

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

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**APPLICATION TO CHANGE WATER RIGHT )  
NO. 76H 30171086 BY DEAN E HARDI & ) DRAFT PRELIMINARY DETERMINATION  
RHONDA K HARDI LIVING TRUST ) TO GRANT CHANGE**

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On January 28, 2026, Dean E Hardi & Rhonda K Hardi Living Trust (Applicant) submitted Application to Change Water Right No. 76H 30171086 to change Statement of Claim 76H 108997-00 to the Missoula Regional Office of the Department of Natural Resources and Conservation (Department or DNRC). The Department published receipt of the application on its website. A preapplication meeting was held between the Department and the Applicant on June 5, 2025, in which the Applicant designated that the technical analyses for this application would be completed by the Department. The Applicant returned the completed Preapplication Meeting Form on November 25, 2025. The Department delivered the Department-completed Technical Analysis on January 12, 2026. The Application was determined to be correct and complete as of February 19, 2026. An Environmental Assessment for this application was completed on April 15, 2026.

**INFORMATION**

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

**Application as filed:**

- Application to Change a Water Right, Form 606
- Addenda:
  - Change in Place of Storage Addendum, Form 600-SA
- Attachments:
  - Letter Noticing Water Right Owners on Conveyance Ditch
  - List of Water Right Owners Notified
- Maps:
  - Historical Use Map, 1979 aerial photo
  - Proposed Use Map 1, undated aerial imagery
  - Proposed Use Map 2, undated aerial imagery

- Department-completed technical analyses based on information provided in the Preapplication Meeting Form, dated January 12, 2026

#### Information Received after Application Filed

- Email from Applicant to DNRC dated March 31, 2026, Re: Ditches
- Email from Applicant to DNRC dated April 2, 2026, Re: Sprinkler Irrigation System
- Email from Applicant to DNRC dated April 16, 2026, Re: Questions on Pond Water Retention and Control

#### Information within the Department's Possession/Knowledge

- 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 Missoula Regional Office at (406) 5721-4284 to request copies of the following documents.
  - Development of standardized methodologies to determine Historic Diverted Volume, dated September 13, 2012
  - Technical Memorandum: Distributing Conveyance Loss on Multiple User Ditches, dated February 14, 2020

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

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; AF means acre-feet; AC means acres; and AF/YR means acre-feet per year.

### **WATER RIGHTS TO BE CHANGED**

#### FINDINGS OF FACT

1. This application is to add a place of storage to Statement of Claim 76H 108997-00. Statement of Claim 76H 108997-00 is filed for a flow rate of 180.53 GPM from Gash Creek via means of a headgate for the purpose of flood irrigation on 16 acres. The historical means of conveyance is the Hickey B ditch. The period of use is April 15 to October 19. The point of diversion is located in the SESWSW Section 33, T8N, R21W, Ravalli County and water is conveyed to the place of use by means of a ditch.

**Table 1: Water Right Proposed for Change**

<b>Water Right Number</b>	<b>Flow Rate (GPM)</b>	<b>Purpose</b>	<b>Period Of Use</b>	<b>Place Of Use</b>	<b>Point Of Diversion</b>	<b>Priority Date</b>
76H 108997-00	180.53	Irrigation (Flood)	4/15 – 10/19	E2NESW Sec. 3, T7N, R21W	SESWSW Sec. 33, T8N, R21W, Ravalli County	11/25/1895

2. Statement of Claim 76H 108998-00 was filed for surface water out of Branch creek to be used on the same place of use as the subject water right. The Applicant has petitioned the water court to withdraw this water right, as it has been unusable for decades.

**CHANGE PROPOSAL**

**FINDINGS OF FACT**

3. The Applicant proposes to add a 3.38 AF reservoir in the NENESW Section 3, T7N, R20W as a place of storage for Statement of Claim 76H 108997-00. The proposed place of storage has already been constructed, and the Applicant is authorized to use it for recreational purposes under Ground Water Certificate 76H 108650-00. This change will allow the Applicant to store surface water from Gash Creek in the reservoir for the already-claimed purpose of irrigation. Water will not be stored for irrigation outside of the historical period of use; rather, water will be stored for short-term intervals to allow the Applicant more flexibility in coordinating the use of Hickey B ditch water with up-ditch users. Map 1 shows the elements of the proposed change.

