

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

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<b>APPLICATION TO CHANGE WATER RIGHT NO. 40EJ 30121308 BY STATE OF MONTANA DEPARTMENT OF FISH, WILDLIFE, AND PARKS</b>	) )	<b>PRELIMINARY DETERMINATION TO GRANT TEMPORARY CHANGE</b>
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On April 8, 2019, the State of Montana Department of Fish, Wildlife, and Parks (FWP or Applicant) submitted Application to Change Water Right No. 40EJ 30121308 to the Havre Regional Water Resources Office of the Department of Natural Resources and Conservation (Department or DNRC) to temporarily change the purpose and place of use for Water Right Claim Nos. 40EJ 175817-00 and 40EJ 175819-00 to instream flow for the benefit of the fishery resource in Cow Creek. The Department published receipt of the Application on its website. The Department sent Applicant a deficiency letter per §85-2-302, Montana Code Annotated (MCA), dated September 13, 2019. The Applicant responded with information dated November 22, 2019. The Application was determined to be correct and complete as of August 3, 2020. An Environmental Assessment for this Application was completed on November 19, 2020.

**I. SUMMARY OF THE APPLICATION**

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

Application as filed:

- Application to Change Water Right, Form 606
- Change to Instream Flow Addendum
- Change in Purpose Addendum
- Temporary Change Addendum

Information Received after Application Filed

- Email Correspondence between Applicant and DNRC

- Response to Department’s Letter from Applicant, received November 22, 2019

Information within the Department’s Possession/Knowledge

- Statement of Claim files 40EJ 175817-00, 40EJ 175819-00 & 40EJ 175820-00
- 1967 Blaine County Water Resource Survey, associated field notes and aerial photos
- USDA late 1970’s early 1980’s aerial photos
- Department’s Technical Report dated August 3, 2020 (numbers in Technical Report are 3.6 AF more due to an error in the surface acres of Cow Creek Reservoir 87.5 AC verse 85.7 AC resulting in 3.6 AF less evaporation)
- Department Return Flow Report, by DNRC Water Management Bureau (WMB) Groundwater Hydrologist, Attila Felnagy dated July 21, 2020
- Email correspondence with Applicant, various dates

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 Havre Regional Office at 406-265-5516 to request copies of the following documents.

- DNRC Return Flow Memo, dated April 1, 2016
- DNRC Historic Diverted Volume Memo, dated September 13, 2012
- DNRC Instream Flow Memo, dated January 23, 2008
- DNRC Ponds and Wetland Evaporation/Evapotranspiration, dated November 8, 2019

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

*A. Change Proposal*

1. The Applicant is proposing to temporarily change the purpose and place of use for irrigation Claims 40EJ 175817-00 and 40EJ 175819-00. The proposed change in purpose will be from irrigation to instream flow to benefit the fishery resource in Cow Creek, tributary to the Missouri River in Blaine County. The proposed change in place of use will be from historically irrigated acres to an instream flow reach that will extend from above the historical point of

diversion to Cow Creek Reservoir. The reach is approximately 2 miles long; starting at the confluence of the North and South Forks of Cow Creek in the SESW of Section 18, T27N, R19E, to Cow Creek Reservoir in the N2N2 Section 20. The Applicant proposes to leave instream 0.21 CFS (~94 GPM) up to 84 AF from April 1 to and through October 31. The remaining portion of these water rights are also proposed to be temporarily changed concurrently with Application 40EJ 30121309 for fisheries in Cow Creek Reservoir. The elements of the Statements of Claim being changed are shown below in Table 1.

**Table 1:**

WR Number	Purpose	Volume AF	Period of Use	Point of diversion	Place of use	Priority date	Acres
40EJ 175817-00	Irrigation	1,402	4/01 - 10/31	N2NW Sec. 21 27N 19E Blaine	See Below	5/1/1889	375
40EJ 175819-00	Irrigation	561	4/01 - 10/31	N2NW Sec. 21 27N 19E Blaine	See Below	3/28/1889	375

**Place of Use 40EJ 175817 00 & 40EJ 175819:** 375 acres total

Acres	Qrt Sec.	Sec.	Twp	Rge
8.3	SWSE	13	27N	19E
0.8	SWNWSW	13	27N	19E
33.9	S2SW	13	27N	19E
8.4	S2N2S2	14	27N	19E
124.7	S2S2	14	27N	19E
98.8	S2S2	15	27N	19E
0.1	SENESE	15	27N	19E
17.4	N2N2	22	27N	19E
82.6	N2N2	23	27N	19E

2. Water for the proposed instream purpose will be provided through the protected reach by the implementation of a measurement plan, which will be described in detail in the *Protected Reach and Measurement Plan* section below.

