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

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APPLICATION TO CHANGE WATER RIGHT NO. 43B 30159989 by State of Montana Department of Fish, Wildlife & Parks	**PRELIMINARY DETERMINATION TO GRANT CHANGE**

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On June 9, 2023, State of Montana Department of Fish, Wildlife & Parks (Applicant) submitted Application to Change Water Right No. 43B 30159989 to change 43B 194822-00, 43B 194823-00, 43B 194824-00, 43B 194343-00, 43B 194222-00, 43B 194344-00, and 43B 194825-00 to the Bozeman Regional Office of the Department of Natural Resources and Conservation (Department or DNRC). The Department published receipt of the application on its website. The Department sent Applicant a deficiency letter under §85-2-302, Montana Code Annotated (MCA), dated December 6, 2023. The Applicant responded with information dated December 22, 2023. A preapplication meeting was held between the Department and the Applicant on March 22, 2023, The Application was determined to be correct and complete as of March 20, 2024. An Environmental Assessment for this application was completed on July 16, 2024.

INFORMATION

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

Application as filed:

- Irrigation Application for Change of Appropriation Water Right, Form 606-IR
- Addenda:
    - Change to Instream Flow Addendum, Form 606-IFA
    - Change in Purpose Addendum, Form 606-PA
    - Temporary Change Addendum, Form 606-TCA
- Attachments
    - United States Department of Agriculture Letter to DNRC (Jan Mack), April 11, 1988
    - Typical Irrigation System Application Efficiency for Surface and Sprinkler Irrigation Systems Table, Sterling R. and W.H. Neibling 1994. Final Report of the Water Conservation Task Forse. IDWR Report. Idaho Department of Water Resources, Boise.

- Montana Weather Stations and Average P/L Estimated and Average P/L Adjusted Pond Evaporation Rates for the Period 1951-1980 Table 4, Estimation of Evaporation from Shallow Ponds & Impoundments in Montana, Donald F. Potts, March 1988
- DNRC (Rusty Taylor) Letter to Montana Water Court (Carol Brown), September 25, 1989
- Water Right Lease Agreement, Point of Rocks Ranch LLC and Montana Department of Fish, Wildlife and Parks, June 5, 2023

- Maps:
  - Park County Water Resources Survey (WRS) Field Notes Map, February 5, 1952
  - Historic Use Maps :
    - 7-9-1947 Aerial Photography
    - 8-16-1949 Aerial Photography
    - 8-4-1969 Aerial Photography
  - Proposed Use Map, 9-30-2021 Aerial Photography
  - Miner Quadrangle Topography Map, USGS, 2013

Information Received after Application Filed

- Deficiency Letter Response from Applicant (Andy Brummond, FWP Water Conservationist) dated December 22, 2023
- Amendment to Application No 43B 30159989 received by DNRC on December 22, 2023, to reflect recent Water Court changes
- Historic Use Spreadsheet produced by Applicant received by DNRC on February 6, 2024
- Email chain between Applicant (Andy Brummond, FWP Water Conservationist) and DNRC (Lyra Reynolds & Savannah Telander), dated February 28, 2024, Re: Change Application 43B 30159989 Clarification Questions
- Email chain between Applicant (Andy Brummond, FWP Water Conservationist) and DNRC (Savannah Telander), dated March 21, 2024, Re: FWP 43B 30159989 Correct and Complete

Information within the Department's Possession/Knowledge

- Statements of Claim 43B 194822-00, 43B 194823-00, 43B 194824-00, 43B 194343-00, 43B 194222-00, 43B 194344-00, and 43B 194825-00 files
- DNRC Irrigation Change Application Technical Report: Technical Report, dated March 20, 2024

- DNRC Surface Water Change Report, dated March 6, 2024
- Water Resources Survey, Park County, December 1951
- USGS Photo 1JA0000010147, dated August 16, 1949
- USDA Aerial Imagery Photo 179-263, dated September 15,1979
- The Department also routinely considers the following information. The following information is not included in the administrative file for this Application, but is available upon request. Please contact the Bozeman Regional Office at 406-586-3136 to request copies of the following documents.
    - "Technical Memorandum: Distributing Conveyance Loss on Multiple User Ditches" (Water Management Bureau, 2020)
    - "Policy Memo - Return Flows" (Davis, 2016)
    - "Development of Standardized Methodologies to Determine Historic Diverted Volume" (Roberts and Heffner, 2012)
    - "Changes for Instream Flow Rights" (Tubbs, 2008)

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

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

WATER RIGHTS TO BE CHANGED

FINDINGS OF FACT

1. Applicant seeks to temporarily change the point of diversion (POD), place of use (POU), and purpose of Statement of Claim Nos. 43B 194822-00, 43B 194823-00, 43B 194824-00, 43B 194343-00, 43B 194222-00, 43B 194344-00, and 43B 194825-00 for a period of 30 years in this Application, with the option to renew. Table 1 below summarizes the rights proposed for change as currently claimed. These Claims are diverted from Stoughten Creek and Rock Creek for irrigation use for a volume not to exceed the amount put to historic and beneficial use.

2. Claim 43B 194222-00, 0.33 CFS flow rate, historically diverted water from Rock Creek by the Stewart Ditch for flood irrigation of 8.70 acres. Claims 43B 194822-00, 43B 194823-00, 43B

194824-00, 43B 194343-00, 1.5 CFS flow rate each, historically diverted water from Rock Creek by the Stewart Ditch for flood irrigation of 39.50 acres. All the water rights diverted from Rock Creek were claimed with a period of diversion and period of use as May 1 to November 1. The Applicant provided evidence that supports that water has been historically diverted and used from Rock Creek from May 1 to October 10. The Stewart Ditch POD is located in NENESW Section 19, T7S, R7E, Park County.

3. Claims 43B 194344-00, 2.26 CFS flow rate, and 43B 194825-00, 2 CFS flow rate, historically diverted from Stoughten Creek by the Pfohl Ditch for flood irrigation of 59.70 acres. Both water rights diverted from Stoughten Creek were claimed with a period of diversion and period of use as May 1 to November 1. The Pfohl Ditch POD is located in NENWNW Section 13, T7S, R7E, Park County.

4. Statements of Claim 43B 194822-00, 43B 194823-00, 43B 194824-00, and 43B 194343-00 are supplemental rights that were historically used to irrigate 30.80 acres in Sections 18, 19, and 20, T7S, R7E, Park County. Statements of Claim 43B 194822-00, 43B 194823-00, 43B 194824-00, 43B 194343-00, and 43B 194222-00 are supplemental rights that were historically used to irrigate 8.70 acres in Sections 19 and 20, T7S, R7E, Park County. Statements of Claim 43B 194344-00 and 43B 194825-00 are supplemental rights that were historically used to irrigate 59.70 acres in Sections 8, 9, 16, and 17, T7S, R7E, Park County. The historical POUs are depicted as hash symbology on the map provided as Figure 1. No other water rights irrigated the historical POUs.

5. No documented history of a call on the water rights included in this Change Application exist.

6. No previous Change Authorizations are associated with the water rights to be changed.

7. The Applicant leases water from the Water Right Owner of Record, Point of Rocks Ranch LLC. Ownership of the Claims is clear, and the rights are not part of a divided interest.

Table 1. Water rights proposed for change

Water Right	Purpose	Flow Rate (CFS)	Maximum Volume (AF)	Period of Use[1]	Source	POD	POU	Priority Date	Acres
43B 194822-00	Irrigation	1.5	Historical Use Statement	5/1 to 11/1	Rock Creek	NENESW Section 19, T7S, R7E, Park County, MT	SESE Section 18, NE Section 19, NWNW Section 20, T7S, R7E, Park County, MT	1909.05.05	39.50
43B 194823-00	Irrigation	1.5	Historical Use Statement	5/1 to 11/1	Rock Creek	NENESW Section 19, T7S, R7E, Park County, MT	SESE Section 18, NE Section 19, NWNW Section 20, T7S, R7E, Park County, MT	1906.04.24	39.50
43B 194824-00	Irrigation	1.5	Historical Use Statement	5/1 to 11/1	Rock Creek	NENESW Section 19, T7S, R7E, Park County, MT	SESE Section 18, NE Section 19, NWNW Section 20, T7S, R7E, Park County, MT	1904.10.26	39.50
43B 194343-00	Irrigation	1.5	Historical Use Statement	5/1 to 11/1	Rock Creek	SESWNW Section 19, T7S, R7E, Park County, MT	SESE Section 18, NE Section 19, NWNW Section 20, T7S, R7E, Park County, MT	1902.05.29	39.50
43B 194222-00	Irrigation	0.33	79.95	5/1 to 11/1	Rock Creek	SESWNW Section 19, T7S, R7E, Park County, MT	S2NENE Section 19, S2NWNW Section 20, T7S, R7E, Park County, MT	1904.10.26	8.70
43B 194344-00	Irrigation	2.26	Historical Use Statement	5/1 to 11/1	Stoughten Creek	NENWNW Section 13, T7S, R7E Park County, MT	SESESE Section 8, SW Section 9, NWNW Section 16, NE Section 17 T7S, R7E, Park County, MT	1895.07.10	59.70
43B 194825-00	Irrigation	2	Historical Use Statement	5/1 to 11/1	Stoughten Creek	NENWNW Section 13, T7S, R7E Park County, MT	SESESE Section 8, SWSW Section 9, NWNW Section 16, NE Section 17 T7S, R7E, Park County, MT	1909.06.01	59.70

[1] The period of use provided are the claimed period of use

CHANGE PROPOSAL

FINDINGS OF FACT

8. The Applicant proposes to temporarily change the POD, POU, and purpose of Statements of Claim 43B 194822-00, 43B 194823-00, 43B 194824-00, 43B 194343-00, 43B 194222-00, 43B 194344-00, and 43B 194825-00 from irrigation use to instream fishery use. The Applicant proposed to retire the historical irrigation use (total 99.2 acres) from the Stewart and Pfohl Ditches. The proposed protected reach is an approximate 0.44-mile reach of Rock Creek the begins at the Stewart Ditch headgate in SESWNW Section 19, T7S, R7E, Park County, and ends at the

confluence of Rock Creek and the Yellowstone River. The protected reach is shown as the red stretch of Rock Creek on the map provided as Figure 1. The period of diversion and use will remain the same as the water rights were historically operated.

