Helena Regional Office
1424 Ninth Avenue P.O. Box 201601
Helena, MT 59620-1601
406-444-6999

10/23/2025

LR Huckaba Ranch Inc
26 MT Highway 356
Cardwell, MT 59271

Subject: Preliminary Determination to GRANT Water Right Change Application No. 41E 30164689

Dear Applicant,

The Department of Natural Resources and Conservation (Department or DNRC) has received and considered public comments pursuant to §85-2-307(5), MCA on the following aspects of the Department's Draft Preliminary Determination for your Application:

- ❑ Adequate Diversion

The Department has reviewed the public comments. Following consideration of the public comments for our evaluation of the criteria for issuance of change authorization found in [§85-2-311/ §85-2-402], MCA, the Department has preliminarily determined that the criteria are met, and this application should be granted. A copy of the Preliminary Determination to Grant your Application is attached.

The Department will prepare a notice of opportunity to object to the Application based on issues identified in the public comment(s), pursuant to §85-2-308, MCA. If no valid objections are received within the objection period, the Department will issue the PD as final pursuant to §85-2-307(5)(c), MCA.

If valid objections are received, the Department will schedule a contested case hearing no more than 90 days after the objection filing deadline, per §85-2-309(1), MCA.

Please let me know if you have any questions.

Best,

Savannah Telander
Water Resources Specialist
406-444-6810
Savannah.Telander@mt.gov

CC:

Chris Edgington, chris@montanatu.org
Alli Pardis, allison.pardis@tu.org

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

* * * * * * *

APPLICATION TO CHANGE WATER RIGHT NO. 41E 30164689 by L R Huckaba Ranch Inc	**PRELIMINARY DETERMINATION TO GRANT CHANGE**

* * * * * * *

On March 6, 2025, HB Huckaba Ranch Inc (Applicant) submitted Application to Change Water Right No. 41E 30164689 to change Statements of Claim 41E 3407-00 and 41E 3408-00 to the Helena Regional Office of the Department of Natural Resources and Conservation (Department or DNRC). 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 March 17, 2025. The Applicant responded with information dated May 9, 2025. A Preapplication Meeting was held between the Department and the Applicant's representatives, Patrick Byroth, Chris Edgington, and Allison Pardis on October 17, 2024, in which the Applicant's representatives designated that the Technical Analyses for this Application would be completed by the Department. The Applicant returned the completed Preapplication Meeting Form on December 19, 2024. The Department delivered the Department completed the Technical Analyses on January 17, 2025. The Application was determined to be Correct and Complete as of June 6, 2025. An Environmental Assessment for this Application was completed July 23, 2025. The Draft Preliminary Determination to Grant was sent to the Applicant July 28, 2025. The Department provided notice of opportunity to provide public comment to this Application per 85-2-307(4), MCA on August 27, 2025. One public comment was received and considered by the Department. This Preliminary Determination to Grant document incorporated the Department's consideration of, and response to the public comment.

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
- Attachments:
    - Proposed POD 02: Adequate Means of Diversion and Operation – Question 33, 35, 39, AquaTech, dated February 6, 2023

- Proposed POD 01 & 03 Adequate Means of Diversion and Operation – Questions 33, 35, 39, Jim Richards, undated
- Letter from Barrick Gold Corporation – Golden Sunlight Mine Inc, Kristi Murphy, dated November 2, 2024

- Maps:
  - Historic Use Map – Question 18, undated
  - Proposed Use Map – Question 19, undated
  - System Operation – Question 32, undated
  - Lower Boulder River Irrigation Infrastructure Improvement Project Huckaba Point of Diversion Change Site, undated
  - Huckaba Ranch West Side – V2, undated
- Department - completed Technical Analyses based on information provided in the Preapplication Meeting Form, dated January 17, 2025
  - Question 6, Proposed PODs Map, undated
  - Question 121 Map, undated
  - Question 122.G.i.3 Map, undated
  - Figure 1. Pump plate for 60 hp pump on Huckaba Ranch, Image of Pump Plate, undated
  - Figure 2. Pump plate for 50 hp pump on Huckaba Ranch, Image of Pump Plate, undated
  - AquaTech West Side – North Half Circle – V2 Receipt, February 6, 2023
  - Lower Boulder River Irrigation Infrastructure Improvement Project Huckaba Point of Diversion Site Flyer, undated

<u>Information within the Department's Possession/Knowledge</u>

- DNRC Change Application 41E 30164689 Surface Water Change Technical Analysis Report, dated January 17, 2025
- Water Resources Survey, Jefferson County, 1956
- USGS Photo 2109500070005, dated July 5, 1947
- USDA Photo 479-B6, dated August 29, 1979
- Statement of Claim 41E 3407-00 file
- Statement of Claim 41E 3408-00 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 Helena Regional Office at 406-444-6999 to request copies of the following documents.

- Department Standard Practice for Determining Historical Use
- Department Standard Practice for Analyzing Area of Potential Adverse Effect
- Technical Memorandum "Distributing Conveyance Loss on Multiple User Ditches" (Heffner, 2020)

Public Comments Received

- The Department received and considered the following comment for the Preliminary Determination. The comment is addressed in the respective criterion section. The public comment received can be found in the administrative file. The preliminary determination decision is to Grant.
    - One public comment was received regarding the measurement condition placed on the adequate diversion criterion. The Department has considered this public comment and has not modified the analysis of the adequate diversion criterion nor the preliminary decision.

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 or DNRC means the Department of Natural Resources & Conservation; CFS means cubic feet per second; GPM means gallons per minute; and AF means acre-feet.

WATER RIGHTS TO BE CHANGED

FINDINGS OF FACT

1. Applicant seeks to change the point of diversion (POD) of Statements of Claim 41E 3407-00 and 41E 3408-00 in this Application. Table 1 below summarizes the rights proposed for change as currently claimed. These claims are diverted from the Boulder River for irrigation use for a volume not to exceed the amount put to historic and beneficial use.

Table 1. Water rights proposed for change

Water Right	Purpose	Flow Rate (CFS)	Volume (AF)	Period of Use	Point of Diversion	Place of Use	Priority Date	Acres
41E 3407-00	Irrigation	11.37	Historical Use Statement	4/1 to 10/30	NWSENW Section 35, T2N, R3W, Jefferson County	SW, SWSE Section 2, E2 Section 3, W2NE, NW Section 11, T1N, R3W, Jefferson County	1886.12.31	300
41E 3408-00	Irrigation	11.37	Historical Use Statement	4/1 to 10/30	NWSENW Section 35, T2N, R3W, Jefferson County	SW, SWSE Section 2, E2 Section 3, W2NE, NW Section 11, T1N, R3W, Jefferson County	1888.12.31	300

2. Both Statements of Claim 41E 3407-00 and 41E 3408-00 have a flow rate of 11.37 CFS and divert from the Boulder River by a means of headgate for the purpose of 300 acres of flood irrigation. The period of use and period of diversion for both Claims are April 1 to October 30. The historical POD is located in the NWSENW Section 35, T2N, R3W, Jefferson County, and water is conveyed to the place of use by the Cardwell Ditch[1].