3. The Applicant has entered into a lease agreement with the owners of Statement of Claim Nos. 40EJ 175817-00 and 40EJ 175819-00 to lease the Claims for instream flow purposes in Cow Creek. As this is a temporary change under § 85-2-436, MCA, the temporary period is 10 years upon authorization with the option to renew when the ten-year period comes to an end.

4. Statement of Claim N0. 40EJ 175820-00 is supplemental over most of the place of use, except for 9.3 acres located in the northern portion of the place of use in Sections 13, 14, and 15. The remainder of the water rights proposed for change in this application and all of supplemental Claim 40EJ 175820-00 are being changed to a fisheries purpose in Cow Creek Reservoir concurrently under Application 40EJ 30121309. There have been no previous change authorizations issued for Claims 40EJ 175817-00 and 40EJ 175819-00.

*B. Change Criteria*

5. The Department is authorized to approve a temporary change for instream flow filed by FWP where FWP proves the applicable §§ 85-2-402, and -436, 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.

....

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

6. In addition to the § 85-2-402(2)(a) and (c), MCA<sup>1</sup>, criteria, an application by FWP for a temporary change authorization for instream flow must comply with the requirements and conditions set forth in § 85-2-436, MCA. Section 85-2-436, MCA provides in part:

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<sup>1</sup>Pursuant to §§ 85-2-402 (2)(b) and -402(2)(d), MCA, the Applicant is not required to prove that the proposed means of diversion, construction, and operation of the appropriation works are adequate and is not required to prove

(2) The change in purpose of use or place of use must meet all of the criteria and process outlined in [85-2-307](#) through [85-2-309](#), [85-2-401](#), and [85-2-402](#) and the additional criteria and process described in subsection (3) of this section to protect the rights of other appropriators from adverse impacts.

(3) (a) The department of fish, wildlife, and parks, with the consent of the commission, may lease existing rights for the purpose of protecting, maintaining, or enhancing streamflows to benefit the fishery resource.

(b) The department may not approve a change in appropriation right until all objections are resolved.

(c) The application for a change in appropriation right authorization must include specific information on the length and location of the stream reach in which the streamflow is to be protected, maintained, or enhanced and must provide a detailed streamflow measuring plan that describes the points where and the manner in which the streamflow must be measured.

(d) The maximum quantity of water that may be changed to instream flow is the amount historically diverted. However, only the amount historically consumed, or a smaller amount if specified by the department in the change in appropriation right authorization, may be used to protect, maintain, or enhance streamflows below the point of diversion that existed prior to the change in appropriation right.

These criteria are designed to protect other water users from potential adverse effects and ensure the proposal will benefit the fishery resource. § 85-2-436(2), MCA.

## II. FINDINGS OF FACT

### A. Historical Use

7. Statement of Claim Nos. 40EJ 175817-00 and 40EJ 175819-00 are respectively based on March 28, 1889 and May 1, 1889 appropriations decreed to Thomas Marlow for 400 and 1000 Miners Inches (10 CFS and 25 CFS) from Cow Creek in a February 28, 1910 District Court case. Water was diverted from Cow Creek into a large capacity ditch (TU Ditch) in Section 18 and conveyed to the TU reservoir located on an unnamed tributary to Hedges Creek. The TU Ditch also provided water directly to part of the place of use and to fill the TU reservoir. There were

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possessory interest in the place of use because this application involves a temporary change in appropriation right for instream flow pursuant to § 85-2-436 MCA.

two other smaller diversion below in Sections 20 and 22 that provided water directly to irrigated acres closer to the creek bottom. When these claims were filed in 1982, they claimed irrigation of 365 acres.

8. In the early 1970s, the owner of the water rights proposed for change (General Agriculture Corporation at the time) began changes to the points of diversion and the place of use. The plans were to greatly increase the number of irrigated acres, install pumps, and build two new reservoirs. In 1972, General Agriculture Corporation filed a Petition and Complaint in the District Court requesting the Court adjudicate the rights on Cow Creek so that they could appropriate unappropriated waters in addition to their existing water rights and to increase irrigated acres with the new reservoirs. Defendants of the suit sought dismissal of the case due to the passage of the Water Use Act with the effective date of July 1, 1973. The suit was dismissed at the District Court level, however the decision was reversed by the Montana Supreme Court and remanded back to the District Court. For unknown reasons, the District Court never rendered a decision on the Petition which became the basis for the filing of the supplemental Water Right 40EJ 175820-00.

9. Although a final decision on the Petition was never rendered, the plans set forth in the Petition had commenced. The construction of Cow Creek Reservoir and Low Cow Creek Reservoir commenced, several pumps and pipelines were installed, and irrigated acreage was expanded. General Agriculture Corporation in agreement with the State of Montana began development of the project which included the installation of several pivots on State Trust Lands, even though a water right had not been established through the District Court. The cost of pumping and poor soil on the upper benches deemed the project too costly and the pivots were removed. The two reservoirs that were constructed were filed on in 1982 with Claim 40EJ 175820-00 which has a November 30, 1972 priority date.