9. The Applicant proposes to protect the full historical diverted volume and flow rate at the Stewart Ditch headgate and the full historically consumed from source volume below the proposed diversion. The maximum volume that can be protected at the proposed POD under this Change Application is 856.38 AF at a flow rate of 10.59 CFS.

10. The flow rate in the protected reach below the historical POD (Stewart Ditch headgate) is the historically consumed from source volume over the period of use for each water right. The historically consumed from source volume is the sum of the historical consumptive volume and return flow water that did not return to the source for the water right. The proposed volume protected below the POD is 816.80 AF at a flow rate of 2.54 CFS.

11. The Applicant proposed to provide the Department with discharge measurements from a FWP maintained seasonal gage station in Rock Creek from May 1 to October 10. The measurement device is located in NENESE Section 19, T7S, R7E, Park County, seen on the map provided as Figure 1. Also, if a call is made on Stoughten Creek, then the Applicant will measure flow rate at the Pfohl Ditch diversion.

12. The water rights included in this Change Application are a part of a 30-year Water Right Lease Agreement between Point of Rocks Ranch LLC (current owners of the water rights included in this Change Application) and the Applicant (lessee of water rights). The lease agreement includes lease of water rights 43B 194822-00, 43B 194823-00, 43B 194824-00, 43B 194343-00, 43B 194222-00, 43B 194344-00, and 43B 194825-00. One of the contingencies of the Water Right Lease Agreement is Point of Rocks Ranch LLC securing a portion of the Park County Conservation District water reservation to replace the irrigation water from the leased water rights with water from the Yellowstone River. Once Point of Rocks Ranch LLC secures the Park County Conservation water for irrigation, they plan to utilize a pump and pipeline system from the Yellowstone River to irrigate the historical POUs shown on the map provided as Figure 1. The lease agreement between Point of Rocks Ranch LLC and the Applicant states that the proposed irrigation infrastructure expected life is 30 years.

13. This Change Application will be subject to the following conditions to fulfill the temporary protected reach and measurement plan criteria:

WATER MEASUREMENT INFORMATION

THE APPLICANT OR A DESIGNEE SHALL MEASURE THE PROTECTED REACH ACCORDING TO THE MEASUREMENT PLAN AUTHORIZED IN THE PRELIMINARY DETERMINATION ORDER USING DEPARTMENT-APPROVED MEASURING DEVICES. MEASUREMENT RECORDS SHALL BE SUBMITTED TO THE DEPARTMENT ANNUALLY BY DECEMBER 31ST. MEASUREMENT RECORDS SHALL BE MADE AVAILABLE TO THE DEPARTMENT UPON REQUEST. THE APPROPRIATOR SHALL MAINTAIN THE MEASURING DEVICE, SO THEY ALWAYS OPERATE PROPERLY AND MEASURE FLOW RATE ACCURATELY.

PLAN OF OPERATION

IN THE EVENT THAT THE APPROPRIATOR MAKES A CALL FOR WATER OR WATER COMMISSIONER IS APPOINTED, THE FOLLOWING OPERATION FOR PROTECTION PREPRESENTING UNDIVIDED, CONTINUOUS FLOW RATES OF WATER RIGHT AND VOLUME LIMITATIONS ON THE WATER RIGHT. THE APPROPRIATOR MAY PROTECT THE FOLLOWING AMOUNTS.

THE APPROPRIATOR MAY PROTECT A CONTINUOUS FLOW RATE OF 10.59 CFS UP TO THE FULL HISTORICALLY DIVERTED VOLUME OF 856.38 AF TO THE HISTORICAL POINT OF DIVERSION IN THE NENESW SECTION 19, T7S, R7E, PARK COUNTY, WITHIN THE PERIOD OF EACH WATER RIGHT INCLUDED IN CHANGE APPLICATION 43B 30159989.

THE PROTECTED REACH ENCOMPASSES THE STRETCH OF ROCK CREEK FROM THE HISTORICAL HEADGATE AT A POINT IN THE NENESW SECTION 19, T7S, R7E, PARK COUNTY TO THE CONFLUENCE OF ROCK CREEK AND YELLOWSTONE RIVER. THE APPROPRIATOR MAY PROTECT A CONTINUOUS FLOW RATE OF 2.54 CFS ALONG THIS REACH WITHIN THE PERIOD OF EACH WATER RIGHT INCLUDED IN CHANGE APPLICATION 43B 30159989. THIS EQUATES TO A TOTAL 816.80 AF OF WATER BEING PROTECTED WITHIN THE PERIOD OF EACH WATER RIGHT INCLUDED IN THE CHANGE.

Each water right included in this Change Application will have an additional informational remark that will identify the maximum flow rate, volume, and period in which water will be protected for

instream fishery use within the protected reach. The informational remarks will follow information provided in Table 2 below.

Table 2. Plan of operation for each water right included in Change Application 43B 30159989

Water Right	Period of Use Start	Period of Use End	Protected Flow Rate at POD (CFS)	Protected Volume at POD (AF)	Protected Flow Rate in Protected Reach Below POD (CFS)	Protected Volume in Protected Reach Below POD (AF)
43B 194822-00	1-May	10-Oct	1.5	76.20	0.21	69.02
43B 194823-00	1-May	10-Oct	1.5	76.20	0.21	69.02
43B 194824-00	1-May	10-Oct	1.5	76.20	0.21	69.02
43B 194343-00	1-May	10-Oct	1.5	76.20	0.21	69.02
43B 194222-00	1-May	10-Oct	0.33	5.30	0.015	4.75
43B 194344-00	1-May	10-Oct	2.26	289.675	0.82	256.42
43B 194825-00	1-May	10-Oct	2	256.6	0.85	279.55