3. Statements of Claim 41E 3407-00, 41E 3408-00, and 41E 3406-00 are supplemental rights that were historically used to irrigate 300 acres in SW, SWSE Section 2, E2 Section 3, W2NE, NW Section 11, all within T1N, R3W, Jefferson County. Claim 41E 3406-00 is an irrigation right owned by the Applicant for water from Cold Spring with a maximum flow rate of 11.37 CFS. 41E 3406-00 is not included in the proposed Change Application but was factored in the historical consumptive use of the place of use (POU). Table 2 below summarizes the supplemental water rights.

[1] Also known as the Shaw Ditch.

Table 2. Supplemental Water Rights

Water Right	Flow Rate (CSF)	Period of Use	Point of Diversion	Place of Use	Priority Date	Acres
41E 3406-00	11.37	4/1 to 10/30	SWSESW Section 6, T2N, R2W, Jefferson County	SW, SWSE Section 2, E2 Section 3, W2NE, NW Section 11, T1N, R3W, Jefferson County	1968.12.31	300
41E 3407-00	11.37	4/1 to 10/30	NWSENW Section 35, T2N, R3W, Jefferson County	SW, SWSE Section 2, E2 Section 3, W2NE, NW Section 11, T1N, R3W, Jefferson County	1886.12.31	300
41E 3408-00	11.37	4/1 to 10/30	NWSENW Section 35, T2N, R3W, Jefferson County	SW, SWSE Section 2, E2 Section 3, W2NE, NW Section 11, T1N, R3W, Jefferson County	1888.12.31	300

4. The conveyance system, Cardwell Ditch, conveys the water rights to be changed along with Applicant owned Statement of Claim 41E 3406-00, and third-party owned Claims 41E 143433-00, 41E 143436-00, and 41E 143437-00. The Cardwell Ditch headgate is utilized as a secondary POD for Claim 41E 3406-00. Claims 41E 143433-00, 41E 143436-00, and 41E 143437-00 are owned by a neighboring third-party, Golden Sunlight Mines Inc.

5. No previous Change Authorizations are associated with the water right to be changed.

CHANGE PROPOSAL

FINDINGS OF FACT

6. The Applicant proposes to change the POD of Statements of Claim 41E 3407-00 and 41E 3408-00 from one headgate on the Boulder River to three pumps on the Jefferson Slough. The Applicant proposes to discontinue use of the historical POD in NWSENW Section 35, T2N, R3W, Jefferson County, and the Cardwell Ditch. The historical POD is proposed to be removed in part of the Shaw Diversion Dam Removal Project by Montana Trout Unlimited. The project involves Golden Sunlight Mine, with support by Montana Department of Fish, Wildlife & Parks (FWP), Natural Resource Conservation Services (NRCS), Trout and Salmon Foundation, Cross Charitable Foundation, and the Applicant. The proposed PODs are two pump sites approximately 1.21 and 1.74 miles downstream of the historical POD, and one pump site approximately 0.67

miles upstream of the Boulder River Jefferson Slough confluence on the Jefferson Slough[2]. The proposed PODs are in NENWSW Section 2, NENWSE Section 3[3], and NWNWNE Section 11, all within T1N, R3W, Jefferson County, seen on the map provided as Figure 1. Boulder River water will continue downstream in the Boulder River into the Jefferson Slough and pumped from the Jefferson Slough from two points of diversion in NENWSW Section 2 and NWNWNE Section 11, all within T1N, R3W, Jefferson County. Jefferson Slough water will be pumped from the POD in NENWSE Section 3 T1N, R3W, Jefferson County. Jefferson Slough water will be immediately replaced by Boulder River water at the confluence of the Boulder River and the Jefferson Slough. All purposed PODs are located on the Applicant's property. Water will be diverted through the proposed PODs into three pipeline systems to irrigate the historical 300-acre POU. The historical POD will no longer be used for irrigation on the Applicant's property as a result of this change. The period of diversion and use will remain the same as the water rights were historically operated. No changes to the POU, purpose, or storage are proposed in this Change Application.

[2] Technical Analyses Report for Change Preapplication No. 41I 30164689, dated January 17, 2025, inadvertently omitted reference to the pump 0.67 miles upstream of the Boulder River and Jefferson Slough confluence under Section 3.2 Area of Potential Adverse Effect.

[3] Technical Analyses Report for Change Preapplication No. 41I 30164689, dated January 17, 2025, states the proposed POD in Section 3 as NENWNE Section 3, T1N, R3W, Jefferson County. The legal land descriptions found in the Technical Analysis are based on the legal land descriptions give to the Department during the October 17, 2024, Preapplication Meeting. After review of the proposed use maps the Department determined the POD to be located in NENWSE Section 3, T1N, R3W, Jefferson County.