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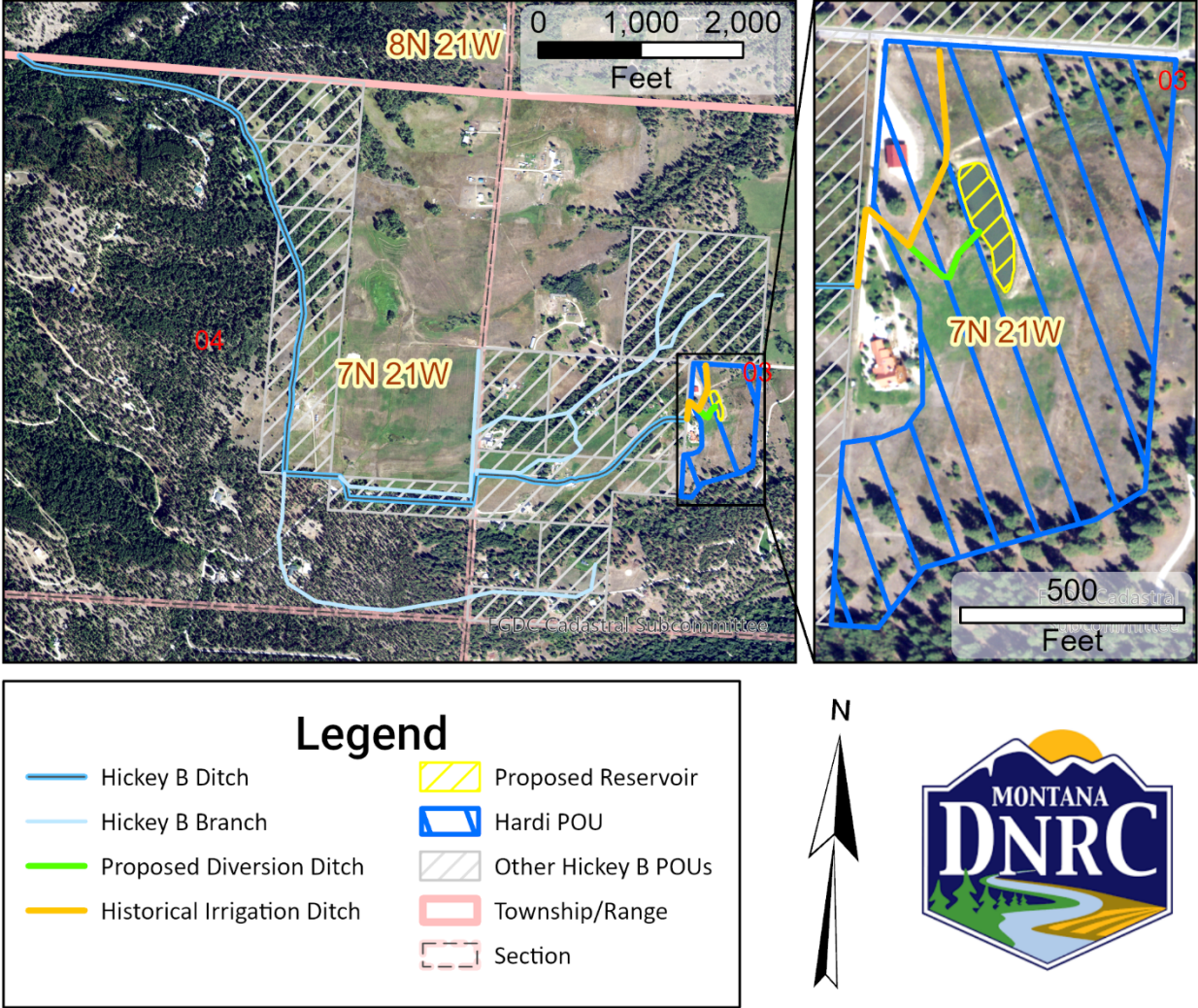


Figure 1. Map of proposed change.

**CHANGE CRITERIA**

4. 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.

5. 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**

6. Statement of Claim 76H 108997-00 lists a priority date of November 25, 1895. The surface water source for this claim is Gash Creek, a tributary of Sweathouse Creek. Sweathouse Creek was decreed in Ravalli County District Court case number 1011 on July 13, 1910. A water right with a priority date of November 25, 1895, was decreed to John Hickey for the entire SW quarter of Section 3, T7N, R21W, Ravalli County, demonstrating that Mr. Hickey was predecessor in interest to the Applicant. Based on this evidence, the Department finds that a priority date of November 25, 1895, is supported for Statement of Claim 76H 108997-00.