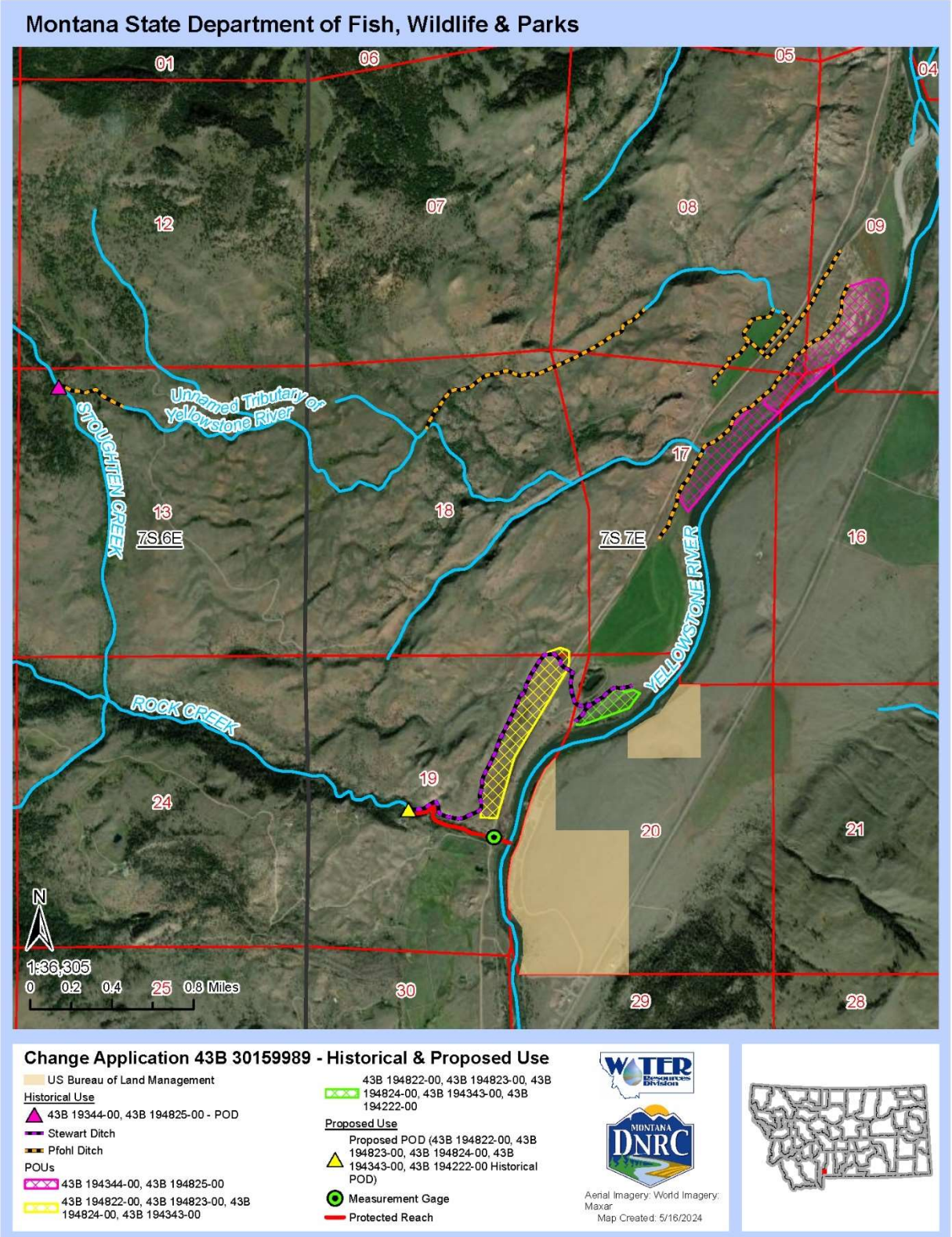

Figure 1. Change Application 43B 30159989 Historical and Proposed Use Map.

CHANGE CRITERIA

14. 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.

15. 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).

16. In addition to the § 85-2-402(2), MCA,[1] an Applicant for a temporary change authorization for instream flow must comply with the requirements and conditions set forth in §§ 85-2-407 and -408, MCA. Section 85-2-408, MCA provides in part:

> (1) The department shall accept and process an application for a temporary change in appropriation rights to maintain or enhance instream flow to benefit the fishery resource under the provisions of **85-2-402, 85-2-407,** and this section. The application must:
>
> (a) include specific information on the length and location of the stream reach in which the streamflow is to be maintained or enhanced; and
>
> (b) provide a detailed streamflow measuring plan that describes the point where and the manner in which the streamflow must be measured.
>
> (2) (a) A temporary change authorization under the provisions of this section is allowable only if the owner of the water right voluntarily agrees to:
>
> (i) change the purpose of a consumptive use water right to instream flow for the benefit of the fishery resource; or
>
> (ii) lease a consumptive use water right to another person for instream flow to benefit the fishery resource.
>
> (3) In addition to the requirements of **85-2-402** and **85-2-407,** an Applicant for a change authorization under this section shall prove by a preponderance of evidence that:
>
> (a) the temporary change authorization for water to maintain and enhance instream flow to benefit the fishery resource, as measured at a specific point, will not adversely affect the water rights of other persons; and
>
> (b) the amount of water for the proposed use is needed to maintain or enhance instream flows to benefit the fishery resource.
>
> (5) The department shall approve the method of measurement of the water to maintain and enhance instream flow to benefit the fishery resource through a temporary change authorization as provided in this section.
>
> . . . .
>
> (8) The maximum quantity of water that may be changed to maintain and enhance streamflows to benefit the fishery resource is the amount historically diverted. However, only the amount historically consumed, or a smaller amount if specified by the department in the lease authorization, may be used to maintain or enhance streamflows to benefit the fishery resource below the existing point of diversion.

17. Pursuant to §§ 85-2-407, and -408, MCA, a temporary change for authorization for instream flow is subject to special conditions which are identified above and addressed in the sections below. 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

[1] 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 possessory interest in the place of use because this application involves a temporary change in appropriation right for instream flow pursuant to § 85-2-408, MCA.

ability to make a different use of that existing right. *E.g., Hohenlohe*, ¶¶ 29-31; *Town of Manhattan*, ¶ 8.

HISTORICAL USE AND ADVERSE EFFECT

FINDINGS OF FACT - Historical Use

18. All Statements of Claim included in this Change Application were included in the Montana Water Court 43B Yellowstone River, Above and Including Bridger Creek Temporary Preliminary Decree issued on January 16, 1985, and the 43B Yellowstone River, Above and Including Bridger Creek Preliminary Decree on May 9, 2019.

19. Statement of Claim 43B 194822-00 is a filed right with a priority date of May 5, 1909. Claim 43B 194823-00 is a filed right with a priority date of April 24, 1906. Claim 43B 194824-00 and 43B 194222-00 are a filed rights with a priority date of October 26, 1904. Claim 43B 194343-00 is a filed right with a priority date of May 29, 1902. Rock Creek Claims 43B 194822-00, 43B 194823-00, 43B 194824-00, and 43B 194343-00 are supplemental and are claimed for irrigation of 30.8 acres in Sections 18 and 19, T7S R7E, Park County, and 8.7 acres in Section 19 and 20, T7S, R7E, Park County. Rock Creek Claim 43B 194222-00 is supplemental and claimed for irrigation of 8.7 acres in Section 19 and 20, T7S, R7E, Park County. Claim 43B 194344-00 is a filed right with a priority date of July 10, 1895. Claim 43B 194825-00 is a filed right with a priority date of June 1, 1909. Stoughten Creek Claims are supplemental and are claimed for irrigation of 59.7 acres in Sections 8, 9, 16, and 17, T7S, R7E, Park County. The historical irrigation is supported by Water Resources Survey (Park County, 1951) and/or historical aerial imagery. The Department finds the maximum total historical acres irrigated by the Claims is 99.2 acres.

20. Statements of Claim 43B 194822-00, 43B 194823-00, 43B 194824-00, 43B 194343-00, and 43B 194222-00 divert water from Rock Creek via the Stewart Ditch headgate and are conveyed to the historical POUs by the Stewart Ditch. Statements of Claim 43B 194344-00 and 43B 194825-00 divert water from Stoughten Creek by the Pfohl Ditch headgate and are conveyed via Pfohl Ditch laterals and natural carrier topographic features, that convey water like ditches (generally dry when not in use as a conveyance), to the historical POU. The conveyance systems included in this Change Application can be seen on the map provided as Figure 2. The maximum flow rate for the Claims included in this Change Application are as follows; 43B 194822-00, 1.5 CFS, 43B 194823-00, 1.5 CFS, 43B 194824-00, 1.5 CFS, 43B 194343-00, 1.5 CFS, 43B 194222-00, 0.33 CFS, 43B 194344-00, 2.26 CFS, and 43B 194825-00, 2 CFS. The total diverted flow rate from Rock Creek is 6.33 CFS and the total diverted flow rate from Stoughten Creek is 4.26 CFS.

No other water rights use the Pfohl Ditches. Two third-party water rights convey water through the Stewart Ditch, see FOF 32 for more information.