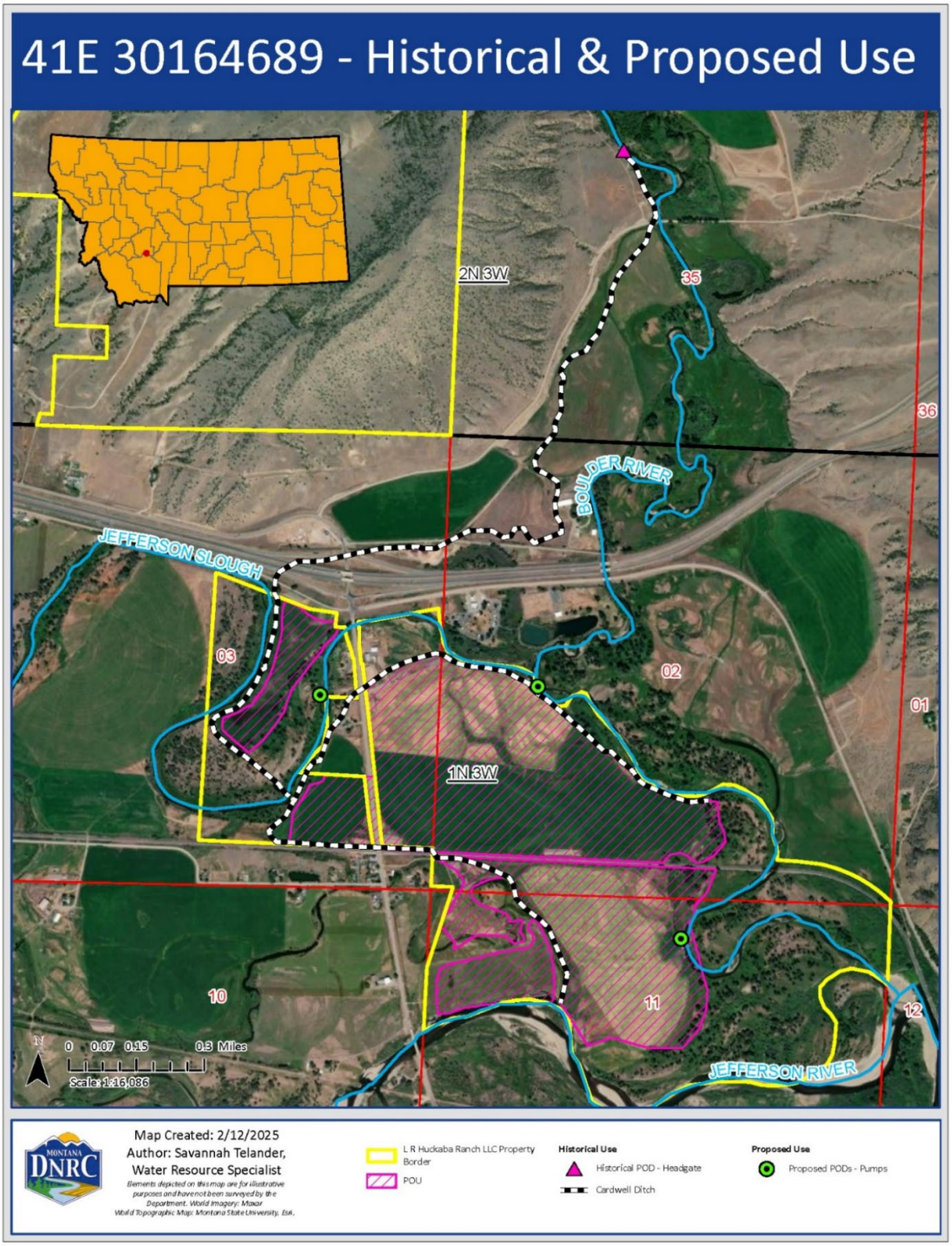

Figure 1. Map of Change Application 41E 30164689 historical and proposed use

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 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.

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*, ¶¶ 29-31; *Town of Manhattan*, ¶ 8; *In the Matter of Application to Change Appropriation Water Right No.41F-31227 by T-L Irrigation*

HISTORICAL USE AND ADVERSE EFFECT

FINDINGS OF FACT - Historical Use

9. Claim 41E 3407-00 is a filed right with a priority date of December 31, 1886, and Claim 3408-00 is a filed right with a priority date of December 31, 1888. Both Claims were included in the Montana Water Court 41E Boulder River, Tributary of Jefferson River Temporary Preliminary Decree on June 20, 1985, and the 41E Boulder River, Tributary of Jefferson River Preliminary Decree on October 19, 2022.

10. Statements of Claim 41E 3407-00 and 41E 3408-00 are supplemental and claimed for irrigation of 300 acres in SW, SWSE Section 2, E2 Section 3, W2NE, NW Section 11, all within T1N, R3W, Jefferson County. The historical irrigation of 300 acres is supported by the Water Resources Survey (Jefferson County, 1956) and 1947 USGS Photo 2109500070005. The Department finds the maximum number of acres historically irrigated by Claims 41E 3407-00 and 41E 3408-00 to be 300 acres.

11. 41E 3407-00 and 41E 3408-00 were both originally claimed with a flow rate of 11.37 CFS. The Applicant's representatives state that the maximum flow rate diverted by 41E 3407-00 is 11.37 CFS and by 41E 3408-00 is 11.37 CFS. Based on the ditch measurements provided in the October 17, 2024, Preapplication Meeting, the maximum ditch capacity of the Cardwell Ditch has the carrying capacity for both water rights proposed for change. The Department finds the total maximum flow rate for the water rights proposed for change is 22.74 CFS.

12. Claims 41E 3407-00 and 41E 3408-00 divert water from the Boulder River by the means of the Cardwell Ditch headgate and diversion dam in NWSENW Section 35, T2N, R3W, Jefferson County. Water is conveyed from the headgate south along the west side of the Boulder River and continues under Interstate 90 onto the Applicants property. Once it enters the Applicant's property the ditch irrigates the POU on the north side of the Jefferson Slough in in E2 Section 3, T1N, R3W, Jefferson County. The ditch continues south until it dumps into the Jefferson Slough in the NESWSE Section 3, T1N, R3W, Jefferson County. Boulder River water is then pumped into a lateral of the Cardwell Ditch from the Jefferson Slough at a secondary POD[4] just across the source from where water is dumped into the Jefferson Slough. The ditch then continues to move water down to irrigate the POU south of the Jefferson Slough in Sections 2, 3, and 11, T1N, R3W, Jefferson County. The Cardwell Ditch can be seen on the map provided as Figure 1 above.

13. Statements of Claim 41E 3406-00, 41E 3407-00, 41E 3408-00, 41E 143433-00, 41E 143436-00 and 41E 143437-00 have historically utilized the Cardwell Ditch as a means of conveyance and stock POU. Claims 41E 3406-00, 41E 3407-00, and 41E 3408-00 historically

[4] 41E 3407-00 and 41E 3408-00 secondary POD in NESWNE Section 3, T1N, R3W, Jefferson County, was decreed onto the Claims during the Preliminary Decree.

conveyed water onto the Applicant's property from April 1 to October 30. Statement of Claim 41E 3406-00 is an irrigation right supplemental to the rights in this Change Application, claiming water from Cold Spring for irrigation of 300 acres on the Applicant's property. Cold Spring water, claimed under Claim 41E 3406-00, is diverted into the Cardwell Ditch headgate as a secondary POD. Claim 41E 3406-00 is included in conveyance loss calculations as this water right utilizes the Cardwell Ditch as a means of conveyance for irrigation on the Applicant's property. Statements of Claim 41E 143433-00, 41E 143436-00 and 41E 143437-00 are owned by a neighboring third party, Golden Sunlight Mines Inc. Claim 41E 143433-00 is an irrigation right and Claims 41E 143436-00 and 41E 143437-00 are diverted ditch stock water rights that claim the Cardwell Ditch as a means of conveyance and stock POU. Irrigation Claim 41E 143433-00 is included in conveyance loss calculations as this water right utilizes water out of the Cardwell Ditch above the Applicant's water rights proposed for change in this Change Application. Claims 41E 143436-00 and 41E 143437-00 were not included in conveyance losses because they are multiple use stock diverted ditch rights with Golden Sunlight Mines Inc. irrigation water rights.