10. When the Montana Water Court adjudicated Claims 40EJ 175817-00 and 40EJ 175819-00 in 2016 it was determined the change in points of diversion and place of use occurred prior to July 1, 1973, so these water rights were decreed with the dam on Cow Creek Reservoir as a primary point of diversion and a 375 irrigated acre place of use. The Lower Cow Creek Reservoir Dam point of diversion and two secondary diversions were also decreed on the water rights.

Supplemental Claim 40EJ 175820-00 was decreed with the same points of diversion (dam) and 365.7 irrigated acres.

11. There are four reservoirs associated with the water rights proposed for change. Table 2 shows the reservoir specifications as decreed by the Montana Water Court in 2016.

**Table 2: Reservoir Details**

Name	Depth (Feet)	Surface Area (Acres)	Capacity (AF)
Cow Creek	45	85.7	1,543
Lower Cow Creek	10	5	20
TU	20	48.4	390
Diversion	10	1	4

12. The Blaine County Water Resource Survey (WRS) field notes indicate active irrigation on 323 acres at the time of the field survey (June 11, 1966). Although there appears to be an error on the source name in the field notes, Hedges Creek is listed for the March 28 appropriation and Cow Creek for an April 15 appropriation. The Department finds the Blaine County WRS supports irrigation of 323 acres under these appropriations.

13. The USDA aerial imagery from October 8, 1980, supports irrigation on more acres (~400 acres) than the decreed 375 acres. The Department cannot find more acres than what is decreed by the Water Court, therefore the Department finds the claimed 375 acres were historically irrigated.

14. Per ARM 36.12.1902, the consumptive volume for 375 irrigated acres in Blaine County was calculated using the Chinook weather station irrigation requirement of 20.8 inches and a management factor (MF) of 58.7% and equals 381.55 AF ((375 acres x 20.8 in)/1ft/12in) x 0.587 MF = 381.55 AF). Per ARM 36.12.1902(17)(b), the Department also considers 10% irrecoverable losses at the field for sprinkler irrigation as part of the consumptive use, which is calculated to be 54.51 AF (381.55 AF/ 0.70 field efficiency) x 0.10 = 54.51 AF). Since the Applicant is retiring all historically irrigated acres as well as the historical ditches during the term of this temporary change, ditch evaporation and vegetative losses are also considered part of the total consumed volume. The Applicant provided the calculations for ditch evaporation (0.86 AF) and vegetative losses (0.73 AF), which the Department finds reasonable. The Department finds the total historic

consumptive volume, not including the evaporation from the reservoirs, to be 437.65 AF (381.55 + 54.51 + 0.86 + 0.73).

15. In order to calculate what portions of the historic consumptive volume are attributable to each water right, the Department used the historically decreed flow rates and percentages the Applicant provided in the Application. The amount of water per acre irrigated ( $375/437.65 = 1.16$  AF/AC) was used with the Applicant’s assertion that Claim 40EJ 175817-00 provided 71.4% and Claim 40EJ 175819-00 provided 28.6% based on the claimed historical flow rates. The flow rates historically decreed were 25 CFS and 10 CFS, however the Applicant changed the historical point of diversion in Section 18 to the dam on Cow Creek Reservoir prior to July 1, 1973, therefore the Water Court did not decree a flow rate. The consumed volume for the acreage not supplementally irrigated with Claim 40EJ 175820-00 (9.3 acres) is 10.86 AF, of which 7.75 AF are attributed to Claim 40EJ 175817-00 and 3.11 AF to Claim 40EJ 175819-00. For the supplemental 365.7 acres, the Department attributed 1/3 to Claim 40EJ 175820-00, 71.4% of the remaining 2/3 to Claim 40EJ 175817-00 and the remaining 28.6% of the 2/3 to Claim 40EJ 175819-00. These amounts were added together to determine the percentage of consumption and estimate the evaporation attributable to each water right (Table 3).

**Table 3: Historic Consumptive Use Volume**

Water Right	9.3 Acres	365.7 Acres	Reservoir Evap.	Total
40EJ 175817	7.75 (71.4%)	203.2 (71.4 % of 2/3)	88 (48%)	299
40EJ 175819	3.11 (28.6%)	81.3 (28.6% of 2/3)	36.7 (20%)	121.1
40EJ 175820	NA	142.3 (1/3)	58.7 (32%)	201
<b>Total:</b>	10.86 AF	426.9 AF	183.4 AF	<b>621.2*AF</b>

\*Due to rounding and decimals, numbers may not add up exactly

16. Per the Department’s November 8, 2019 Memorandum: Pond and Wetland Evaporation/Evapotranspiration, the net (rather than gross) evaporation will be calculated for the reservoirs. The Department used monthly gross evaporation and average monthly precipitation values collected at the Chinook Weather Station (#241722) between 1981 to 2010 as indicated in the Penman/Linacre procedure described in Potts (1988) to calculate an annual net evaporation value equal to 24.0 inches. The calculated annual net evaporation rate for a surface area of 91.7 acres associated with all three existing reservoirs is 183.4 AF. The TU reservoir will continue to be used by the other water rights associated with it and will therefore not be included in the

Department’s consumptive volume calculations. The net evaporation is for the fisheries use component of Change Application 40EJ 30121309 and is distributed monthly in Table 4 based on the monthly rate generated from the Penman/Linacre procedure.