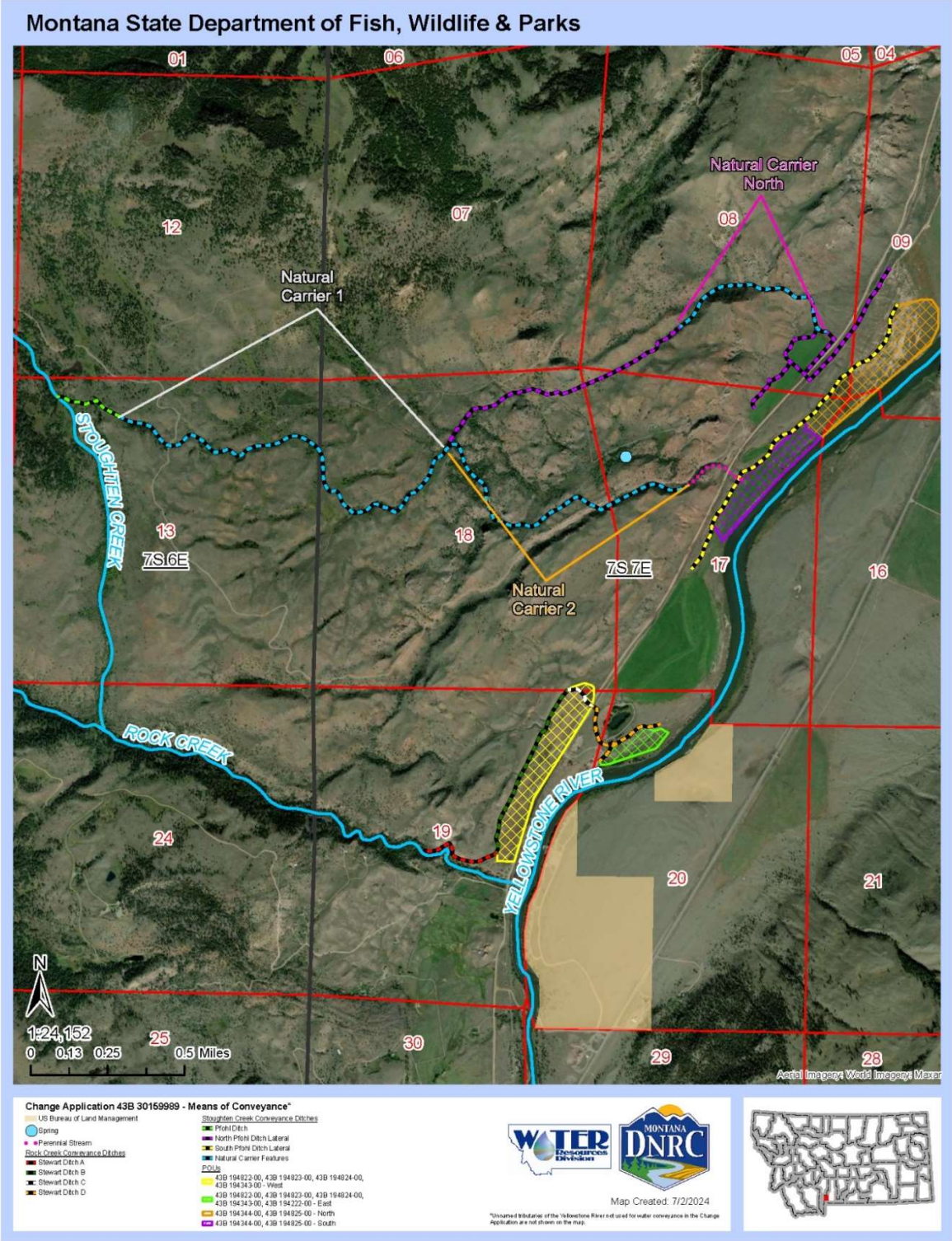

Figure 2. Change Application 43B 30159989 Conveyance System Map

21. The Department confirmed the unnamed tributaries/ natural carrier topographic features (seen in Figures 1 and 2) provided in this Change Application using historical USGS topography maps[2], Park County WRS maps, and USGS National Hydrology Dataset. The Department considers the intermittent natural carrier topographic features included within the Stoughten Creek conveyance system as natural features where water is naturally directed during times of runoff and where diverted Stoughten Creek water is transported like a ditch for irrigation. The Applicant described the portion of the Unnamed Tributary of the Yellowstone River, symbolized as pink dotted line in Figure 2 in the N2 Section 17, T7S, R7E, Park County, is a spring fed perennial stream (spring located in NWSW Section 17, T7S, R7E, Park County, seen on Figure 2) based on field experience and discussions with Point of Rocks Ranch LLC long-time ranch manager. The Department did not consider this portion of the Unnamed Tributary of the Yellowstone River conveyance losses because water is always present.

22. The Applicant used ditch measurements found in the field to model the flow depth within each segment of the ditch systems needed to carry the full claimed flow rate within each ditch and/or natural carrier topographic features. The Applicant modeled the capacity of Stewart Ditch, Pfohl Ditch, and natural carrier topographic features based on the claimed flow rates for all the water rights conveyed within the correlating ditch systems and field measurements. The ditch information provided by the Applicant is provided in Table 3.

Table 3. Ditch Parameters provided by Applicant

Ditch ID	Length (ft)	Manning Coefficient	Slope	Surface Width	Wetted Perimeter	Hydraulic Radius
NC 1	7418	0.03	0.1	4.6	4.84	0.174
NC 2	5081	0.03	0.1	4.44	4.76	0.164
NC North	4033	0.03	0.1	4.36	4.71	0.156
Pfohl	1468	0.03	0.003	4.22	5.21	0.4465
Pfohl North	4154	0.03	0.003	7.11	7.24	0.35
Stewart Upper	599	0.03	0.003	7.47	8.19	0.47
Stewart Middle	1638	0.03	0.003	7.42	8.14	0.469
Stewart Lower	3566	0.03	0.003	7.35	8.06	4.64

23. The Department used the data provided by the Applicant, historical topography maps, WRS maps, Google Earth, ArcGIS, and historical aerial imagery to determine the Stewart Ditch, Pfohl Ditches, and the natural carrier topographic features conveyance systems, seen on the map provided as Figure 2. The Department found the ditch capacities using the ditch data found in Table 4, and the ditch measurements provided by the Applicant found in Table 3. The calculated

[2] Miner, Montana USGS Topography Maps, 1986, 2000, and 2020.

capacities of the three conveyance systems included in this Change Application are summarized in Table 4.

Table 4. Ditch parameters found by the Department

Ditch ID	Length (ft)^	Slope*	Bottom Width (ft)**	Claimed Flow Rate (CFS)	Ditch Capacity (CFS)
Pfohl	1322.36	0.03	2.765	4.26	11.7
NC 1	7550.4	0.075	3.15	4.26	3.56
NC 2	5398.8	0.11	3.1	4.26	3.84
NC North	3379.2	0.143	3.04	4.26	3.99
Pfohl North***	5986.768	0.13	5.2	4.26	14.23
Stewart A	1542.9	0.3	3.81	6.33	19.96
Stewart B	3143.82	0.106	3.78	6.33	13.22
Stewart C	571.67	0.015	3.72	6.33	13.4
Stewart D	752.6	0.015	3.72	6.33	13.4

^ The ditch lengths were calculated with ArcGIS data.
*Based on elevation data on GoogleEarth
**Calculated using parameters provided by Applicant
***Includes both segments of the North Pfohl Ditch

24. The Applicant asserts that Statements of Claim 43B 194822-00, 43B 194823-00, 43B 194824-00, 43B 194343-00, and 43B 194222-00 were historically diverted into the Stewart Ditch to irrigate an east field (8.7 acres) and/or a west field (30.8 acres), for a total of 39.5 acres in the historical POUs. The Applicant asserts Claims 43B 194344-00 and 43B 194825-00 were historically diverted in the Pfohl Ditches and natural carrier topographic features to irrigate a south field (23.4 acres) and a north field (36.3 acres), for a total of 59.7 acres of the historical POU. The Department categorized the historical irrigation practices contour ditch irrigation based on the Applicant's description of the historical practices and historical aerial imagery. The Applicant does not have firsthand knowledge of the irrigation practices for the water rights included in this Change Application but has worked and observed the project area for two decades. Based on the Applicant's estimation, water was used for irrigation practices at the beginning of May (May 1) and ended mid-October (October 10).

25. The Applicant states the field efficiency of 15% reflects the water efficiency of the unleveled fields where the historical POUs are flood irrigated. The Department finds a 15% field efficiency reasonable for the glacial topography of the POUs and the type of irrigation, wild flood. The historical consumptive volume (HCV) by purpose is the volume of water that is consumed by the crop located in each field within the water rights POU. Using the Applicant provided information about historical irrigation practices, as well as Department knowledge of the project

area, the Department calculated the HCV by purpose for the water rights included in this Change Application was calculated to be 140.5 AF. The following equations were used to find the HCV; these calculations are summarized in Table 5.

$$Field\ HCV\ by\ Purpose = Field\ Crop\ Consumption + Field\ Historical\ Irrecoverable\ Losses$$

$$Field\ Crop\ Consumption = Gardiner\ Station\ ET * \frac{1ft}{12inches} * Park\ County\ Management\ Factor * Historical\ Acres$$

$$Historical\ Irrecoverable\ Losses = Field\ Application * IL\%$$

$$Field\ Application = \frac{Field\ Crop\ Consumption}{Field\ Efficiency}$$

Table 5. Rock Creek irrigation fields HCV

Field ID	Type of Use	Irrigation Method	Acres	County	NIR (in)	Park Co Management Factor	Field Efficiency	Field Crop Consumption (AF)	Field Applied Volume (AF)	Field Historical IL (AF)	Historical Consumed by Purpose Volume (AF)
East	Historical	Flood Irrigation, Wheeline & Handline	8.7	Park	22.46	0.569	0.15	9.3	61.8	3.1	12.4
West	Historical	Flood Irrigation, Wheeline & Handline	30.8	Park	22.46	0.569	0.15	32.8	218.7	10.9	43.7
TOTAL			39.5					42.1	280.5	14	56.1

Table 6. Stoughten Creek irrigation fields HCV

Field ID	Type of Use	Irrigation Method	Acres	County	NIR (in)	Park Co Management Factor	Field Efficiency	Field Crop Consumption (AF)	Field Applied Volume (AF)	Field Historical IL (AF)	Historical Consumed by Purpose Volume (AF)
South	Historical	Flood Irrigation, Wheeline & Handline	23.4	Park	22.46	0.569	0.15	24.9	166.1	8.3	33.2
North	Historical	Flood Irrigation, Wheeline & Handline	36.3	Park	22.46	0.569	0.15	38.7	257.7	12.9	51.5
TOTAL			59.7					63.6	115.6	5.8	84.7

26. The water rights proposed for change are supplemental and have historically irrigated 39.5 acres from Rock Creek and 59.7 acres from Stoughten Creek. The field HCV was distributed to individual water rights based on the flow rate supplemental relationship. The supplemental flow

proportion was determined by the proportion of the individual water right flow rate to the total flow rate each field in the historical place of use. The supplemental consumptive volume for each irrigation water right proposed for change was found by multiplying the supplemental flow proportion for the field in the historical places of use by the total field HCV. The following equations were used to find the HCV by purpose for each irrigation water right, these calculations are summarized in Tables 7 and 8.