14. The Applicant states water was historically diverted into the Cardwell Ditch headgate in NWSENW Section 35, T2N, R3W, Jefferson County, and conveyed through the Cardwell Ditch to the 300-acre POU. The Applicant states Claim 41E 3407-00 and 41E 3408-00 provided irrigation to the 300-acre POU for alfalfa, barley, oats, and grass hay. Water was typically diverted starting April 1 and ended as late as October 30 of each year.

15. The water rights proposed for change are Statements of Claim, and the historical use was evaluated as the rights existed prior to July 1, 1973. No prior Change Authorizations for the water rights have occurred, and no documented history of calls for Claims 41E 3407-00 and 41E 3408-00 exist. The Department calculated the historical use using the Department's standard methodology pursuant to ARM 36.12.1902.

16. Using information provided by the Applicant about historical irrigation practices as well as Department knowledge of the project area, the historical consumptive volume (HCV) was found for the historical POU. The total historical POU consumptive volume was distributed to Claims 41E 3407-00 and 41E 3408-00 based on the proportion of the total flow rate each water right delivers to the historical POU. The following equations were used to find the HCV, these calculations are summarized in Tables 2 and 3.

$$Supplemental\ HCV = HCV * Supplemental\ Flow\ Proportion$$

$$HCV = Crop\ Consumption + Historic\ Irrecoverable\ Losses$$

$$Crop\ Consumption = Boulder\ Weather\ Station\ * 1ft/12inches * Jefferson\ County\ Management\ Factor * Historic\ Acres\ Historic$$

$$Irrecoverable\ Losses = Field\ Applied * IL\%$$

$$Field\ Applied = Crop\ ConsumptionField\ Efficiency$$

Table 2. Historical consumptive volume of the historical POU

Irrigation Method	Acres	IWR (in)*	Mgmt. Factor^	Field Efficiency	Crop Consumption (AF)	Applied Volume (AF)	IL (AF)	Total Consumed Volume (AF)
Flood Irrigation, Wheeline & Handline	300	17.08	0.61	0.25	260.47	1041.88	52.09	312.56

*Boulder IWR Weather Station

^Jefferson County Historical Use Management Factor (1964-1973)

Table 3. Historical consumptive volume of the POU by water right

Water Right	Type of Use	Applied Volume - Supplemental (AF)	Consumed Volume - Supplemental (AF)	Non-Consumed Volume - Supplemental (AF)
41E 3406-00	Historical	347.29	104.19	243.11
41E 3407-00	Historical	347.29	104.19	243.11
41E 3408-00	Historical	347.29	104.19	243.11
Total		**1041.88**	**312.56**	**729.32**

17. The historical diverted volume (HDV) is the sum of the water applied to the field and seasonal conveyance losses. The HDV was calculated 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 and the best available information about the Cardwell Ditch. The Applicant states water has been historically diverted starting April 1 and ended at the latest on October 30. The Applicant further states that the diversion was paused for two weeklong cuttings per season. The Department used the following equation to calculate the HDV, these calculations are summarized in Table 4.

$$Water\ Right\ HDV = \frac{Water\ Right\ Crop\ Consumption}{Field\ Efficiency} + Water\ Right\ Conveyance\ Loss$$

Table 4. Historical Diverted Volume of 41E 3407-00 and 41E 3408-00

Water Right	Consumed Volume - Supplemental (AF)	Field Efficiency	Conveyance Loss Volume (AF)	Historic Diverted Volume (AF)
41E 3407-00	104.19	0.25	285.63	632.92
41E 3408-00	104.19	0.25	285.63	632.92
Total	**208.38**		**571.26**	**1265.84**

18. 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 Cardwell Ditch. Conveyance losses were distributed to all water rights in the Cardwell Ditch based on the Department's memorandum "Distributing Conveyance Loss on Multiple User Ditches" (Heffner, 2020).

19. The Cardwell Ditch historically conveyed Claims 41E 3406-00, 41E 3407-00, 41E 3408-00, 41E 143433-00, 41E 143436-00, and 41E 143437-00[5]. Irrigation Claims were considered in calculating and distributing conveyance losses. Diverted stock use Claims 41E 143436-00 and 41E 143437-00 were not used to calculate conveyance losses, as they are multiple use rights based on appropriations of Golden Sunlight Mines Inc irrigation water rights and the rights share conveyance water. Due to the water rights in the Cardwell Ditch being conveyed at varying distances to multiple POUs over a different number of days, the Department divided the ditch into four down-ditch combinations. The water rights were assigned to a combination based on the carrying ditch segment lengths and diverted days. The ditch combinations for the Cardwell Ditch are summarized on Table 5 and can be seen on the map provided as Figure 2.

[5] Statements of Claim 41E 143436-00 and 41E 143437-00 were objected to in the Basin 41E Preliminary Decree. The Claims were adjusted (marshaled) to be direct from source on the Boulder River and direct from ditch for every ditch adjacent to the Golden Sunlight Mines Inc property, by the Water Court in the May 14, 2024, Notice of Filing of Master's Report for Case 41E-0198-R-2024. As a result to the 2024 Masters Report, Claims 41E 143436-00 and 41E 143437-00 claim the Cardwell Ditch (also known as the Shaw Ditch) diverting from the Boulder River in NWSENW Section 35, T2N, R3W, Jefferson County. 41E 143433-00 was also objected to in the Preliminary Decree to be marshaled across a larger area, but no master report have been released. The Department evaluated the Golden Sunlight Mines Inc stock and irrigation water rights claimed out of the Cardwell Ditch as multiple use rights.