**Table 4: Net Reservoir Evaporation calculation\***

	Evap. (Chinook Station) (in.)	Precip. (Chinook Station) (in.)	Net Evap (in.)	Net Reservoir Evaporation (AF)
January	0.65	0.49	0.16	1.2
February	0.92	0.40	0.52	4.0
March	1.87	0.61	1.26	9.6
April	2.97	0.91	2.06	15.8
May	4.03	2.25	1.78	13.6
June	4.91	2.35	2.56	19.6
July	6.14	1.74	4.40	33.6
August	5.98	1.22	4.76	36.4
September	4.33	1.41	2.92	22.3
October	3.00	0.71	2.29	17.5
November	1.56	0.55	1.01	7.7
December	0.75	0.48	0.27	2.1
<b>Total</b>	<b>37.12</b>	<b>13.12</b>	<b>24.00</b>	<b>183.4</b>

\*Net Evaporation calculated per Department memo dated November 8, 2019

17. The Department calculated the historical diverted volume using ARM 36.12.1902(10), information provided in the Application, and evaporation calculated by the Department. The Department used the applied volume, conveyance losses and reservoir seepage values as calculated by the Applicant, and Department calculated reservoir evaporation to find a historically diverted volume of 1,213.4 AF.

- Irrigation applied volume: 545.01 AF (381.55 AF ÷ 0.7 field efficiency)
- Ditch seepage: 84.5 AF (calculated by applicant)
- Ditch evaporation: 0.86 AF (calculated by applicant)
- Ditch vegetative loss: 0.73 AF (calculated by applicant)
- Reservoir Evaporation: 183.4 AF
- Seepage from Cow Creek Reservoir: 398.85 AF (calculated by applicant)
- Total: 1,213.4 AF (545.01+84.5+0.86+0.73+183.4+398.85=1,213.4 AF)

18. The Applicant measured a flow of 0.73 CFS in Cow Creek below the reservoir while the reservoir was at full pool and no water was spilling. This would calculate to 528.37 AF of seepage per year. The Applicant asserts that the reservoir is drawn down 5 feet during the winter months and estimates an 11% reduction in reservoir pool level and seepage. This results in approximately 499 AF of seepage per year. Since the seepage water fills the lower reservoir, which is also used for irrigation, the Applicant subtracted approximately 100 AF from the calculated seepage for a total seepage value of 398.85 AF. The Applicant also provided calculations for ditch seepage, ditch evaporation and ditch vegetative loss which along with reservoir seepage is found to be reasonable by the Department (see application materials and deficiency response).

19. The percentages used to identify the consumptive volume per water right (FOF 15), were also used to attribute the diverted volume to each right. The Department finds the following historic use including diverted and consumed volume per water right in Table 5.

**Table 5: The Department finds the following Historic Use:**

Water Rights	Diverted Volume	Consumptive Volume	Acres Irrigated	Priority Date	Period of Use	Period & Points of Diversion
40EJ 175817 (48%)	582.4 AF	299 AF	375	5/1/1889	4/1 – 10/31	1/1 to 12/31 Cow Creek Reservoir Sec.21 T27N R19E  Lower Cow Creek Reservoir Sec. 23 T27N R19E
40EJ 175819 (20%)	242.7 AF	121.1 AF	375	3/28/1889	4/1 – 10/31	
40EJ 175820 (32%)	388.3 AF	201 AF	365.7	11/30/1972	4/1 – 10/31	
Total	1,213.4 AF	621.2 AF	375			

*B. Adverse Effect*

20. The Applicant proposes to protect a volume of 84 AF (60 AF for Claim 40EJ 175817-00 and 24 AF for Claim 40EJ 175819-00) instream in Cow Creek from the confluence of North and South Forks of Cow Creek to the Cow Creek Reservoir. The Applicant proposes to protect a flow rate of 0.21 CFS (0.15 CFS for Claim 40EJ 175817-00 and 0.06 CFS for Claim 40EJ 175819-00) instream as soon as the Cow Creek Reservoir begins spilling and until the 84 AF is exhausted (approximately 202 days) within the period of use (April 1 to October 31). The remaining historic

diverted, 1,129.4 AF, volume is proposed to be changed to in-reservoir fisheries under Application 40EJ 30121309, all in Cow Creek Reservoir. The Lower Cow Creek Reservoir and the Diversion Reservoir are no longer in use.