$$Supplemental\ Consumed\ by\ Purpose\ Volume_{water\ right} = Historical\ Consumed\ by\ Purpose\ Volume * Supplemental\ Flow\ Proportion_{water\ right}$$

Table 7 Rock Creek Historical Supplemental HCV

Water Right	Field ID	Supplemental Relationship	Flow Rate (CFS)	Supplemental Flow Proportion	Supplemental Field Applied Volume (AF)	Supplemental Consumed by Purpose Volume (AF)
43B 194222-00	East	Flow Rate	0.33	0.05	3.2	0.6
43B 194343-00	East	Flow Rate	1.5	0.24	14.6	2.9
43B 194822-00	East	Flow Rate	1.5	0.24	14.6	2.9
43B 194823-00	East	Flow Rate	1.5	0.24	14.6	2.9
43B 194824-00	East	Flow Rate	1.5	0.24	14.6	2.9
43B 194343-00	West	Flow Rate	1.5	0.25	54.7	10.9
43B 194822-00	West	Flow Rate	1.5	0.25	54.7	10.9
43B 194823-00	West	Flow Rate	1.5	0.25	54.7	10.9
43B 194824-00	West	Flow Rate	1.5	0.25	54.7	10.9
TOTAL			6.33		280.4	55.8

Table 8 Stoughten Creek Historical Supplemental HCV

Water Right	Field ID	Supplemental Relationship	Flow Rate (CFS)	Supplemental Flow Proportion	Supplemental Field Applied Volume (AF)	Supplemental Consumed by Purpose Volume (AF))
43B 194344-00	North	Flow Rate	2.26	0.53	136.7	27.3
43B 194825-00	North	Flow Rate	2	0.47	121	24.2
43B 194344-00	South	Flow Rate	2.26	0.53	88.1	17.6
43B 194825-00	South	Flow Rate	2	0.47	78	15.6
TOTAL			4.26		423.8	84.7

27. The total HCV by purpose for the Change Application was found by summing the historically consumed by purpose volume for all the water rights proposed for change, seen in Table 9.

Table 9. HCV for all water rights proposed for change

Water Right	Type of Use	Applied Volume - Supplemental (AF)	Consumed Volume - Supplemental (AF)
43B 194222-00	Historical	3.2	0.6
43B 194343-00	Historical	69.3	13.8
43B 194822-00	Historical	69.3	13.8
43B 194823-00	Historical	69.3	13.8
43B 194824-00	Historical	69.3	13.8
43B 194825-00	Historical	199	39.8
43B 194344-00	Historical	224.8	44.9
TOTAL		704.2	140.5

28. The Department Surface Water Change Report, dated March 6, 2024, identified 224.4 AF from Rock Creek and 339.1 AF from Stoughten Creek (total of 563.5 AF) of non-consumed water composed the historical return flows from 99.2 acres of historical irrigation, summarized on Table 10. Of the 224.4 AF return flow from Rock Creek, 12 percent of the Rock Creek west field (21 AF) did not accrue back to the creek and was consumed from the source. All of the non-consumed water from Stoughten Creek accrued into the Yellowstone River[3].

Table 10. Non-consumed volume attributed to Rock Creek and the Yellowstone River.

Source, Field ID	Acres	IWR (in)^	Mgmt Factor*	Field Eff.	Crop Cons. (AF)	Applied Volume (AF)	IL (AF)	Total Consumed Volume (AF)	Non-consumed Volume (AF)
Rock Creek, East	8.7	22.46	56.9%	15%	9.3	61.8	3.1	12.4	49.4
Rock Creek, West	30.8	22.46	56.9%	15%	32.8	218.7	10.9	43.7	175
Rock Creek, Total	39.5	22.46	56.9%	15%	42.1	280.5	14	56.1	224.4
Stoughten Creek, Total	59.7	22.46	56.9%	15%	63.6	423.8	21.2	84.7	339.1
Total	99.2				105.7	704.3	35.2	140.8	563.5

^Gardiner IWR Weather Station
*Park County Historical Use Management Factor, Flood Irrigation

[3] The percentage attributed from eastern field of the Rock Creek water rights POU and the Stoughten Creek water rights POUs are less than 10%. Due to this, DNRC reassigned the less than 10% proportions so, 100% of the historical return flows from these POUs to the Yellowstone River to follow DNRC standard practices.

29. Due to not having firsthand knowledge of the irrigation practices from Rock and Stoughten Creek, the Applicant formed a model using equations from ARM 36.12.1902 (10) to determine the number of days it takes to deliver the historical diverted volume (HDV) to the historical POUs at the claimed flow rate (6.33 CFS Rock Creek, 4.26 CFS Stoughten Creek). The Applicant arranged the ARM 36.12.1902 (10) equations in the model so that the number of irrigation days is the variable manipulated until the HDV is equal to the historical applied volume. The Department deemed this method a justified alternative due to the conveyance systems either having no other water rights in the conveyance system (Stoughten Creek) or allow enough days for other users in the conveyance ditch to utilize the ditch when the Point of Rocks Ranch LLC was not historically irrigating (Rock Creek), see FOF 32 for more details. The number of days found using this method are also similar to the number of days it takes to deliver the calculated field applied volume at the claimed diverted flow rate. The Department used the Applicant's model to determine the number of irrigation days using the conveyance systems found on Figures 1 and 2, along with conveyance dimensions, net evaporation, and flow rate, seen on Tables 3, 4 & 13. Using the Applicant's model, the Department found it takes 19.1 days for 43B 194822-00, 43B 194823-00, 43B 194824-00, and 43B 194343-00 to irrigate the west field of the Rock Creek POU and 5.4 days for 43B 194822-00, 43B 194823-00, 43B 194824-00, 43B 194343-00, and 43B 194222-00 to irrigate the east field of the Rock Creek POU; for a total of 24.5 days of irrigation with Rock Creek water. The Department found it took 23.4 days for 43B 194344-00 and 43B 194825-00 to irrigate the southern field, and 41.5 days to irrigate the northern field of the Stoughten Creek POU; for a total of 64.9 days of irrigation with Stoughten Creek water. The Department used the Applicants model, that utilizes the following equations, to determine the number of irrigation days; these calculations are summarized on Table 12.

$$Historical\ Delivered\ Volume_{Field} = Historical\ Applied\ Volume_{Field}$$

$$Historical\ Applied\ Volume_{Field} = Historical\ Diverted\ Volume - Conveyance\ Losses_{Ditch}$$

$$Historical\ Diverted\ Volume_{Field} = Claimed\ Flow\ Rate_{Ditch\ Total} * 1.98 * Irrigated\ Days$$

$$\begin{aligned} Historical\ Delivered\ Volume_{Field} \\ = (Claimed\ Flow\ Rate_{Ditch\ Total} * 1.98 * Irrigated\ Days) \\ - Conveyance\ Losses_{Ditch} \end{aligned}$$

$$Conveyance\ Losses_{Ditch} = Seepage\ Loss + Vegetation\ Loss + Evaporative\ Loss$$

Table 12. Applicant model for irrigated days

Historic Use - Applicant Model

Stoughten Creek

Southern 23.4 ac	Length (ft)	Wet Perimeter (ft)	Wet Width (ft)	Ditch Loss Rate (ft3/ft2/day)	Flow Rate (cfs)	Net Evaporation (in)	Days	Seepage Loss (AF)	Vegetation Loss (AF)	Evaporative Loss (AF)	Conveyance Loss (AF)	Historical Diverted Vo (AF)
Pfohl Ditch	1322.36	5.21	4.22	1.0	4.26	1.852	23.4	3.70	0.37	0.02	4.09	
NC 1	7550.4	4.84	4.60	1.0	4.17	1.852	23.4	14.72	1.57	0.07	16.36	
NC 2	5398.8	4.76	4.44	1.0	3.82	1.852	23.4	10.35	1.03	0.05	11.43	
						Total	23.4	28.78	2.97	0.14	31.89	197.7
Northern 36.3 ac												
Pfohl Ditch	1322.36	5.21	4.22	1.0	4.26	1.852	41.5	6.56	0.66	0.03	7.25	
NC 1	7550.4	4.84	4.60	1.0	4.17	1.852	41.5	26.11	2.79	0.13	29.02	
North Pfohl Ditch	4884.968	7.24	7.11	1.0	3.82	1.852	41.5	33.69	2.20	0.17	36.06	
NC North	3379.2	4.71	4.36	1.0	3.38	1.852	41.5	11.37	1.01	0.05	12.44	
North Pfohl Ditch	1101.8	7.24	7.11	1.0	3.23	1.852	41.5	7.60	0.42	0.04	8.06	
						Total	41.5	85.34	7.08	0.41	92.83	350.6
						Stoughten Creek Total	**64.9**	**114.1**	**10.1**	**0.5**	**124.7**	**548.2**