7. Statement of Claim 76H 108997-00 was filed for a 16-acre place of use in the E2NESW Section 3, T7N, R21W, Ravalli County. The 1957 Water Resource Survey field notes for Ravalli County indicate that 65 acres were irrigated in the SW of Section 3, T7N, R21W, with maps from the Water Resource Survey showing much of the Applicant's property irrigated. The portion of the Applicant's property covered by a digitized polygon of the WRS map was measured in ArcGIS Pro at approximately 14 acres. It should be noted, however, that the WRS digitized map has only coarse precision at the  $\frac{1}{4}$   $\frac{1}{4}$  scale. The mylar of verified claims on 1979 USDA aerial photo 179-68 delineates approximately 18 acres as irrigated; all but the southeast corner of the Applicant's property. However, a residence and driveway are visible in the 1979 photo inside the area marked as irrigated on the western portion of the property; these also lie in the area delineated as unirrigated in the WRS map. A close examination of the 1979 aerial photo taken in conjunction with the WRS information suggests that the place of use should be reckoned at 16 acres. The Department finds 16 acres of historical irrigation for Statement of Claim 76H 108997-00

8. Statement of Claim 76H 108998-00, sourced out of Branch Creek, has a place of use of 18 acres overlapping that of the subject water right. The Applicant's neighbor states that Branch Creek has been dry since the late 70's. The Water Resource Survey 1957 field notes for Ravalli County indicates that there is inadequate supply to satisfy the recorded rights for irrigation on 99 acres in the SW Section 3, T7N, R21W, although it does not indicate whether the inadequacy is in Branch Creek, Gash Creek, or both. The Applicant has filed a petition with the Montana Water Court to withdraw this right, as it is impossible to utilize. Due to decades of non-use and the petition filed to withdraw the water right, the Department will not consider Statement of Claim 76H 108998-00 as a supplemental water right in its historical use analysis.

9. The period of diversion and period of use for Statement of Claim 76H 108997-00 is April 15 to October 19. These dates fall within the standards for USDA Natural Resources and Conservation Service Climatic Area II, in which the place of use falls. The Department finds that the historical period of diversion and the historical period of use are April 15 to October 19.

10. Statement of Claim 76H 108997-00 was historically used for wild flood irrigation on 16 acres. The Department calculated historical consumptive use per the methods described in ARM 36.12.1902(16). The Western Ag Research IWR weather station was used for climate data. The wild flood irrigation method was assigned a field efficiency value of 25%, and irrecoverable losses (IL) were calculated as 5% of the field applied volume in accordance with ARM 36.12.1902(17). Table 2 shows the values used to calculate field applied and historically consumed volume.

**Table 2:** Historically Consumed Volume and Field Applied Volume for Statement of Claim 76H 108997-00

Irrigation Method	Acres	IWR (in)	Mgmt. Factor	Field Efficiency	Crop Consumption (AF)	Field Applied Volume (AF)	IL (AF)	Historically Consumed Volume (AF)
Wild Flood	16	19.82	79.5%	25%	21.01	84.04	4.20	25.21

11. The Applicant submitted measurements and photographs of the conveyance structures. The historical point of diversion is a headgate in the SESWSW Section 33, T8N, R21W, Ravalli County. From the headgate, water is carried 70 ft by a wooden flume with dimensions 29 inches wide and 9.5 inches deep. Water then flows into a 300-foot-long concrete culvert 24 inches in diameter, after which it is emptied into a concrete weir which can divert water into the Hickey B and Hickey C ditches. The Hickey B ditch measures 30 inches wide and 12 inches deep. The subject water right has the last diversion out of the Hickey B ditch and is preceded by 17 other rights on this ditch. A list of all up-ditch water rights can be found in the Department’s technical analysis.

12. The capacity of the wooden flume was calculated using Manning’s equation:

$$v = \frac{k}{n} R_h^{2/3} S^{1/2}$$

Where  $v$  is velocity,  $k$  is a constant,  $n$  is the manning’s coefficient of the channel material,  $R_h$  is the hydraulic radius, and  $S$  is the slope. The values used by the Department for its calculations are as follows:

k	n	$R_h$	S
1.486	0.012	0.48	0.0572

The maximum theoretical velocity of water in the flume was calculated to be 18.11 ft/s. Multiplying this value by the cross-sectional area of the flume (1.91 ft<sup>2</sup>) resulted in a maximum theoretical flow rate of 34.65 CFS.

