-00	91.1	148.90	99.90

29. The Applicant proposes to retire 72 historically irrigated acres and add 32.3 new acres, so Claim 41D 191122-00 will be used to irrigate a total 276.4 acres after the proposed change. As a result, the proposed consumed volume of Claim 41D 191122-00 is 99.9 AF. The proposed consumptive use is 17.8 AF less than the historical consumed volume of 117.7 AF. The Department finds the proposed change in place of use will not increase the consumed volume of Claim 41D 191122-00.

30. The Applicant will continue to use the historical POD and conveyance ditches after the proposed change. The Applicant proposes to retire a portion of the Larson-Narancich Ditch beginning in the E2SENW Section 29, T4S, R7W, Madison County and convey water to the proposed golf course using pipelines. Since the portion of the ditch that will be retired is within the

¹ Acres remaining in the historical POU in Section 28 were distributed between Claims 41D 191122-00 and 41D 191123-00 for proposed use, but not historical use. The 14.9 historical acres are claimed in the historical POU of Claim 41D 191122-00 but not Claim 41D 191123-00. For proposed use, these acres were considered to be in the historical footprint of the project. Therefore, the volume calculated for these acres uses historical parameters and is distributed to both water rights instead of just one.

POU, no changes in conveyance losses are proposed. The Applicant will not change the use and operation of the existing wildlife-waterfowl ponds as part of the proposed project. The new field applied use was added to the conveyance losses attributed to Claim 41D 191122-00 and the pond volumes to obtain the proposed diverted volume, shown in Table 14.

Table 14. Proposed diverted volume

Water Right No	Crop Consumption - Supplemental (AF)	Applied Volume - Supplemental (AF)	Conveyance Losses - Supplemental (AF)	Pond Volume (AF)	Total Diverted Volume (AF)
41D 191122-00	91.1	148.90	155.37	46.2	350.47

31. The proposed diverted volume of Claim 41D 191122-00 is 350.47 AF, which is 32.1 AF less than the historical diverted volume of 382.6 AF. The Applicant proposes to leave the difference in diverted volume, equal to 32.1 AF, instream in the Big Hole River at the historical POD. The Department finds the change in place of use will not increase the diverted volume of Claim 41D 191122-00.

32. The Department modeled return flows for the change in POU for Claim 41D 191122-00. The Big Hole River was identified as the receiving surface stream for historical and proposed return flows. The Department's Surface Water Change Report, dated December 4, 2024, identified the Big Hole River downstream of the NENESW Section 31, T4S, R7W, Madison County as the location of historical and proposed return flows. Historically, 63.3 AF of non-consumed volume returned to the Big Hole River. Under the proposed change, 49.1 AF of non-consumed volume will return to the Big Hole River. The return flow volumes under the proposed change would be 14.2 AF less than historically.

33. The Applicant proposes to leave 32.1 AF, equal to the difference between the historical and proposed diverted volumes, instream in the Big Hole River at the historical POD so a portion of the historically diverted volume is available during the historical period of diversion. Return flows will continue to accrue to the Big Hole River downstream of the NENESW Section 31, T4S, R7W, Madison County under new practices. The difference in return flows is also less than the volume left instream under the proposed change, so an analysis of timing of return flows was not conducted.

34. Following the proposed change, Claim 41D 191122-00 will continue to be supplemental to Claim 41D 191123-00 on historical and new acres in the POU. The Applicant proposes to change Claim 41D 191123-00 in Change Application No. 41D 30162271. The same historically irrigated acres in Section 29, T4S, R7W, Madison County are proposed to be retired in both change applications. The Applicant also proposes to add the same new acres to the water rights for the golf course. The golf course will be irrigated with both claims from 4/15 to 11/10, which is

the historical irrigation period of use for supplemental right Claim 41D 191123-00. The Applicant will divert water to the golf course through a secondary pump site in the Larson-Narancich Ditch, allowing the Applicant to ensure the course is only irrigated when both rights are being diverted. Claim 41D 191122-00 will be subject to the following condition as a result:

IMPORTANT INFORMATION

IRRIGATION USE ON THE 63.5-ACRE GOLF COURSE MAY ONLY OCCUR 4/15 TO 11/10.