21. The proposed protected reach is approximately two miles long and there are two water rights in the proposed protected reach. Claim 40EJ 175801-00 is for livestock direct from source and is owned by Sand Creek Ranch. Claim 40EJ 215415-00 lists a diversion in Section 18 and is junior in priority to the water rights proposed for change. The claimed diversion for Claim 40EJ 215415-00 is located upstream of the location where return flows historically accreted in Cow Creek; therefore, this claim did not rely on return flows resulting from irrigation with the water rights proposed for change. While this user may be subject to call in the event of inadequate streamflow this will not be an adverse effect since historically these flows were not available at their diversion when Claims 40EJ 175817-00 and 40EJ 175819-00 were historically exercised.

22. According to the Return Flow Report by Department Water Management Bureau Groundwater Hydrologist Attila Fohnagy, dated July 21, 2020, for Application to Change Water Right Nos. 40EJ 30121308 and 40EJ 30121309, return flows historically accreted in Cow Creek and Hedges Creek. Return flows begin accreting at the upstream extent of the historic place of use and gradually increase to the total relative amounts in Cow Creek downstream of Hedges Creek. Table 6 below shows the calculated return flow amounts associated with the 375-acre historically irrigated place of use that will be temporarily retired during the term of this change.

**Table 6: Total return flows for irrigation of 375 acres at the historic POU upstream of the confluence of Cow Creek and Hedges Creek**

	NIR (in)	Net Reservoir Evaporation (AF)	Applied (AF)	Crop Consumed (AF)	Not Consumed (AF)	Return Flows (AF)	
						Cow Creek	Hedges Creek
January	0.00	1.2	0.0	0.0	0.0	5.8	3.2
February	0.00	4.0	0.0	0.0	0.0	5.8	3.2
March	0.00	9.8	0.0	0.0	0.0	5.8	3.2
April	0.00	16.1	0.0	0.0	0.0	5.8	3.2
May	1.39	13.9	61.8	49.5	12.4	5.8	3.2
June	3.02	19.9	134.7	107.8	26.9	5.8	3.2
July	3.89	34.3	173.5	138.8	34.7	5.8	3.3

August	3.33	37.1	148.6	118.9	29.7	5.8	3.3
September	0.59	22.7	26.5	21.2	5.3	5.8	3.3
October	0.00	17.9	0.0	0.0	0.0	5.8	3.3
November	0.00	7.9	0.0	0.0	0.0	5.8	3.3
December	0.00	2.1	0.0	0.0	0.0	5.8	3.3
<b>Total</b>	<b>12.21</b>	<b>187.0</b>	<b>545.1</b>	<b>436.1</b>	<b>109.0</b>	<b>70.0</b>	<b>39.0</b>

23. The Department’s Return Flow Report also included calculations for the net effect of losses of historical return flows in Cow Creek and Hedges Creek both upstream and downstream of the confluence of the two creeks resulting from the retirement of the historically irrigated 375-acre place of use. Table 7 shows the monthly breakdown of the net effect on both Hedges and Cow Creeks.

**Table 7: Net effect on flows in Hedges Creek and Cow Creek both upstream and downstream of its confluence with Hedges Creek**

	Net Effect on Stream Flows (AF)		
	Hedges Creek	Cow Creek	
		Upstream	Downstream
January	-3.2	-5.8	-9.1
February	-3.2	-5.8	-9.1
March	-3.2	-5.8	-9.1
April	-3.2	-5.8	-9.1
May	-3.2	6.5	3.3
June	-3.2	21.1	17.9
July	-3.3	28.9	25.6
August	-3.3	23.9	20.6
September	-3.3	-0.5	-3.8
October	-3.3	-5.8	-9.1
November	-3.3	-5.8	-9.1
December	-3.3	-5.8	-9.1
	-39.0	39.0	

24. Claims 40EJ 137788 and 40EJ 137787 are livestock (direct from source) water rights located in the reach of Hedges Creek where return flows historically accreted. Hedges Creek is considered a perennial stream; however, review of several aerial photos shows pooling at various

times throughout the year. Although there is pooling and the source may not always flow year-round, it is more likely than not that livestock are able to drink and the rights can be actively exercised without adverse effect.

25. The Applicant provided a list of downstream water rights on Cow Creek, all of which are junior to the water rights proposed for change. Although the proposed change will create a negative net effect downstream on Cow Creek (Table 7), the seepage from Cow Creek Reservoir will more than offset any adverse effect resulting from the elimination of return flows associated with the historically irrigated acres that will be retired. The Applicant asserts irrigation has not occurred since 1997. The Department finds that the Applicant's proposed change to temporary instream flow protection does not create an adverse effect.