Table 5. Down-Ditch Combinations for Cardwell Ditch

Down-Ditch Combination	Water Rights	Period of Use/Diversion	Days Irrigated	Total Flow Rate (CFS)	Ditch Length (ft)	Width (ft)	Wetted Perimeter (ft)	Ditch Loss Rate	Net Evap (in)
Cardwell A	41E 3406-00, 41E 3407-00, 41E 3408-00, 41E 143433-00	4/1 to 8/31	145	39.23	1055	4	9.59	1.2	13.86
Cardwell B	41E 3406-00, 41E 3407-00, 41E 3408-00	9/1 to 10/30	53	34.11	1055	4	9.59	1.2	8.88
Cardwell C	41E 3406-00, 41E 3407-00, 41E 3408-00	4/1 to 10/30	198	34.11	7886	4	9.59	1.2	22.74
Cardwell D	41E 3406-00, 41E 3407-00, 41E 3408-00	4/1 to 10/30	198	34.11	3089	4	9.59	1.2	22.48

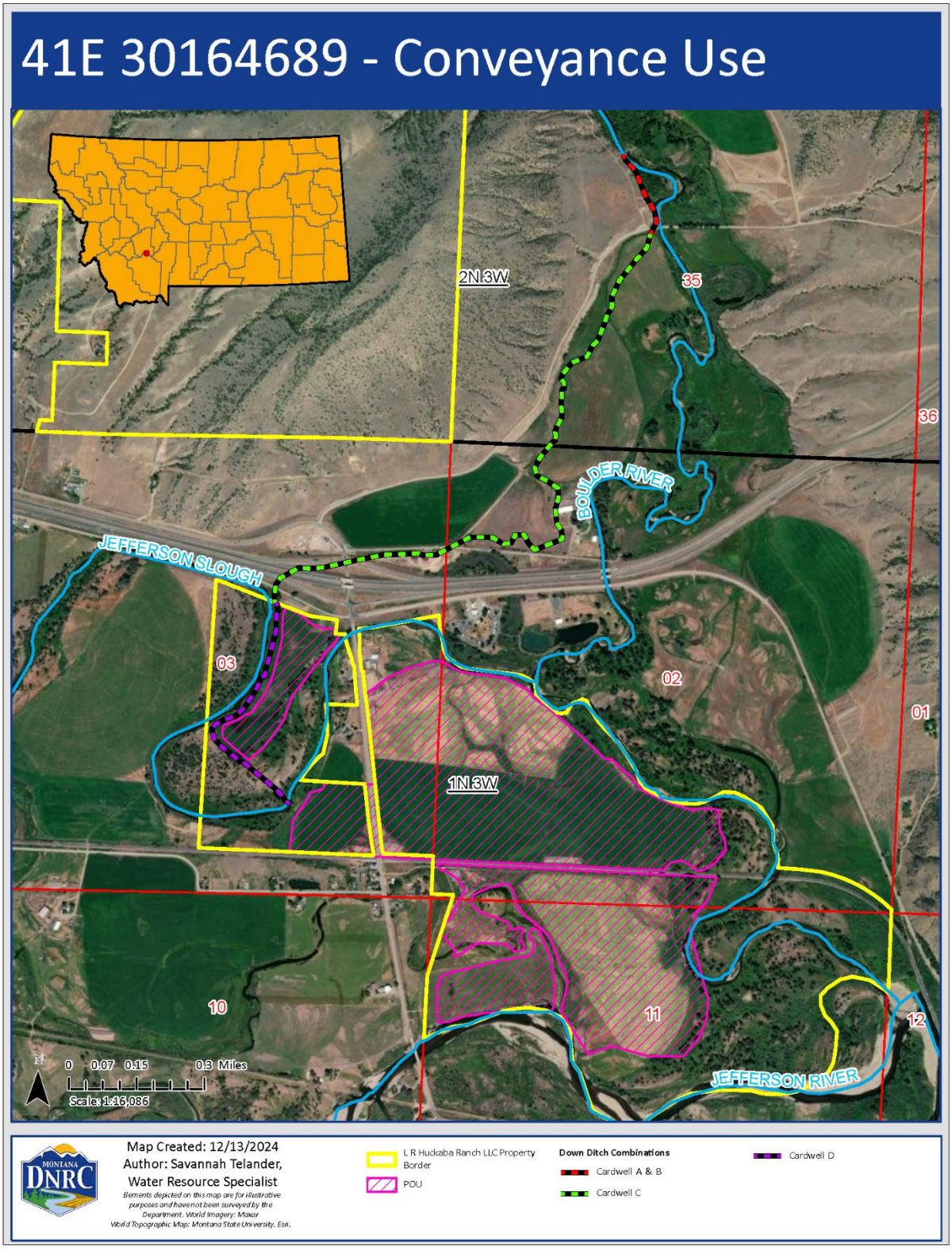

Figure 2. Cardwell Ditch Conveyance Use Map of Down-Ditch Combinations

20. Using ditch measurements provided by the Applicant during the Preapplication Meeting October 17, 2024, and third-party water right information found in water right files, seen in Table 5, the Department calculated conveyance losses for each down-ditch combination and the water rights proposed for change. Conveyance losses for the water rights included in this Change Application were distributed using the Department's memorandum "Distributing Conveyance Loss on Multiple User Ditches" (Heffner, 2020) and ARM 36.12.1902(10). The historical conveyance loss volume is equal to the sum of the historical seepage loss, vegetation loss, and ditch evaporation volumes. Conveyance loss volumes per down-ditch combination are provided below in Table 6 and the conveyance loss volumes per each water right in the Cardwell ditch are provided below in Table 7. The following equations were used to calculate conveyance loss volumes:

$$Ditch\ Combo\ Conveyance\ Losses_{Total} = Seepage\ Loss_{combo} + Vegetation\ Loss_{combo} + Evaporation\ Loss_{combo}$$

$$Seepage\ Loss_{combo} = (Wetted\ Perimeter_{combo} * Ditch\ Length_{combo} * Ditch\ Loss\ Rate * Days\ Diverted_{combo}) * \frac{1\ acre}{43560 ft^2}$$

$$Distributed\ Vegetation\ Loss_{combo} = 0.75\%\ loss\ per\ mile * \frac{Ditch\ Length_{combo}}{5280\ miles} * Flow\ Rate_{combo} * Days\ Diverted_{combo} * 2$$

$$Distributed\ Ditch\ Evaporation\ Loss_{combo} = (Surface\ Area * Adjusted\ Net\ Evaporation_{combo}) * \frac{1\ acre}{43560 ft^2}$$

$$Adjusted\ Net\ Evaporation_{combo} = Period\ of\ Diversion\ Net\ Evaporation * \frac{Days\ Irrigated}{365}$$

$$Surface\ Area = (Wetted\ Width\ ft) * Ditch\ Length_{combo}$$

$$Ditch\ Combo\ Conveyance\ Losses_{Water\ Right} = Ditch\ Combo\ Conveyance\ Losses_{Total} * Combo\ Flow\ Proportion_{Water\ Right}$$

$$Combo\ Flow\ Proportion_{Water\ Right} = Water\ Right\ Flow\ Rate_{ditch} * Ditch\ Combo\ Total\ Flow\ Rate$$