35. The Department analyzed an area of potential adverse effect beginning at the POD in the SESWNE Section 36, T4S, R8W, Madison County downstream to where the Larson-Narancich Ditch joins back to the Big Hole River in the SWSESW Section 21, T4S, R7W, Madison County. Water rights with points of diversion in this reach or that share a POD or POU with Claim 41D 191122-00 were considered for adverse effect. The Applicant proposes to retire 72 acres from the historically irrigated POU to offset consumption associated with the new acres. Historically diverted water no longer diverted for the proposed project, equal to 32.1 AF, will be left instream in the Big Hole River. The Applicant will remove or fill field ditches that historically supplied the retired acres to ensure no intentional irrigation occurs on the 72 retired acres. The Applicant will not increase the diverted or consumed volume nor change the timing of diversions for the water right proposed for change. No change in location of return flows will occur, and an analysis of timing was not conducted as the water left instream is greater than the difference in return flows. No change is proposed to the existing wildlife-waterfowl ponds. The Applicant will continue to use the historical point of diversion and will not create an adverse effect to other users due to a shift in the location of a call for water.

36. The Department finds no adverse effect will occur as a result of the proposed change in place of use of Claim 41D 191122-00.

BENEFICIAL USE

FINDINGS OF FACT

37. The Applicant is not changing the purposes of the water right proposed for change. The purposes are remaining irrigation and wildlife-waterfowl uses which are recognized beneficial uses of water in the State of Montana.

38. The Applicant proposes to divert 350.47 AF at a maximum 12.5 CFS flow rate and consume 99.9 AF for continued irrigation and wildlife-waterfowl uses. A total 276.4 acres will be irrigated following the proposed change. The Department used the Department's Turf Grass

memorandum and standard outlined in ARM 36.12.1902 to find the proposed use associated with irrigation of 276.4 acres (FOF Nos. 28 – 30). The volumes associated with the existing ponds were found and certified as part of previous Change Authorization Nos. 41D 19112200 and 41D 19112201.

39. The Department finds the continued use of Claim 41D 191122-00 for irrigation of 276.4 acres and three wildlife-waterfowl ponds is a beneficial use of water.

ADEQUATE DIVERSION

FINDINGS OF FACT

40. The Applicant proposes to continue to divert Claim 41D 191122-00 from the Big Hole River at the historical POD at the Larson-Narancich headgate in the SESWNE Section 36, T4S, R8W, Madison County. Water will continue to be diverted and conveyed through the Larson-Narancich Ditch from 4/15 to 11/14 for irrigation and wildlife-waterfowl use, as done historically.

41. From the Larson-Narancich Ditch, irrigation water will continue to be conveyed through a ditch lateral known as the “Center Ditch” that lies within the POU. Water will flow through the Center Ditch within the POU to multiple lateral field ditches to irrigate the POU, as done historically. The Applicant stated that pipelines will also convey water through the POU to deliver water to irrigation structures for sprinkler irrigation of historical acres. Water that flows through the wildlife-waterfowl ponds in Section 29, T4S, R7W, Madison County is conveyed through the same infrastructure as the irrigation water.

42. The water used to irrigate the 63.5-acre golf course will be diverted through the historical headgate and conveyed through the Larson-Narancich Ditch to a secondary diversion in the SESENE of Section 29, T4S, R7W, Madison County. The secondary diversion, a pumping site composed of a 75 hp pump and motor with a maximum 3.34 CFS capacity, will convey water to the course via 12” mainlines and 6” lateral lines. Water will be applied to the course using large valve-in-head Toro sprinklers with various nozzles that have flow rates of 16 GPM, 24 GPM, and 31.6 GPM. The Applicant provided design plans and irrigation specifications to support the system requirements to adequately deliver water to the irrigation place of use (Application Materials, response to item IR.5.D).