*C. Beneficial Use/ Fisheries Resource*

26. The Applicant proposes to use water for temporary instream flow protection in Cow Creek from the confluence of the North and South Forks Cow Creek to the Cow Creek Reservoir. FWP has an instream flow reservation (40EJ 30017443) in the reach proposed for instream protection in this Application. In this application a flow rate of 4.5 CFS was identified as the upper inflection point below which the quality of fish habitat rapidly diminishes and was therefore identified as the required flow rate for the reservation. Flows regularly drop below this 4.5-CFS inflection point/flow rate and the temporary instream flow protection proposed in this application is designed to support FWP's goals for Cow Creek by bringing conditions closer to the natural flow regime, which will benefit fishery habitat.

27. According to the FWP reservation application, Cow Creek historically supported an abundant brook trout population. The changes proposed in this Application to Change Water Right No. 40EJ 30121308 are designed to help maintain necessary riffle/pool inflection points, increase the period in which the desired instream flows are met, and ultimately help bring conditions closer to the historical flow regimes to benefit the fishery in Cow Creek.

*D. Protected Reach and Measurement Plan*

28. The Applicant proposes to protect the combined historical flow rate (0.21 CFS) and the combined historically diverted volume (84 AF) of Claims 40EJ 175817-00 and 40EJ 15819-00 in a 2-mile reach of Cow creek beginning at the confluence of the North and South Forks of Cow Creek in the SESW of Section 18, T27N R19E to the Cow Creek Reservoir in the N2N2 of Section 20, T27N R19E. The remaining historical flow rate and volume associated with these water rights is also being changed in Application 40EJ 30121309 for the purpose of fisheries in Cow Creek Reservoir. To be sure the water filling the reservoir for fisheries purpose is not part of the instream protection, the Applicant proposes to measure the instream portion below the spillway in Cow Creek Reservoir (NWNENW Section 21, T27N R19E). Once the reservoir begins to spill, the instream protection above the reservoir will commence for Claims 40EJ 175817-00 (0.15 CFS and 60 AF) and 40EJ 175819-00 (0.06 CFS and 24 AF).

29. Below the spillway, the Applicant proposes to install a staff gage, stilling well, and water level logger in order to develop a stage-discharge rating curve. Once the reservoir begins to spill, the instream protection of 0.21 CFS (94 GPM) up to 84 AF above the reservoir will begin. FWP staff will collect discharge measurements on a monthly basis to develop and maintain the rating curve. The staff gage reading in conjunction with rating table will be used to determine if flows fall below the protectable flow rate and if a call on a junior user is necessary.

30. The Department finds the Applicant's Protected Reach and Measurement Plan to be adequate to provide the temporary instream flow protection proposed in this application. The following streamflow measurement condition will be placed on the authorization:

THE APPROPRIATOR SHALL INSTALL A STAFF GAGE, STILLING WELL, AND WATER LEVEL LOGGER BELOW COW CREEK RESERVOIR. DISCHARGE MEASUREMENTS SHALL BE COLLECTED MONTHLY ONCE THE RESERVOIR BEGINS TO SPILL AND A RATING CURVE WILL BE DEVELOPED AND MAINTAINED. THE APPLICANT SHALL DOCUMENT WHEN INSTREAM PROTECTION COMMENCES AND REPORT TO THE DEPARTMENT AT THE END OF EACH SEASON. THE APPROPRIATOR WILL PROTECT 0.21 CFS (94 GPM) IN COW CREEK ABOVE COW CREEK RESERVOIR FROM THE TIME THE RESERVOIR STARTS SPILLING UNTIL 84 AF ARE EXHAUSTED OR THE END OF THE PERIOD OF USE IS REACHED, WHICHEVER OCCURS FIRST. FAILURE TO SUBMIT

REPORTS MAY BE CAUSE FOR REVOCATION OF THIS CHANGE AUTHORIZATION. REPORTS MUST BE SENT TO THE HAVRE WATER RESOURCES REGIONAL OFFICE BY NOVEMBER 30 EACH YEAR.

### III. CONCLUSIONS OF LAW

#### A. Adverse Effect – Historic Use, Protected Reach and Measurement Plan

31. 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. Town of Manhattan, at ¶ 10 (an appropriator’s right only attaches to the amount of water actually taken and beneficially applied).<sup>2</sup>

32. 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

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<sup>2</sup> DNRC decisions are available at:  
[http://www.dnrc.mt.gov/wrd/water\\_rts/hearing\\_info/hearing\\_orders/hearingorders.asp](http://www.dnrc.mt.gov/wrd/water_rts/hearing_info/hearing_orders/hearingorders.asp)

Mont. at 429, 816 P.2d at 1057; Hohenlohe, at ¶¶43-45.<sup>3</sup>

33. The cornerstone of evaluating potential adverse effect to other appropriators is the determination of the “historic use” of the water right being changed. Town of Manhattan, at ¶10 (recognizing that the Department’s obligation to ensure that change will not adversely affect other water rights requires analysis of the actual historic amount, pattern, and means of water use). In this case, the Applicant seeks to change existing water rights represented by its Water Right Statement of Claim. Therefore, analysis of historic use and adverse effect in requires evaluation of what the water right looked like and how it was exercised prior to July 1, 1973.