Table 6. Conveyance loss volumes for each down-ditch combination

Down-Ditch Combination	Length (ft)	Flow Rate (CFS)	Width (ft)	Wetted Perimeter (ft)	Ditch Loss Rate (ft3/ft/day)	Days Irrigated	Adj. Net Evap (in)	Seepage Loss (AF)	Vegetation Loss (AF)	Evaporative Loss (AF)	Total Conveyance Loss (AF)
Cardwell A	1055	39.23	4	9.59	1.2	145	13.86	40.41	17.05	0.11	57.57
Cardwell B	1055	34.11	4	9.59	1.2	53	8.88	14.77	5.42	0.07	20.26
Cardwell C	7886	34.11	4	9.59	1.2	198	22.74	412.51	151.31	1.37	565.19
Cardwell D	3089	34.11	4	9.59	1.2	198	22.48	161.58	59.27	0.53	221.38
Total								629.28	233.04	2.09	**864.41**

Table 7. Conveyance Loss Volume for Water Rights in Cardwell Ditch

Water Right	Down-Ditch Combination	Total Flow Rate (CFS)	Water Right Flow Rate (CFS)	Proportion	Down-Ditch Combination Conveyance Loss (AF)	Water Right Conveyance Loss (AF)	Water Right Total Conveyance Loss (AF)
41E 3406-00	Cardwell A	39.23	11.37	0.29	57.57	16.69	285.63
	Cardwell B	34.11	11.37	0.33	20.26	6.75	
	Cardwell C	34.11	11.37	0.33	565.19	188.4	
	Cardwell D	34.11	11.37	0.33	221.38	73.79	
41E 3407-00	Cardwell A	39.23	11.37	0.29	57.57	16.69	285.63
	Cardwell B	34.11	11.37	0.33	20.26	6.75	
	Cardwell C	34.11	11.37	0.33	565.19	188.4	
	Cardwell D	34.11	11.37	0.33	221.38	73.79	
41E 3408-00	Cardwell A	39.23	11.37	0.29	57.57	16.69	285.63
	Cardwell B	34.11	11.37	0.33	20.26	6.75	
	Cardwell C	34.11	11.37	0.33	565.19	188.4	
	Cardwell D	34.11	11.37	0.33	221.38	73.79	
41E 143433-00[5]	Cardwell A	39.23	5.12	0.13	57.57	7.51	7.51
Total						**864.41**	**864.41**

21. The Department finds the following historical use for Statements of Claims 41E 3407-00 and 41E 3408-00, as shown in Table 8.

Table 8. Summary of Historical Use of 41E 3407-00 and 41E 3408-00

Water Right	Purpose	Maximum Historical Acres	Priority Date	Point of Diversion	Place of Use	Maximum Flow Rate (CFS)	Consumed Volume (AF)	Diverted Volume (AF)
41E 3407-00	Irrigation	300	1886.12.31	NWSENW Section 35 T2N R3W, Jefferson County	SW, SWSE Section 2, E2 Section 3, W2NE, NW Section 11 T1N R3W, Jefferson County	11.37	104.19	632.92
41E 3408-00	Irrigation	300	1888.12.31	NWSENW Section 35 T2N R3W, Jefferson County	SW, SWSE Section 2, E2 Section 3, W2NE, NW Section 11 T1N R3W, Jefferson County	11.37	104.19	632.92
Total						**22.74**	**208.38**	**1265.84**

ADVERSE EFFECT

FINDINGS OF FACT

22. The Applicant proposes to change the POD for Statements of Claim 41E 3407-00 and 41E 3408-00. No changes in POU or purpose are proposed, and these water rights do not involve a place of storage. The historical POD and Cardwell Ditch will no longer be used by these water rights as a result of this change.

23. The proposed PODs are three pump sites located in NENWSW Section 2, NENWSE Section 3, and NWNWNE Section 11, all within T1N, R3W, Jefferson County. The proposed pump sites are approximately 1.21 and 1.74 miles downstream of the historical POD and 0.67 miles upstream of the Boulder River and Jefferson Slough confluence, all on the Jefferson Slough. The Applicant provided information regarding Cardwell Ditch diversion dam that is proposed to be removed in a Montana Trout Unlimited restoration project for ecological uplift in the Boulder and Jefferson Rivers. The current diversion dam has a fish ladder, but is frequently clogged with debris making it inaccessible for spawning. Due to the age of the infrastructure, the diversion dam and headgate have been increasingly difficult to operate. Water claimed under Claims 41E 3407-00 and 41E 3408-00 is proposed to continue downstream in the Boulder River into the Jefferson Slough. Boulder River and Jefferson Slough water will then be pumped by the three pump sites on the Applicant's property to irrigate the POU.

24. No changes in the POU are proposed, the consumptive use associated with the POU will remain the same as the historical consumed volume of 208.38 AF. The Department calculated the proposed diverted volume for Claims 41E 3407-00 and 41E 3408-00 using the same methodology as the historical diverted volume. The Applicant will continue to use water starting as early as April 1 and stop diversions as late as October 30 with two seven day pauses for cutting.

25. The Applicant proposes to change the POD from a headgate to three pump sites for Statements of Claim 41E 3407-00 and 41E 3408-00. The proposed PODs will pump Boulder River and Jefferson Slough water into a pipeline conveyance system to irrigate the 300-acre POU. No conveyance loss is associated with the proposed PODs. The proposed diverted volume of Claims 41E 3407-00 and 41E 3408-00 is equal to the historical applied volume of 694.58 AF (Table 3), 571.26 AF less than historically diverted.

26. The Applicant proposes to use a total flow rate of 4.52 CFS for 300 acres of irrigation from April 1 to October 30. Based on the pump information provided by the irrigation system installer in the deficiency letter response dated May 9, 2025, the total maximum pump capacity is 4.52

CFS. The proposed pump in NENWSW Section 2, T1N, R3W, Jefferson County, is a 15 horsepower pump that has a capacity of 2.67 CFS. The proposed pump in NENWSE Section 3, T1N, R3W, Jefferson County, is a General Electric 60 horsepower pump that has a capacity of 0.68 CFS. The proposed pump in NWNWNE Section 11, T1N, R3W, Jefferson County, is a Nedic Motor Company 50 horsepower pump that has a capacity of 1.16 CFS. The proposed irrigation system pump sites have the capability of pumping up to 4.52 CFS. Based on the pipeline specifications provided in the deficiency letter response dated May 9, 2025, the combined total pipeline capacity for the whole irrigation system is 2.83 CFS. The pipeline system does not have an equal carrying capacity as the proposed pumps. The Applicant further explains that two of the three pumps have been installed, and are capable of irrigating the POU as needed. The Applicant proposes to operate the proposed PODs the same as the historical POD and divert water from April 1 to October 30 with two seven day pauses for cutting. A water measurement condition required by the Department until notice of project completion will determine the proposed project's perfected flow rate needed for the Change Authorization.