43. The Larson-Narancich Ditch will continue to convey three water rights following the change: Claims 41D 191117-00, 41D 191122-00, and 41D 191123-00. Claims 41D 191122-00 and 41D 191123-00 are proposed for change in this change application or concurrent Change Application No. 41D 30162271. Claim 41D 191117-00 is not proposed for change. No third-party

water rights are in the Larson-Narancich Ditch. The Applicant provided measurements and capacity calculations of the Larson-Narancich Ditch at the headgate and a Parshall flume located down-ditch. The capacity of the headgate was found using the Hazen Williams Equation using the diameter of the headgate (60" wide by 36" tall). The Applicant stated the flume down-ditch of the headgate appears to be the historical structure and is a 5-foot Parshall flume, not a 4-foot flume as described in Montana Water Court Case 41D-144 (2014). Capacity at the 5-foot Parshall flume is based on the Bureau of Reclamation Water Measurement Manual for the maximum height of water able to be recorded in the flume (2 feet). The Department finds the capacity of the headgate is 77.6 CFS and the capacity of the ditch at the flume is 60.1 CFS. The maximum flow conveyed by the Larson-Narancich Ditch is 42.7 CFS. The capacity of the ditch and headgate are greater than the maximum flow conveyed through the system.

44. The Department finds the proposed diversion and conveyance infrastructure to be adequate.

POSSESSORY INTEREST

FINDINGS OF FACT

45. 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. (Change Application 41D 30162270 file)

CONCLUSIONS OF LAW

HISTORICAL USE AND ADVERSE EFFECT

46. 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*, ¶ 10 (an appropriator’s right only attaches to the amount of water actually taken and beneficially applied).²

47. 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 Royston*, 249 Mont. at 429, 816 P.2d at 1057; *Hohenlohe*, ¶¶ 43-45.³

48. 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*, ¶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.⁴ A comparative analysis of the historic use of the water right to the

² DNRC decisions are available at: <https://dnrc.mt.gov/Directors-Office/HearingOrders>

³ 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).

⁴A 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. Section 85-2-234, MCA

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*, ¶ 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 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).⁵

⁵ 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.)

49. 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*, ¶ 44; *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; ARM 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).⁶

50. 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 ¶¶ 45-46 and 55-6; *Spokane Ranch & Water Co.*, 37 Mont. at 351-52, 96 P. at 731.

51. 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,

⁶ 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, 198 P.3d 219, (citing *Hidden Hollow Ranch v. Fields*, 2004 MT 153, 321 Mont. 505, 92 P.3d 1185).

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 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).

52. 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. ARM 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. ARM 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. ARM 36.12.1901 and 1903.

53. 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).

54. 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).

55. 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).

56. 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. ARM 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 ARM 36.12.1902. (FOF No. 18).

57. If an Applicant seeks more than the historic consumptive use as calculated by ARM 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.*; *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").

58. Based upon the Applicant's evidence of historic use, the Applicant has proven by a preponderance of the evidence the historic use of Statement of Claim 41D 191122-00 to be a diverted volume of 382.6 AF, a historically consumed volume of 117.7 AF, and flow rate of 12.5 CFS. (FOF Nos. 11-25)

59. 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. Section 85-2-402(2)(b), MCA. (FOF Nos. 26 – 36)

BENEFICIAL USE

60. A change Applicant must prove by a preponderance of the evidence the proposed use is a beneficial use. Sections 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. ARM 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 (Mont. 1st Jud. Dist. Ct.) (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,, Order Affirming DNRC Decision, Pg. 3 (Mont. 5th Jud. Dist. Ct.) (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)

61. In *Sitz Ranch v. DNRC*, the applicant could only demonstrate need for 200 to 300 acre-feet of water but requested 800 acre-feet. *Sitz Ranch v. DNRC*, DV-10-13390, 2-3, Fifth Judicial

District Court, Order Affirming DNRC Decision (2011). The court upheld DNRC's decision that the applicant requested more water than could be beneficially used and thus did not prove beneficial use.