Rock Creek

West of County Road 30.8 ac	Length (ft)	Wet Perimeter (ft)	Wet Width (ft)	Ditch Loss Rate (ft3/ft2/day)	Flow Rate (cfs)	Net Evaporation (in)	Days	Seepage Loss (AF)	Vegetation Loss (AF)	Evaporative Loss (AF)	Conveyance Loss (AF)	Historical Diverted Vo (AF)
Stewart Ditch A	1542.9	8.19	7.47	1.2	6.33	1.621	19.1	6.65	0.53	0.02	7.20	
Stewart Ditch B	3143.82	8.13	7.41	1.2	6.14	1.621	19.1	13.45	1.05	0.05	14.54	
						Total	19.1	20.10	1.58	0.07	21.74	239.8
East of County Road 8.7 ac												
Stewart Ditch A	1542.9	8.19	7.47	1.2	6.33	1.621	5.4	1.88	0.15	0.01	2.04	
Stewart Ditch B	3143.82	8.13	7.41	1.2	6.14	1.621	5.4	3.80	0.30	0.01	4.11	
Stewart Ditch C	571.67	8.06	7.35	1.2	5.76	1.621	5.4	0.69	0.05	0.00	0.74	
Stewart Ditch D	752.6	8.06	7.35	1.2	5.69	1.621	5.4	0.90	0.07	0.00	0.97	
						Total	5.4	6.37	0.50	0.02	6.89	67.8
						Rock Creek Total	**24.5**	**26.5**	**2.1**	**0.1**	**28.6**	**307.5**

*Historical delivered and historical applied volumes may not be exactly equal due to rounding

30. Seasonal conveyance losses are the sum of seepage loss, vegetation loss, and losses due to ditch evaporation. Using field measurements and modeled data, the Department calculated seasonal conveyance losses for the historical conveyance ditches and natural carrier topographic features for the water rights proposed for change. Conveyance losses for the water rights included in this Change Application were not distributed based on the Department's memorandum "Distributing Conveyance Loss on Multiple User Ditches" (Heffner, 2020), but the Department finds that the Applicant's method to calculate conveyance loss still conforms with ARM 36.12.1902(10). The Department used the ditch and natural carrier feature measurements and modeled data to calculate ditch parameters and capacity using the Manning's "n" equation. The following equation was used to calculate conveyance losses.

$$Water\ Right\ Conveyance\ Loss = \sum Ditch\ Combo\ Conveyance\ Losses_{WR}$$

31. The Stewart Ditch is used to convey water and irrigate the historical POU for the Rock Creek water rights included in this Change Application: Claims 43B 194222-00, 43B 194343-00, 43B 194822-00, 43B 194823-00, 43B 194824-00. Stewart Ditch can be seen on the maps above provided as Figures 1 and 2. The Rock Creek water rights included in this Change Application have varying distances from the POD to the two fields (east and west) within the POU and varying irrigation days, based on how long it would take the claimed flow rate to be delivered to the fields. Due to the Stewart Ditch conveying multiple water rights over varying distances, to multiple fields within the POU, the Department divided the ditch into four down-ditch combinations. The water rights were assigned to a combination based on the varying ditch segment lengths and diverted days. The ditch combinations for the Stewart Ditch are summarized on Table 13 and can be seen on the map provided as Figure 2.

Table 13. Rock Creek water rights down-ditch combinations

Down-Ditch Combo	Water Rights in Combination	POU	Days Diverted	Total Flow Rate (CFS)	Combination Ditch Length (ft)
Stewart A	43B 194222-00, 43B 194343-00, 43B 194822-00, 43B 194823-00, 43B 194824-00	West Field	24.5	6.33	1542.9
Stewart B	43B 194222-00, 43B 194343-00, 43B 194822-00, 43B 194823-00, 43B 194824-00	East Field	24.5	6.33	3143.82
Stewart C	43B 194222-00	East Field	5.4	0.33	571.67
Stewart D	43B 194222-00, 43B 194343-00, 43B 194822-00, 43B 194823-00, 43B 194824-00	East Field	5.4	6.33	752.6

32. The Stewart Ditch has two third party water rights, 43B 16777-00 and 43B 195143-00 that claim the ditch as a means of conveyance. Based on Park County WRS maps and information provided by the Applicant, water conveyed in the Stewart Ditch for the third-party users was historically diverted into the ditch and then flumed over Rock Creek and used for irrigation south of creek. The Applicant states that the beginning stretch of the ditch, approximately 1,053 ft down ditch of the Stewart Ditch headgate, has been replaced by a pipeline. Based on aerial imagery, the Department determined that this portion of the ditch was replaced by a pipeline sometime between 1991 and 2004. The Department evaluated conveyance losses based on pre-July 1, 1973, conveyance systems (ditch). The model provided by the Applicant, see Table 12, to determine the amount of days water was diverted assumes no other water rights are in the ditch during the diversion of Claims 43B 194222-00, 43B 194343-00, 43B 194822-00, 43B 194823-00, 43B 194824-00. The Department determines this model and methodology acceptable and assumes the third-party water rights in the Stewart Ditch were diverted outside the number of days it takes the Rock Creek water rights included in this Change Application were diverted. The third-party water rights in the Stewart Ditch were not included in conveyance loss calculations for the Stewart Ditch.

33. The Stoughten Creek water rights are conveyed from the creek to the POU by the Pfohl Ditch and natural carrier topographic features, that carry water like a ditch, seen on the maps above provided as Figures 1 and 2. All water rights conveyed in the Pfohl Ditch are proposed for change in this Change Application. The Department only considered the intermittent natural carrier topographic features and Pfohl Ditch segments in conveyance loss calculations for the Stoughten Creek water rights. The Applicant proposed to reduce the conveyance losses from the intermittent natural carriers by 25% to take into consideration when water is naturally present in the natural carrier topographic features during seasonal snowmelt and rain events. The proposed conveyance loss reduction is based on the Applicant's field experience and knowledge of the project area. The Department determined the 25% reduction in conveyance loss from the natural carrier topographic features reasonable based on the local knowledge, geographic location, topography, and description of the conveyance features in the Application. Due to the varying segments of the Stoughten Creek conveyance system and irrigation days, the Department evaluated the conveyance losses for each down-ditch segment of the Stoughten Creek system as shown in Table 14.

Table 14. Stoughten Creek water rights down-ditch combinations

Down-Ditch Combo	Water Rights in Combination	POU	Days Diverted	Total Flow Rate (CFS)	Combination Ditch Length (ft)
Pfohl	43B 194344-00, 43B 194825-00	North & South Field	64.9	4.26	1322.36
NC 1	43B 194344-00, 43B 194825-00	North & South Field	64.9	4.26	7550.4
NC 2	43B 194344-00, 43B 194825-00	South Field	41.5	4.26	5398.8
NC North	43B 194344-00, 43B 194825-00	North Field	23.4	4.26	5986.768
Pfohl North^	43B 194344-00, 43B 194825-00	North Field	41.5	4.26	3379.2

34. The conveyance losses for the down-ditch combinations were found using the total flow rate, ditch length, and period of diversion for each combination, seen in Tables 16 and 17. The conveyance losses were then distributed to each water right based on the proportion of the flow rate the water right contributes to the down-ditch combination flow rate. The Department used the following equations to calculate conveyance losses; these calculations are summarized in Tables 15 – 17.

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

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

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

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

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

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

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

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

Table 15. Rock Creek convenance losses for down-ditch combinations

Down-Ditch Combo	Length (ft)	Flow Rate (CFS)	Width (ft)	Wetted Perimeter (ft)	Ditch Loss Rate ($ft^3/ft^2/day$)	No. of Days Irrigated	Adj. Net Evaporation (in)	Seepage Loss[4] (AF)	Vegetation Loss (AF)	Evaporative Loss (AF)	Total Conveyance Loss (AF)
Stewart A	1542.9	6.33	7.47	8.19	1.2	24.5	1.3	8.5	0.7	0	9.2
Stewart B	3143.82	6.33	7.41	8.11	1.2	24.5	1.3	17.2	1.4	0.1	18.7
Stewart C	571.67	0.33	7.35	8.06	1.2	5.4	0.3	0.7	0	0	0.7
Stewart D	752.6	6.33	7.35	8.06	1.2	5.4	0.3	0.9	0.1	0	1
TOTAL								27.3	2.2	0.1	29.6

Table 16. Stoughten Creek conveyance losses for down-ditch combinations

Down-Ditch Combo	Length (ft)	Flow Rate (CFS)	Width (ft)	Wetted Perimeter (ft)	Ditch Loss Rate ($ft^3/ft^2/day$)	No. of Days Irrigated	Adj. Net Evaporation (in)	Seepage Loss (AF)	Vegetation Loss (AF)	Evaporative Loss (AF)	Total Conveyance Loss (AF)[5]
Pfohl	1322.36	4.26	4.22	5.21	1	64.9	4	10.3	1	0	11.3
NC 1	7550.4	4.26	4.6	4.84	1	64.9	4	54.4	5.9	0.3	45.45
NC 2	5398.8	4.26	4.44	4.76	1	23.4	1.4	13.8	1.5	0.1	11.55
NC North	3379.2	4.26	4.36	4.71	1	41.5	2.5	15.2	1.7	0.1	12.675
Pfohl North 1	4484.968	4.26	7.11	7.24	1	41.5	2.5	30.9	2.3	0.2	33.3
Pfohl North 2	1101.8	4.26	7.11	7.24	1	41.5	2.5	7.6	0.6	0	8.2
TOTAL								132.2	13	0.7	122.48

[4] Stewart A and Pfohl down-ditch combos seepage loss were reduced by

[5] Natural carrier conveyance losses were reduced by 25% to take into consideration natural flows.