27. No change in purpose or POU is proposed and return flows from irrigation of 300 acres will continue to accrue to the Jefferson Slough as it did historically. Per the Department's return flow policy, a quantification of the monthly volume returning to the hydraulically connected surface water was not conducted.

28. Claims 41E 3407-00 and 41E 3408-00 have historically utilized a pump on the Jefferson Slough in NESWSE Section 3, T1N, R3W, Jefferson County, as a secondary POD to irrigate the POU south of the Jefferson Slough. During the Preliminary Decree, this secondary POD was decreed onto the claims. The proposed POD in Section 3, T1N, R3W, Jefferson County, is approximately 0.23 miles downstream of the historical secondary POD decreed on Statements of Claim 41E 3407-00 and 41E 3408-00, on the Jefferson Slough. Additionally, the POD in Section 3, T1N, R3W, Jefferson County, is 0.67 miles upstream of the Boulder River and the Jefferson Slough confluence. Historically and under the proposed Change Application, Boulder River return flows claimed under Claims 41E 3407-00 and 41E 3408-00 have and will continue to accrue in the Jefferson Slough within the stretch where the Section 3 proposed POD is located. There are no intervening water rights diverting from the Jefferson Slough within the reach between the proposed POD in NENWSE Section 3 T1N, R3W, Jefferson County, and the confluence of the Jefferson Slough and Jefferson River.

29. Three third-party water rights, 41E 143433-00, 41E 143436-00, and 41E 143437-00, in the Cardwell Ditch are not included in this Change Application and are owned by Golden Sunlight

Mine Inc. Kristi Murphy, manager of Golden Sunlight Mine Inc, addressed a letter to the Department that acknowledges the water decrease in the Cardwell Ditch proposed in this Change Application. Murphy further states, that Golden Sunlight Mine Inc is supportive of the Applicant's proposed change and is preparing their own application for a change to their water rights to eliminate the need from the Cardwell Ditch diversion.

30. Two intervening water rights between the historical and proposed PODs, were identified by the Department. One irrigation water right (41E 143434-00) diverts from the Boulder River downstream at headgate in NWNWNE Section 2, T1N, R3W, Jefferson County. One Water Reservation (41E 30017424) owned by Montana Department of Fish, Wildlife & Parks on the Boulder River from Cold Spring to the confluence with the Jefferson Slough. There are no water rights on the Jefferson Slough between the proposed POD in NENWSE Section 3, T1N, R3W, Jefferson County, and the Jefferson Slough and Jefferson River confluence.

31. In the proposed change, Boulder River water historically diverted by the Cardwell Ditch, will continue down the source into the Jefferson Slough, where it will then be pumped for irrigation use under Claims 41E 3407-00 and 41E 3408-00. When Claims 41E 3407-00 and 41E 3408-00 are in use, the proposed pumps (PODs) will operate at a lower flow rate and require a lower diverted volume, 571.26 AF less than historically diverted. Water pumped from the Jefferson Slough upstream of the confluence, will be immediately replaced with Boulder River water via return flows from irrigation practices and at the confluence of the Boulder River and the Jefferson Slough. In the proposed change there will be more Boulder River water left instream between the historical POD and the Jefferson Slough, Jefferson River confluence, and will not create an adverse effect on other Boulder River, or Jefferson River users. No change in return flows will occur.

32. The Department finds there will be no adverse effect from the proposed change under the terms and conditions set out in this Preliminary Determination.

BENEFICIAL USE

FINDINGS OF FACT

33. 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 POD due to stream restoration and inoperable infrastructure of the historical diversion dam and headgate. Per Montana Trout Unlimited, debris build up within the diversion dam has negatively affected fish spawning and habitat. The age of the diversion structure has also caused

difficulties in operation. The proposed project will improve fish habitat and allow the Applicant to continue irrigation of 300 acres.

34. The Applicant proposed to use the 694.58 AF diverted volume and 4.52 CFS flow rate for continued irrigation of the 300-acre historical POU. The volume amount is determined by the Department's standards found in ARM 36.12.1902 for calculating consumptive and diverted volume for irrigation of 300 acres.

35. The Department finds the proposed 4.52 CFS and 694.58 AF diverted volume for irrigation purpose to be a beneficial use of water.

ADEQUATE DIVERSION

FINDINGS OF FACT

36. The Applicant proposes to change the POD to three pump sites to Statements of Claim 41E 3407-00 and 41E 3408-00. The proposed pumps will be located on the Applicant's property in NENWSW Section 2, NENWSE Section 3, and NWNWNE Section 11, all within T1N, R3W, Jefferson County. Boulder River water will convey through the Boulder River and Jefferson Slough where it will be diverted via two pump sites on the Applicant's property. The third pump site will be upstream of the Boulder River Jefferson Slough confluence, on the Applicant's property, pumping Jefferson Slough water. The proposed pumps are General Electric 60 horsepower pump capable of pumping 2.67 CFS, a 15 horsepower pump capable of pumping 0.77 CFS, and Nidec Motor capable of pumping 1.16 CFS. The cumulative flow rate for the proposed pumps is 2027 GPM or 4.52 CFS. The proposed pump sites allow the Applicant to divert water for the irrigation purpose.

37. The Department finds this diversion infrastructure to be adequate for the proposed irrigation. This Change Application will be subject to a condition in order to fulfill the adequacy of diversion criteria.

This Change Application will be subject to the following condition to fulfill the adequacy of diversion criteria:

WATER MEASUREMENT INFORMATION

THE APPROPRIATOR SHALL INSTALL A DEPARTMENT APPROVED WATER USE MEASURING DEVICE AT THE POINTS APPROVED BY THE DEPARTMENT. WATER MUST NOT BE DIVERTED UNTIL THE REQUIRED MEASURING DEVICE IS IN PLACE AND OPERATING. ON A FORM PROVIDED BY THE DEPARTMENT, THE APPROPRIATOR SHALL KEEP A

WRITTEN DAILY RECORD OF THE FLOW RATE AND VOLUME OF ALL WATER DIVERTED INCLUDING THE PERIOD OF OPERATION. RECORDS SHALL BE SUBMITTED BY NOVEMBER 30 OF EACH YEAR UPON PROJECT COMPLETION AND UPON REQUEST THEREAFTER. FAILURE TO SUBMIT REPORTS MAY BE CAUSE FOR REVOCATION OF THE AUTHROIZATION. THE RECORDS MUST BE SENT TO THE HELENA DNRC WATER RESOURCES REGIONAL OFFICE. THE APPROPRIATOR SHALL MAINTAIN THE MEASURING DEVICE SO IT ALWAYS OPERATES PROPERLY AND MEASURES FLOW RATE AND VOLUME ACCURATELY.