62. Applicant proposes to use water for irrigation and wildlife-waterfowl uses, which are recognized beneficial uses. Section 85-2-102(5), MCA. Applicant has proven by a preponderance of the evidence irrigation and wildlife-waterfowl are beneficial uses and that 350.47 acre-feet of diverted volume and 12.5 CFS flow rate of water requested is the amount needed to sustain the beneficial uses and is within the standards set by DNRC Rule. Section 85-2-402(2)(c), MCA (FOF Nos. 37 – 39).

ADEQUATE MEANS OF DIVERSION

63. 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).

64. 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. 40 – 44)

POSSESSORY INTEREST

65. 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 ARM 36.12.1802.

66. 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 No. 45).

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 30162270 should be granted subject to the following.

The Applicant is authorized to change the place of use of Statement of Claim 41D 191122-00. The Applicant is authorized to divert from a point of diversion in the SESWNE Section 36, T4S, R8W, Madison County. Under Claim 41D 191122-00, the Applicant may divert a maximum volume of 350.47 AF and consumed a volume of 99.9 AF at a flow rate of 12.5 CFS from 4/15 to 11/14. The Applicant may use Claim 41D 191122-00 for irrigation of 212.9 acres and wildlife-waterfowl use from 4/15 to 11/14 and for irrigation of 63.5 acres from 4/15 to 11/10. The authorized place of use for irrigation is in Table 15 below. The Applicant is authorized to continue wildlife-waterfowl use in the existing ponds in the SWSWSW, SWSWNE, and NESWNE Section 29, T4S, R7W, Madison County. The maximum flow rate and volume that will be diverted from the Big Hole River by the water right proposed for change cannot exceed 12.5 CFS and 350.47 AF.

Table 15. Legal land descriptions for the acres for irrigation. The 63.5-acre golf course is composed of both historical and new acres.

Total Acres	Type of Acres	Qtr Sec	Sec	Twp	Rge	County
17.4	New	SW	21	4S	7W	Madison
6.9	New	NW	28	4S	7W	Madison
10.7	Historical	W2NWNW	28	4S	7W	Madison
8	New	NE	29	4S	7W	Madison
178.4	Historical		29	4S	7W	Madison
55	Historical	NE	31	4S	7W	Madison

This Application is subject to the following condition:

IMPORTANT INFORMATION

IRRIGATION USE ON THE 63.5-ACRE GOLF COURSE MAY ONLY OCCUR 4/15 TO 11/10.

NOTICE

The Department will provide public notice of this Application and the Department's Preliminary Determination to Grant pursuant to § 85-2-307, MCA. The Department will set a deadline for objections to this Application pursuant to §§ 85-2-307, and -308, MCA. If this Application receives a valid objection, it will proceed to a contested case proceeding pursuant to Title 2, chapter 4, part 6, MCA, and § 85-2-309, MCA. If this Application receives no valid objection or all valid objections are unconditionally withdrawn, the Department will grant this Application as herein approved. If this Application receives a valid objection(s) and the valid objection(s) are conditionally withdrawn, the Department will consider the proposed condition(s) and grant the Application with such conditions as the Department decides necessary to satisfy the applicable criteria. E.g., §§ 85-2-310, -312, MCA.

Dated this 11th day of April 2025.

/Original signed by Kerri Strasheim/

Kerri Strasheim, Manager
Bozeman Regional Office
Montana 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 11th day of April, 2025, by first class United States mail.

ABCW LLC
7673 CABALLERO DR
SANDY, UT 84093-6237

LEE YELIN, WATER RIGHTS INC (CONSULTANT)
VIA EMAIL: WATERRIGHTSINC@GMAIL.COM

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