34. 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 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>4</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 Department

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<sup>3</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>4</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. §85-2-234, MCA

with evidence of the historic diverted volume, consumption, and return flow); Hohenlohe, at ¶44-45; Town of Manhattan v. DNRC, Cause No. DV-09-872C, Montana Eighteenth Judicial District Court, *Order Re Petition for Judicial Review*, Pgs. 11-12 (proof of historic use is required even when the right has been decreed because the decreed flow rate or volume establishes the maximum appropriation that may be diverted, and may exceed the historical pattern of use, amount diverted or amount consumed through actual use); Matter of 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).

35. An applicant must also analyze the extent to which a proposed change may alter historic return flows for purposes of establishing that the proposed change will not result in adverse effect. The requisite return flow analysis reflects the fundamental tenant of Montana water law that once water leaves the control of the original appropriator, the original appropriator has no right to its use and the water is subject to appropriation by others. E.g., Hohenlohe, at ¶44 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>

36. 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 ¶¶ 42-6 and 55-6; Spokane Ranch & Water Co., 37 Mont. at 351-52, 96 P. at 731.

37. The Montana Supreme Court explained the relationship between the fundamental

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

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), 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).

38. 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 set 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.

39. 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.

40. 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 Nos.14-15).

41. Accordingly, the Applicant was required to prove the historic consumptive use by a preponderance of the evidence for each of the water rights being changed. The actual historic use of water could be less than the optimum utilization represented by the calculated duty of water in any particular case. E.g., Application for Water Rights in Rio Grande County 53 P.3d 1165 (Colo., 2002) (historical use must be quantified to ensure no enlargement); In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC., *supra*; Orr v. Arapahoe Water and Sanitation Dist. 753 P.2d 1217, 1223 -1224 (Colo., 1988)(historical use of a water right could very well be less than the duty of water); Weibert v. Rothe Bros., Inc., 200 Colo. 310, 317, 618 P.2d 1367, 1371 - 1372 (Colo. 1980) (historical use could be less than the optimum utilization “duty of water”).

42. In order to prove lack of adverse effect, for an FWP instream flow change in use, the applicant must demonstrate that the operation of the instream flow change will not adversely affect other water users. This requires consideration of the protected reach, the location and timing of historic return flows, and measurement plan in order to insure the applicant’s plan for operation of its change will not adversely affect other water users. §§ 85-2-402(2)(a) and -436(2) and (3), MCA. An instream flow change may be authorized to protect the full historic diverted flow rate and volume to the historic point of diversion. The amount protected instream below the historic point of diversion depends upon the potential for adverse effect to other water users.

The Department has the discretion under appropriate circumstances to limit or reduce that portion suitable for instream flow from the amount historically diverted to the amount historically consumed, or a smaller amount and to approve the change under such conditions as the Department considers necessary. §§ 85-2-402(2)(a) and - 436(2) and (3)(d), MCA; Hohenlohe, ¶¶ 37, 39, 42, 67 - 70.

43. Based upon the Applicant's evidence of historic use, the Applicant has proven by a preponderance of the evidence the historic use of Water Right Statement of Claim No. 40EJ 175817-00 of 582.4 AF diverted volume with a consumptive use of 299 AF and Water Right Statement of Claim No. 40EJ 175819-00 of 242.7 AF diverted volume with a consumptive use of 121.1 AF. (FOF Nos. 7-19)

44. The Applicant established that the change authorization will be operated in a manner that ensures the amount of water protected instream does not exceed the maximum volume and flow rate during the period of use for the change authorization. Furthermore, the Applicant identified the reach in which instream flows will be protected and provided a detailed measurement plan to ensure that the change authorization is operated in compliance with §85-2-436(3)(c), MCA. (FOF Nos. 28-30)

45. The Department concludes that the Applicant's plan for operation and measurement of instream flow protection to protect the combined historical flow rate (0.21 CFS) and the combined historically diverted volume (84 AF) from the confluence of North and South Forks Cow Creek to Cow Creek Reservoir is sufficient as proposed to ensure that 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 will not be adversely affected. §85-2-402(2)(a). (FOF Nos. 20-25)

*B. Beneficial Use/Fishery Resource*

46. A change applicant must prove by a preponderance of the evidence the proposed use is a beneficial use. §§85-2-102(5) 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.