ISSUES RAISED BY PUBLIC COMMENT AND DEPARTMENT'S RESPONSE

38. The Department considered one comment on the adequate diversion criterion that raised concern about the water measurement condition.

39. Issue: Commentor raised concern regarding the frequency of the measurements for each point of diversion required in the water measurement condition being too high. Commentor also states that the Applicant provided pump information showing the proposed pumps (PODs) capacity adequate for the proposed project and will not exceed historical use. (Commentor: Trout Unlimited, Patrick Byroth)

40. Response: As described in FOF 26, the pipeline system does not have an equal carrying capacity as the proposed pumps (PODs). A water measurement condition is required by the Department until a Notice of Project Completion is filed to determine the pipeline system carrying capacity, confirming the flow rate needed for the Change Authorization. Once the Change Authorization flow rate is perfected, water measurements will be required upon request of the Department thereafter. The information supplied by the commenter fails to provide sufficient substantive information to demonstrate that the adequate diversion criterion was inadequately addressed and the Department will neither reevaluate the criterion nor modify the condition.

POSSESSORY INTEREST

FINDINGS OF FACT

41. The Applicant signed the affidavit on the Application form affirming the Applicant has possessory interest, or the written consent of the person with possessory interest, in the property where the water is to be put to beneficial use. See Department file 41E 30164689.

CONCLUSIONS OF LAW

HISTORICAL USE AND ADVERSE EFFECT

42. 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).[6]

43. 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*

[6] DNRC decisions are available at: https://dnrc.mt.gov/Directors-Office/HearingOrders

Royston, 249 Mont. at 429, 816 P.2d at 1057; *Hohenlohe*, ¶¶ 43-45.[7]

44. 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.[8] 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*, ¶ 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

[7] *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).

[8] A 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

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).[9]

45. 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

[9] 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.)

subsequent water users).[10]

46. 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.

47. 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 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).

[10] 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).

48. The Department's rules reflect the above fundamental principles of Montana water law and are designed to itemize the type 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.

49. 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).

50. 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).

51. 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).

52. 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.15-16).

53. 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").

54. Based upon the Applicant's evidence of historic use, the Applicant has proven by a preponderance of the evidence the historic use of 41E 3407-00 to be a diverted volume of 632.92 AF, a historically consumed volume of 104.19 AF, and flow rate of 11.37 CFS. Based upon the Applicant's evidence of historic use, the Applicant has proven by a preponderance of the evidence the historic use of 41E 3408-00 to be a diverted volume of 632.92 AF, a historically consumed volume of 104.19 AF, and flow rate of 11.37 CFS. (FOF Nos. 9-21)

55. 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)(a), MCA. (FOF Nos. 22-32)

BENEFICIAL USE

56. 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).

57. Applicant proposes to use water for irrigation which is a recognized beneficial use. Section 85-2-102(5), MCA. Applicant has proven by a preponderance of the evidence irrigation is a beneficial use and that 694.58 AF of diverted volume and 22.74 CFS flow rate of water requested is the amount needed to sustain the beneficial. Section 85-2-402(2)(c), MCA (FOF Nos. 33-35).

ADEQUATE MEANS OF DIVERSION

58. 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).

59. 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. 36-40)

POSSESSORY INTEREST

60. 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.

61. 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. 41).

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. 41E 30164689 should be GRANTED subject to the following.

The Applicant is authorized to divert Statements of Claim 41E 3407-00 and 41E 3408-00 from three pump sites in the NENWSW Section 2, NENWSE Section 3, and NWNWNE Section 11, T1N, R3W, Jefferson County. Under Change Application 41E 30164689, the Applicant may divert a maximum volume of 347.29 AF under 41E 3407-00 and a max volume of 347.29 AF under 41E 3408-00, a total of 694.58 AF. The maximum consumed volume for 41E 3407-00 is 104.19 AF and the maximum consumed volume for 41E 3408-00 is 104.19 AF, a total of 208.38 AF. Claims 41E 3407-00 and 41E 3408-00 are authorized to divert water at a flow rate of 4.52 CFS from April 1 to October 30 for irrigation of 300 acres in SW, SWSE Section 2, E2 Section 3, W2NE, NW Section 11, all within T1N, R3W, Jefferson County.

This Application is subject to the following condition:

WATER MEASUREMENT INFORMATION

THE APPROPRIATOR SHALL INSTALL A DEPARTMENT APPROVED WATER USE MEASURING DEVICE AT THE POINTS APPROVED BY THE DEPARTMENT. WATER MUST NOT BE DIVERTED UNTIL THE REQUIRED MEASURING DEVICE IS IN PLACE AND OPERATING. ON A FORM PROVIDED BY THE DEPARTMENT, THE APPROPRIATOR SHALL KEEP A WRITTEN DAILY RECORD OF THE FLOW RATE AND VOLUME OF ALL WATER DIVERTED INCLUDING THE PERIOD OF OPERATION. RECORDS SHALL BE SUBMITTED BY NOVEMBER 30 OF EACH YEAR UPON PROJECT COMPLETION AND UPON REQUEST THEREAFTER. FAILURE TO SUBMIT REPORTS MAY BE CAUSE FOR REVOCATION OF THE AUTHROIZATION. THE RECORDS MUST BE SENT TO THE HELENA DNRC WATER RESOURCES REGIONAL OFFICE. THE APPROPRIATOR SHALL MAINTAIN THE MEASURING DEVICE SO IT ALWAYS OPERATES PROPERLY AND MEASURES FLOW RATE AND VOLUME ACCURATELY.

NOTICE

The Department will provide a 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 determines necessary to satisfy the applicable criteria, pursuant to sections 85-2-310, -312, MCA.

Only a person who has exhausted his or her administrative remedies available within the agency and is aggrieved by a final order of the Department is entitled to judicial review under Montana Administrative Procedure Act (§ 2-4-702, MCA).

DATED 23rd of October 2025.

Jennifer Daly, Manager
Helena 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 23rd of October, 2025, by first class United States mail.

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