13. The capacity of the concrete culvert was calculated using the Hazen-Williams equation:

$$v = k \cdot C \cdot R^{0.63} \cdot S^{0.54}$$

Where  $v$  is velocity,  $k$  is a constant,  $C$  is the roughness coefficient for the pipe material,  $R$  is hydraulic radius, and  $S$  is the slope. The values used by the Department for its calculations are as follows:

k	C	R	S
1.318	130	0.5	0.037

It was not possible to obtain information about the slope of the culvert; therefore, the Department used the slope of the first section of ditch after the culvert. The maximum theoretical velocity of water in the culvert was calculated to be 18.66 ft/s. The maximum velocity was multiplied by the cross-sectional area of the culvert (3.14 ft<sup>2</sup>) to obtain the maximum theoretical flow rate of 58.61 CFS.

14. The capacity of the Hickey B ditch was calculated using the Manning's equation. The values used by the Department for its calculations are as follows:

k	n	R <sub>h</sub>	S
1.486	0.025	0.56	0.037

The maximum theoretical velocity of water in the Hickey B ditch was calculated to be 7.73 ft/s. Multiplying this value by the cross-sectional area of the ditch (2.5 ft<sup>2</sup>) resulted in a maximum theoretical flow rate of 19.31 CFS.

15. The total authorized flow rate of water rights on the Hickey B ditch is 6.65 CFS, and the total authorized flow rate of water rights on the Hickey C ditch is 1.95 CFS. The Department finds that the wooden flume and concrete culvert are capable of carrying the 8.6 CFS authorized for Hickey B and Hickey C ditch water rights, and that the Hickey B ditch is capable of carrying the 6.65 CFS authorized to be diverted from it.

16. Per Department standard practice, conveyance losses are only considered where a conveyance ditch does *not* run through or adjacent to the place of use of a water right which it supplies; losses along these reaches are considered as contributing to the beneficial use of those rights (e.g. through subirrigation).

17. Water for Statement of Claim 76H 108997-00 travels approximately 2000 ft from the headgate to the first place of use on the Hickey B ditch. After this, the ditch travels solely through or along places of use, save for a short, 140-ft stretch. These two reaches were evaluated for conveyance losses.

18. The Department calculates conveyance loss is the sum of seepage loss, vegetation loss, and evaporative loss, which are found using the following equations:

$$\text{Seepage Loss (AF)} = \frac{\text{wetted perimeter (ft)} \times \text{ditch length (ft)} \times \text{loss rate} \left( \frac{\text{ft}}{\text{day}} \right) \times \text{days}}{\frac{43,560 \text{ ft}^2}{\text{acre}}}$$

$$\text{Vegetation Loss (AF)} = \frac{\% \text{ loss}}{\text{ft}} \times \text{ditch length (ft)} \times \text{flow rate} \left( \frac{\text{ft}^3}{\text{sec}} \right) \times \text{days} \times 2$$

$$\text{Ditch Evaporation (AF)} = \text{surface area of ditch (ft}^2\text{)} \times \text{evaporation rate (ft)} \times \frac{1 \text{ acre}}{43,560 \text{ ft}^2}$$

19. In the 2000-ft reach from the headgate to the first Hickey B place of use, 1700 ft were considered for evaporative losses (as no evaporation was considered to occur in the 300-ft culvert), and 1630 ft were considered for seepage and vegetative losses (as these were not considered to occur in the culvert or the flume). The USDA National Cooperative Soil Survey (NCSS) indicates that the soils in this area belong to the Macmeal-Kadygulch-Tolman families, described as very gravelly sandy loam. The Department estimated the seepage rate for these soils at 2.2 ft<sup>3</sup>/ft<sup>2</sup>/day.

20. The sum of the flow rates of water rights on the Hickey B ditch is 6.65 CFS (6.57 CFS for irrigation + 0.08 CFS for stock rights). The slope of this reach of the ditch is 0.037. Using the Manning's equation with a Manning's number of 0.025 for an earthen ditch, the water depth before any diversions can be calculated to be 6 inches.