Table 117. Conveyance losses per water right

Water Right	Down-Ditch Combo	Water Right Flow Rate (CFS)	Down-Ditch Combo Flow Rate (CFS)	Proportion	Water Right Conveyance Loss[6] (AF)
	Stewart A	0.33	6.33	0.05	0.5
	Stewart B	0.33	6.33	0.05	0.9
	Stewart C	0.33	0.33	1	0.7
43B 194222-00	Stewart D	0.33	6.33	0.05	0
	Stewart A	1.5	6.33	0.24	2.2
	Stewart B	1.5	6.33	0.24	4.5
43B 194343-00	Stewart D	1.5	6.33	0.24	0.2
	Stewart A	1.5	6.33	0.24	2.2
	Stewart B	1.5	6.33	0.24	4.5
43B 194822-00	Stewart D	1.5	6.33	0.24	0.2
	Stewart A	1.5	6.33	0.24	2.2
	Stewart B	1.5	6.33	0.24	4.5
43B 194823-00	Stewart D	1.5	6.33	0.24	0.2
	Stewart A	1.5	6.33	0.24	2.2
	Stewart B	1.5	6.33	0.24	4.5
43B 194824-00	Stewart D	1.5	6.33	0.24	0.2
	Pfohl	2	4.26	0.47	5.3
	NC 1	2	4.26	0.47	21.375
	NC 2	2	4.26	0.47	5.4
	NC North	2	4.26	0.47	5.925
	Pfohl North 1	2	4.26	0.47	15.7
43B 194825-00	Pfohl North 2	2	4.26	0.47	3.9
	Pfohl	2.26	4.26	0.53	6
	NC 1	2.26	4.26	0.53	24.075
	NC 2	2.26	4.26	0.53	6.15
	NC North	2.26	4.26	0.53	6.75
	Pfohl North 1	2.26	4.26	0.53	17.6
43B 194344-00	Pfohl North 2	2.26	4.26	0.53	4.3

35. The Applicant proposes that seepage loss from the upper portions of the Stewart and Pfohl Ditches returned back to the diverted sources due the proximity of the ditches from the diverted source and that seepage loss from the remainder of the ditch lengths did not return to the diverted source, and the Applicant's field experience in the area. Listed below are the Departments findings on seepage loss and return flows from the Stoughten Creek and Rock Creek ditch systems. The ditch segments referenced below can be seen on the map provided as Figure 2. Based on this evidence, seepage loss from Stewart A and Pfohl Down-Ditch Combinations would have accrued back to the diverted sources and were not included in the historical consumed from source volume.

[6] Natural carrier conveyance losses were reduced by 25% to take into consideration natural flows.

a. **Stewart Ditch A** – Conveys Rock Creek water 1,542.9 feet parallel of Rock Creek. The Department finds seepage loss from this segment of Stewart Ditch returning back to the diverted source (Rock Creek) reasonable based on the proximity to Rock Creek, geomorphology, and flow path of the ditch segment.

b. **Stewart Ditch B, C, and D** – The point on the ditch from Steward A section to the other sections is where the ditch bend sharply away from Rock Creek and parallels the Yellowstone River. Based on the flow path of the ditch segments, geomorphology, and proximity to the Yellowstone River, the Department finds return flows from the Stewart Ditch B, C, and D to accrue into the Yellowstone River.

c. **Pfohl Ditch** – Conveys water from Stoughten Creek to Natural Carrier 1 (natural carrier topographic feature). Based on the proximity to the diverted source, the DNRC finds reasonable for seepage loss to accrue back to the diverted source (Stoughten Creek).

d. **North Pfohl, South Pfohl, Natural Carrier Topographical Features** – Conveys water from the Pfohl Ditch to the north and south fields of the POU of the Stoughten Creek water rights. Based on the topography and flow paths in this area, the Department finds seepage from the North Pfohl, South Pfohl, Natural Carrier Topographical Features to accrue to the Yellowstone River.

36. The historically consumed from source volume was determined to be the sum of the HCV, total water right conveyance losses (FOF 30-34) minus the water rights proportion of seepage loss from the Stewart A and Pfohl Ditch segments, and the return flow water that did not return to the diverted source for each water right. Based on the Departments calculations, the historical consumed from source volume is 816.80 AF. The historical consumed from source volume, including return flow volume that did not return to the source of the water right, for each water right is summarized in Table 18.

Table 18. Historical volume consumed from source

Water Right	Historical Volume Consumed by Purpose (AF)	Conveyance Loss (AF)	Return Flow Portion (AF)	Seepage Portion Not Counted (AF)	Historical Volume Consumed from Source (AF)
43B 194222-00	0.6	2.1	2.47	0.425	4.75
43B 194343-00	13.8	6.9	50.36	2.04	69.02
43B 194822-00	13.8	6.9	50.36	2.04	69.02
43B 194823-00	13.8	6.9	50.36	2.04	69.02
43B 194824-00	13.8	6.9	50.36	2.04	69.02
43B 194825-00	39.8	64.875	179.72	4.841	279.55
43B 194344-00	44.9	57.6	159.38	5.459	256.42
TOTAL	140.5	152.18	543.01		816.80

37. The HDV for the Statements of Claim included in this Change Application were calculated pursuant to ARM 36.12.1902 (10) and the Department's standard methodology (Roberts and Heffner, 2012). The Department calculated the HDV based on information provided by the Applicant about the historical irrigation practices, modeled irrigation days, best available information about the Stewart Ditch, Pfohl Ditches, and natural ditches. The Department used the following equations to calculate HDV; these calculations are summarized in Table 20.

$$HDV = \frac{Crop\ Consumption}{Field\ Efficency} + Conveyance\ Loss$$

$$Supplemental\ Crop\ Consumption = Supplemental\ Flow\ Proportion * Crop\ Consumption$$

Table 19. Water right historical diverted volume

Water Right	Supplemental Crop Consumption (AF)	Field Efficiency	Water Right Conveyance Loss (AF)	Supplemental Historical Diverted Volume (AF)
43B 194222-00	0.48	0.15	2.1	5.3
43B 194343-00	10.40	0.15	6.9	76.2
43B 194822-00	10.40	0.15	6.9	76.2
43B 194823-00	10.40	0.15	6.9	76.2
43B 194824-00	10.40	0.15	6.9	76.2
43B 194344-00	33.72	0.15	64.875	289.675
43B 194825-00	29.85	0.15	57.6	256.6
TOTAL	105.63		152.18	856.38

38. The Department finds the maximum historical flow rate for all the water rights proposed for change is 10.59 CFS, the historical diverted volume is 856.38 AF, and the historical consumptive volume is 140.50 AF.

Table 20. Summary of historical use findings for irrigation water rights

Water Right	Priority Date	Diverted Volume (AF)	Maximum Flow Rate (CFS)	Consumed by Source Volume (AF)	Place of Use	Point of Diversion
43B 194222-00	1904.10.26	5.3	0.33	4.745	S2NENE Section 19, S2NWNW Section 20, T7S, R7E, Park County, MT	NENESW Section 19, T7S, R7E, Park County, MT
43B 194343-00	1902.05.29	76.2	1.5	69.02	SESE Section 18, NE Section 19, NWNW Section 20, T7S, R7E, Park County, MT	NENESW Section 19, T7S, R7E, Park County, MT
43B 194822-00	1909.05.05	76.2	1.5	69.02	SESE Section 18, NE Section 19, NWNW Section 20, T7S, R7E, Park County, MT	NENESW Section 19, T7S, R7E, Park County, MT
43B 194823-00	1906.04.24	76.2	1.5	69.02	SESE Section 18, NE Section 19, NWNW Section 20, T7S, R7E, Park County, MT	NENESW Section 19, T7S, R7E, Park County, MT
43B 194824-00	1904.10.26	76.2	1.5	69.02	SESE Section 18, NE Section 19, NWNW Section 20, T7S, R7E, Park County, MT	NENESW Section 19, T7S, R7E, Park County, MT
43B 194344-00	1895.07.10	289.675	2.26	256.42	SESESE Section 8, SW Section 9, NWNW Section 16, NE Section 17 T7S, R7E, Park County, MT	NENWNW Section 13, T7S, R7E Park County, MT
43B 194825-00	1909.06.01	256.6	2	279.55	SESESE Section 8, SW Section 9, NWNW Section 16, NE Section 17 T7S, R7E, Park County, MT	NENWNW Section 13, T7S, R7E Park County, MT

ADVERSE EFFECT

FINDINGS OF FACT

39. This Change Application proposed to temporarily change the POD, POU, and purpose for Statements of Claim 43B 194822-00, 43B 194823-00, 43B 194824-00, 43B 194343-00, 43B 194222-00, 43B 194344-00, and 43B 194825-00 for a period of 30 years. The Claims are proposed to change from irrigation to instream fishery used within an approximate 0.44 mile reach of Rock Creek. Stoughten Creek water rights, 43B 194344-00 and 43B 194825-00, POD is proposed to change from the Pfohl Ditch headgate in NENWNW Section 13, T7S, R7E, downflow to the Stewart Ditch headgate in NENESW Section 19, T7S, R7E, all within Park County. The proposed protected reach for all water rights included in this Change Application is from the historical Rock Creek POD (Stewart Ditch headgate) to the confluence of Rock Creek and Yellowstone River, located in NESW and N2SE Section 19, T7S, R7E, Park County. The Applicant proposes to protect the full diverted volume and flow rate at the historical Rock Creek POD (Stewart Ditch headgate) and full historically consumed from source volume below the

historical diversion. The proposed period of diversion and period of use will not change as a result of the proposed change. The Applicant proposes to continue to operate the water rights within the historical period of May 1 to October 10.