47. Where the proposed beneficial use is instream flow to enhance the fishery resource, an applicant must prove that that amount of water proposed for change is needed to maintain or enhance instream flows to benefit the fishery resource. § 85-2-102(1)(c) and (5)(c); § 85-2-436(1) and (3), MCA. See In the Matter of Beneficial Water Use Permit No. 41H-30013678 by Baker Ditch Company, DNRC Statement of Opinion (June 11, 2008)(change authorization denied - no credible evidence provided on which a determination can be made of whether the quantity of water requested is adequate or necessary to sustain the fishery use, or that the size or depth of the ponds is adequate for a fishery); In the Matter of Application for Beneficial Water Use Permit No. 43C 30007297 by Dee Deaterly, (DNRC Final Order 2007)(*aff'd on other grounds, Deaterly v. DNRC et al.*, Cause No. BDV-2007-186, Montana First Judicial District, *Nunc Pro Tunc Order on Petition for Judicial Review* (2008)) (permit denied in part because of failure to support quantity of water needed for pond).

48. The Applicant proposes to use water for instream flow to benefit the fishery in the Cow Creek which is a recognized beneficial use. §85-2-102(5), MCA. Applicant has proven by a preponderance of the evidence that instream flow protection of 84 AF of diverted volume at 0.21 CFS flow rate of water requested is the amount needed to maintain and enhance the fishery resource and sustain the beneficial use. (FOF Nos. 26-27)

*C. Protected Reach/Measurement Plan*

49. The Department has determined that the Applicant may protect 84 AF of the historic diverted volume at a flow 0.21 from the confluence of North and South Forks Cow Creek at the SESW Section 18, T27N, R19E, to Cow Creek Reservoir in the N2N2 Section 20, T27N, R19E, all in Blaine County. The Department concludes the length and location of the stream reach in which instream flows will be maintained and enhanced along with the measurement plan satisfy the requirements of 85-2-436(3)(c), MCA. (FOF Nos.28-30)

#### **IV. 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. 40EJ 30121308 should be granted subject to the following.

The Applicant is authorized to temporarily protect for instream use the combined historical flow rate (0.21 CFS) and the combined historically diverted volume (84 AF) of Claims 70EJ 175817-00 and 40EJ 175819-00 in a 2-mile reach of Cow Creek beginning at the confluence of North and South Forks Cow Creek (SESW Section 18, T27N, R19E, Blain County) to Cow Creek Reservoir (N2N2 Section 20, T27N, R19E, Blaine County) for a period of 10 years. Once the reservoir is full and begins spilling instream protection of 0.15 CFS up to 60 AF with Claim 40EJ 175817-00 and 0.06 CFS up to 24 AF with Claim 40EJ 175819-00 above the reservoir will commence. The protection of 0.21 CFS total will continue until the maximum volume of 84 AF is exhausted or the end of the period of use is reached. The period of use is April 1 to October 31. The remaining historical volumes calculated for both Claims 40EJ 175817-00 and 40EJ 175819-00 are proposed for temporary change for fisheries in Cow Creek Reservoir in Change Application No. 40EJ 30121309.

This Authorization is subject to the following condition:

THE APPROPRIATOR SHALL INSTALL A STAFF GAGE, STILLING WELL, AND WATER LEVEL LOGGER BELOW COW CREEK RESERVOIR. DISCHARGE MEASUREMENTS SHALL BE COLLECTED MONTHLY ONCE THE RESERVOIR BEGINS TO SPILL AND A RATING CURVE WILL BE DEVELOPED AND MAINTAINED. THE APPLICANT SHALL DOCUMENT WHEN INSTREAM PROTECTION COMMENCES AND REPORT TO THE DEPARTMENT AT THE END OF EACH SEASON. THE APPROPRIATOR WILL PROTECT 0.21 CFS (94 GPM) IN COW CREEK ABOVE COW CREEK RESERVOIR FROM THE TIME THE RESERVOIR STARTS SPILLING UNTIL 84 AF ARE EXHAUSTED OR THE END OF THE PERIOD OF USE IS REACHED, WHICH EVER OCCURS FIRST. FAILURE TO SUBMIT REPORTS MAY BE CAUSE FOR REVOCATION OF THIS CHANGE

AUTHORIZATION. REPORTS MUST BE SENT TO THE HAVRE WATER RESOURCES REGIONAL OFFICE BY NOVEMBER 30 EACH YEAR.

**NOTICE**

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

DATED this 24th day of November 2020.

*/Original signed by Matt Miles/*  
Matt Miles, Regional Manager  
Havre Regional Office  
Department of Natural Resources  
and Conservation

**CERTIFICATE OF SERVICE**

This certifies that a true and correct copy of the PRELIMINARY DETERMINATION TO GRANT was served upon all parties listed below on this 24th day of November 2020, by electronic mail (email).

MONTANA STATE OF DEPT OF FISH WILDLIFE & PARKS  
% ANDY BRUMMOND  
(VIA EMAIL)

HOLLY FRANZ, ATTORNEY AT LAW  
FOR SAND CREEK RANCH LLC  
(VIA EMAIL)

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Havre Regional Office, (406) 265-5516