21. The Department uses 30-year monthly gridded climate normals sourced from the National Oceanic and Atmospheric Administration (NOAA) National Centers for Environmental Information to estimate evaporation rates statewide. The modeled evaporation for the portions of the Hickey B ditch which were analyzed for conveyance losses is 1.89 ft over the course of the period of diversion.

22. Total conveyance losses for the 2000 ft from the headgate to the first place of use on the Hickey B ditch are shown in Table 3.

**Table 3.** First Leg Conveyance Losses on the Hickey B Ditch

<b>(A) Seepage Loss</b>	Ditch Wetted Perimeter (ft)	Ditch Length (ft)	Ditch Loss Rate (ft <sup>3</sup> /ft <sup>2</sup> /day)	Days Irrigated	Seepage Loss (AF)
	3.5	1630	2.2	187	53.88
<b>(B) Vegetation Loss</b>	% Loss/Mile	Historic Flow Rate (CFS)	Days Irrigated	Ditch Length (mi)	Vegetation Loss (×2) (AF)
	0.75	6.65	187	0.31	5.76
<b>(C) Ditch Evaporation</b>	Ditch Width (ft)	Ditch Length (ft)	Ditch Evaporation Rate (ft)	Ditch Evaporation (AF)	<b>Seasonal Conveyance Loss (AF) (A + B + C)</b>
	2.5	1700	1.89	0.18	

23. The sum of the flow rates of water rights in the Hickey B ditch on the 140-ft reach where conveyance losses are calculated (140-ft reach) is 5.45 CFS. Using the Manning’s equation, the water depth in this leg can be calculated to be 5 inches. The soils in this leg are part of the Chereete-Sheafman complex, composed of coarse sandy loam or coarse gravelly sandy loam. The Department estimated the seepage rate for these soils at 2.0 ft<sup>3</sup>/ft<sup>2</sup>/day.

24. Total conveyance losses for the second reach where conveyance losses are calculated are shown in Table 4.

**Table 4.** Second Leg Conveyance Losses on the Hickey B Ditch.

<b>(A) Seepage Loss</b>	Ditch Wetted Perimeter (ft)	Ditch Length (ft)	Ditch Loss Rate (ft <sup>3</sup> /ft <sup>2</sup> /day)	Days Irrigated	Seepage Loss (AF)
	3.33	140	2.0	187	4.00
<b>(B) Vegetation Loss</b>	% Loss/Mile	Historic Flow Rate (CFS)	Days Irrigated	Ditch Length (mi)	Vegetation Loss (×2) (AF)
	0.75	5.45	187	0.03	0.41
<b>(C) Ditch Evaporation</b>	Ditch Width (ft)	Ditch Length (ft)	Ditch Evaporation Rate (ft)	Ditch Evaporation (AF)	<b>Seasonal Conveyance Loss (AF) (A + B + C)</b>
	2.5	140	1.89	0.02	

25. Conveyance losses are apportioned to water rights based on their percentage of the total flow rate in the ditch. The conveyance losses attributable to each water right on the Hickey B ditch is shown in Table 5.

**Table 5.** Apportionment of Conveyance Losses on the Hickey B Ditch

Water Right Number	Flow Rate (CFS)	Conveyance Loss Leg 1 (AF)	% Flow Leg 1 (CFS)	Apportioned Loss Leg 1 (AF)	Conveyance Loss Leg 2 (AF)	% Flow Leg 2 (CFS)	Apportioned Loss Leg 2 (AF)
76H 2504 00	0.39	59.82	5.86	3.50	4.43	7.15	0.32
76H 9853 00	0.02		0.3	0.18		0.73	0.03
76H 9854 00	0.58		8.64	5.17		10.55	0.47
76H 99707 00	2.00		30.06	17.98		36.70	1.63
76H 99710 00	0.12		1.8	1.08		2.20	0.10
76H 103790 00	0.02		0.3	0.18		--	--
76H 103791 00	0.38		5.64	3.37		--	--
76H 105206 00	0.02		0.3	0.18		0.73	0.03
76H 105207 00	0.30		4.53	2.71		5.53	0.25
76H 105320 00	0.75		11.27	6.74		13.76	0.61
76H 107855 00	0.02		0.3	0.18		--	--
76H 107856 00	0.38		5.64	3.37		--	--
76H 107857 00	0.08		1.17	0.70		--	--
<b>76H 108997 00</b>	<b>0.40</b>		<b>6.05</b>	<b>3.62</b>		<b>7.38</b>	<b>0.33</b>
76H 149557 00	0.33		4.95	2.96		6.04	0.27
76H 150105 00	0.25		3.78	2.26		4.61	0.20
76H 151398 00	0.25		3.78	2.26		4.61	0.20
76H 215669 00	0.38		5.64	3.37		--	--

26. The historically diverted volume for Statement of Claim 76H 108997-00 is 87.99 AF (84.04 AF field-applied volume + 3.95 AF conveyance losses).

27. The Department finds the following historical use, as shown in Table 6.

**Table 6.** Summary of Historical Use Findings for Statement of Claim 76H 108997-00

WR #	Priority Date	Diverted Volume	Flow Rate	Purpose (Acres)	Consumptive Use	Place of Use	Point of Diversion
76H 108997-00	11/25/1895	87.99 AF	180.53 GPM	Irrigation (16 ac)	25.21 AF	E2NESW Sec. 3 T7N, R21W	SESWSW Sec. 33 T8N, R21W

## **ADVERSE EFFECT**

### **FINDINGS OF FACT**

28. The Applicant proposes to add a place of storage to Statement of Claim 76H 108997-00. Water will be pumped from the proposed place of storage for sprinkler irrigation on the historical place of use.

29. The Department does not consider a change in method of irrigation when calculating the proposed consumptive and field applied volumes on acreage that was historically irrigated by a given water right. Because the proposed use lies entirely within the footprint of the historically irrigated acreage, the Department finds that the proposed consumed and field applied volumes are equal to the historically consumed and field applied volumes.

30. As the addition of a place of storage is the only change proposed by the Applicant, the only possible increase to consumptive use is from evaporative losses on the reservoir. The proposed place of storage is already allowed under Ground Water Certificate 76H 108650-00, which accounts for evaporative losses in its issued volume.

31. The reservoir outlet system is designed such that the water level cannot rise more than 5 inches. Owing to the shape and construction of the reservoir, an increase of this magnitude will not result in an increase to the surface area of the pond; thus, no additional evaporative losses will occur.

32. The Applicant does not intend to use the new place of storage to extend the period of use of Statement of Claim 76H 108997-00, but to facilitate cooperation in sharing ditch water with neighbors. Water will be stored for brief periods throughout the season, allowing for flexibility in the Applicant's irrigation schedule by reducing the need to coordinate with up-ditch water users' schedules.

33. Return flows were not analyzed as no change to place of use was proposed.

34. The Applicant is the last user on the Hickey B ditch; therefore, no down-ditch appropriators can be affected by the proposed change.

35. The Department finds that no water rights will be adversely affected by the proposed change in place of storage.

## **BENEFICIAL USE**

### **FINDINGS OF FACT**

36. The addition of a place of storage will facilitate coordination and water sharing between users on the Hickey B ditch. The historical use analysis of Statement of Claim 76H 108997-00 found that the Applicant diverted 180.53 GPM of water, and that 87.99 AF was the diverted volume necessary to irrigate the 16-acre historical place of use. This change does not propose to alter the purpose or place of use.

37. The Department finds that the change proposed use of water is beneficial, and that the flow rate of 180.53 GPM and diverted volume of 87.99 AF are reasonably justified per ARM 36.12.1801(3).

## **ADEQUATE DIVERSION**

### **FINDINGS OF FACT**

38. When the Hickey B ditch enters the Applicant's property, its dimensions are 16 inches wide by 12 inches deep. The Applicant is the last user on this branch of the Hickey B ditch system. Presently, water is carried north via ditch to end edge of the Applicant's property. A previous owner dug a channel diverting water from this main channel to the pond. A diversion box with headgates on both branches of the ditch allows the flow of water to be controlled. The Applicant does not currently utilize this channel but plans to use it to convey water from the main ditch to the place of storage under this change.

39. The capacity of the proposed conveyance was calculated with the Manning's equation. Using ditch dimensions of 14 x 12 inches, a slope of 0.094, and a manning's number of 0.025, the maximum capacity of the ditch was calculated to be 13.2 CFS.

40. The proposed place of storage is a reservoir located in the NENESW Section 3, T7N, R21W, with a surface area of 0.45 acres, maximum depth of 15 ft, and capacity of 3.38 AF. This reservoir is already permitted under Ground Water Certificate 76H 108650-00.

41. A metal standpipe 18 inches in diameter is used to control the level of water in the proposed place of storage. Two outlet holes, each 6 inches wide and 2 inches tall, are cut into the standpipe, the lower outlet approximately 5 inches below the bottom edge of the upper outlet. Flow through the lower outlet can be controlled by closing off the opening. In its present use under Ground Water Certificate 76H 108650-00, the level of water in the reservoir is already maintained between the low- and high-water thresholds.

42. Currently, the Applicant irrigates by diverting water from the Hickey B ditch into gravity-fed tanks. Water is pumped from these tanks to handlines. The applicant will continue to use handline irrigation but divert water from the reservoir using a Munro 3.5 HP pump with a 1.5” outlet.

43. The Department finds that the proposed means of diversion and conveyance are capable of diverting the proposed flow rate and volume.

## **POSSESSORY INTEREST**

### **FINDINGS OF FACT**

44. 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.

## **CONCLUSIONS OF LAW**

### **HISTORICAL USE AND ADVERSE EFFECT**

45. 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).<sup>1</sup>

46. 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.<sup>2</sup>

47. 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.<sup>3</sup> 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

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<sup>1</sup> DNRC decisions are available at: <https://dnrc.mt.gov/Directors-Office/HearingOrders>

<sup>2</sup> 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).

<sup>3</sup>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

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).<sup>4</sup>

48. 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. Holloran*, 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);

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<sup>4</sup> 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.)

*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).<sup>5</sup>

49. 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.

50. 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

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<sup>5</sup> 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).

past beneficial use.

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

51. 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.

52. 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).

53. 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).

54. 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).

55. 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/has not elected to proceed under ARM 36.12.1902. (FOF No. 10).

56. 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").

57. 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 76H 108997-00 to be a diverted volume of 87.99 AF, a historically consumed volume of 25.21 AF, and flow rate of 180.53 GPM. (FOF Nos. 6-27).

58. 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. 28-35).

### BENEFICIAL USE

59. 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).

60. 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 that irrigation is a beneficial use and that the 87.99 acre-feet of diverted volume and 180.53 GPM flow rate of water requested is the amount needed to sustain the beneficial use. Section 85-2-402(2)(c), MCA (FOF Nos. 36-37).

### ADEQUATE MEANS OF DIVERSION

61. 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).

62. 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. 38-43).

### POSSESSORY INTEREST

63. 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.

64. 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. 44).

**PRELIMINARY DETERMINATION**

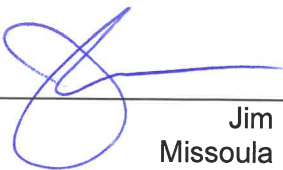
Subject to the terms and analysis in this Preliminary Determination Order, the Department preliminarily determines that this Application to Change Water Right No. 76H 30171086 should be GRANTED subject to the following.

The Applicant may divert 87.99 AF at a flow rate of up to 180.53 GPM from a point in the SESWSW Section 33, T8N, R21W, Ravalli County, for the purpose of irrigation and add a 3.38 AF place of storage in the NENESW Section 3, T7N, R21W to Statement of Claim 76H 108997-00 and use water stored in this reservoir for the purpose of irrigation.

**NOTICE**

The Department will provide a notice of opportunity for public comment on this Application and the Department's Draft Preliminary Determination to Grant pursuant to § 85-2-307, MCA. The Department will set a deadline for public comments to this Application pursuant to §§ 85-2-307, and -308, MCA. If this Application receives public comment, the Department shall consider the public comments, respond to the public comments, and issue a preliminary determination to grant the application, grant the application in modified form, or deny the application. If no public comments are received pursuant to § 85-2-307(4), MCA, the Department's preliminary determination will be adopted as the final determination.

Dated this 16th day of April, 2026.



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Jim Nave, Manager  
Missoula Regional Office  
Montana Department of Natural Resources and Conservation

**CERTIFICATE OF SERVICE**

This certifies that a true and correct copy of the DRAFT PRELIMINARY DETERMINATION TO GRANT was served upon all parties listed below on this 16th day of April, 2026, by first class United States mail.

DEAN E. HARDI & RHONDA K. HARDI LIVING TRUST  
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