40. The flow rate needed to be protected in the proposed reach below the historical POD (Stewart Ditch headgate) to the confluence of Rock Creek and Yellowstone River was determined by distributing the historically consumed from source volume over the period of use for each water right. Both Rock Creek and Stoughten Creek water were consumed fully from both sources. The historically consumed from source volume can be found in FOF 36 above. The new consumed from source use is equal to the historically consumed from source volume, 816.80 AF. A total of 2.54 CFS and up to 816.80 AF is proposed to be protected within the proposed protected reach below the historical POD. The proposed protected flow rate and protected volume for each water right included in this Change Application are shown in Table 21.

Table 21. Proposed operational plan

Water Right	Purpose	Period of Use START	Period of Use END	Period of Use (days)	Protected Flow Rate at POD (CFS)	Protected Flow Rate in Protected Reach Below POD (CFS)	Protected Volume at POD (AF)	Historic Consumed by Purpose Volume (AF)	Total Conveyance Loss (AF)	Total Return Flow (AF)	Protected Volume in Protected Reach Below POD (AF)
43B 194822-00	Instream Fishery	1-May	10-Oct	162	1.5	0.21	76.20	13.80	6.90	50.36	69.02
43B 194823-00	Instream Fishery	1-May	10-Oct	162	1.5	0.21	76.20	13.80	6.90	50.36	69.02
43B 194824-00	Instream Fishery	1-May	10-Oct	162	1.5	0.21	76.20	13.80	6.90	50.36	69.02
43B 194343-00	Instream Fishery	1-May	10-Oct	162	1.5	0.21	76.20	13.80	6.90	50.36	69.02
43B 194222-00	Instream Fishery	1-May	10-Oct	162	0.33	0.01	5.30	0.60	2.10	2.47	4.75
43B 194344-00	Instream Fishery	1-May	10-Oct	162	2.26	0.82	289.68	44.90	64.88	159.38	256.42
43B 194825-00	Instream Fishery	1-May	10-Oct	162	2	0.85	256.60	39.80	57.60	179.72	279.55
TOTAL					10.59	2.54	856.38	140.50			816.80

41. Regarding the temporary point of diversion change from Pfohl Ditch in Stoughten Creek to the Rock Creek diversion, no other water rights utilize the Pfohl Ditch. Following this Change Application, the Applicant will not divert any water into the Pfohl Ditch for beneficial use.

a. For Stoughten Creek, one other livestock direct from source claim (43B 30132400) exists on Stoughten Creek between Pfohl Ditch and the confluence with Rock Creek and is junior to 43B 194344-00 and 43B 194825-00. Another non-diversionary livestock direct from source right is owned upstream on Stoughten Creek by the USFS. While the Applicant will measure water in Stoughten Creek prior to making call on Stoughten Creek water rights, these two non-diversionary water rights have a low risk of call.

b. For Rock Creek above the confluence with Stoughten Creek, non-diversionary USFS livestock direct from source (and tributary sources) water rights are listed. The USFS also has an instream flow reservation with a 2013 priority date for fisheries that compliments this change. The FWP reservation is in place on the entire Rock Creek source with a 1978 priority date. One 2008 permit also exists, but due to priority date being junior to the FWP reservation, this water right will see no difference in call pattern.

c. Four water rights and one FWP water reservation have PODs located on Rock Creek between the Stoughten Creek and Rock Creek confluence and the confluence of Rock Creek and the Yellowstone River. One is another non-diversionary livestock direct from source water right by Point of Rocks Ranch LLC. The other is a 1995 permit for Rock Creek Water (43B 95418-00), which is also junior to the FWP reservation and will not see any change in call pattern. All five of the Rock Creek water rights have priority dates junior to the Rock Creek Claims and the Stoughten Creek Claims proposed for change. Two of the third-party water rights that divert from Rock Creek utilize Stewart Ditch as a means of conveyance (43B 16777-00 for irrigation on 10 acres and 43B 195143-00 for irrigation on 44 acres). The Applicant states the other users within the Stewart Ditch have not utilized the ditch in a number of years but have historically had enough days to divert water from Rock Creek for their claimed purposes. The Department finds that proposed change will not adversely affect water rights within the historically diverted sources or ditches. The proposed change will not adversely affect any water rights within Stoughten Creek or Rock Creek.

42. Water historically diverted from Stoughten Creek and Rock Creek, will stay in the sources and continue into the Yellowstone River. Under the proposed change, water will be present where water historically accrued in Stoughten Creek and Rock Creek, during the entire period of use.

Return flows that historically accrued in the Yellowstone River accrued into the river below the confluence of Rock Creek and the Yellowstone River will still be present in the Yellowstone River following the proposed change. The Applicant is required to measure the flow rate of Rock Creek just above the confluence of Rock Creek and the Yellowstone River, seen in Figure 1. Flow rate monitoring and measurements at the proposed measurement point will ensure that Stoughten Creek and Rock Creek water is providing a benefit and flowing into the Yellowstone River, and that water rights within the stretch of the Yellowstone River where return flows accrued are not adversely affected. The change in return flows will not adversely affect water rights within Stoughten Creek, Rock Creek, or the Yellowstone River.

43. The Applicant proposes to measure the flow rate on Rock Creek at a MT FWP Gage Station 43B 91750, located just west of the county road, shown on the map provided as Figure 1. The gage consists of a two-inch stilling well with a staff gage attached. The stilling well houses a one meter TruTrack water level logger. The discharge of the creek will be measured and recorded monthly within the period of use, to both show a beneficial use of water and to show the operating plan is being followed, if water distribution issues arise.

44. Stoughten Creek and the Pfohl Ditch headgate are difficult to access, due to grizzly bear habitat. Due to the safety hazards and water rights from Stoughten Creek, the Applicant is not proposing a measurement point on Stoughten Creek at this time. In the event of a call from a water user with a POD between the Pfohl Ditch headgate and the confluence of Rock Creek and the Yellowstone River (referenced in FOF 41), the Applicant will take the needed steps to measure the flow of Stoughten Creek at the historical POD (Pfohl Ditch headgate) to ensure that the Stoughten Creek portion of the protected flow rate and volume is available. This measurement will be necessary for any call made on Stoughten Creek water and is a formal part of the measurement plan.

45. The maximum proposed protected volume at the proposed POD is 856.38 AF and flow rate is 10.59 CFS. Proposed protected use below the proposed POD is 816.80 AF and 2.54 CFS. The Department finds the proposed use is less than or equal to the historical use and all water will be left instream.

46. The Department finds the proposed change in POD, POU, and purpose for Claims 43B 194822-00, 43B 194823-00, 43B 194824-00, 43B 194343-00, 43B 194222-00, 43B 194344-00, and 43B 194825-00 will not cause an adverse effect.

BENEFICIAL USE

FINDINGS OF FACT

47. The Applicant proposes to change water rights to instream flow purpose to protect, maintain, or enhance stream flows to benefit fishery resource of Rock Creek. Instream flow to benefit the fishery resource is a recognized beneficial use of water in the State of Montana.

48. The Applicant, State of Montana Department of Fish, Wildlife & Parks, states that Rock Creek is an important tributary that provides habitat for a variety of species including Yellowstone cutthroat, Brown trout, Rainbow trout, and mountain white fish. Many of the fish found in the lower portion of Rock Creek are migrant fish from the Yellowstone River, that use Rock Creek for spawning and illustrate the need to ensure continued connectivity. This change is a part of a larger investment of work, such as fish passage work at existing culverts. Due to recent drought conditions in the Yellowstone River, Above and Including Bridger Creek Basin, the Applicant states that restoring stream flow closer to the "natural flow regime plays a critical role in sustaining native biodiversity and ecosystem integrity" in the Rock Creek and the Yellowstone River ecosystems. The Applicant references several sources for the instream flow needs in Rock Creek. First, the Applicant holds a water reservation on Rock Creek based on 50 percentile flow, 43B 30017747, that ranges from 4.09 CFS in February to 109 CFS in June, with 11.8 CFS in the key month of August. The flow rate of the Applicants water reservation is based on hydrologic statistical calculations. Also, US Forest Service water reservation flow rate on Rock Creek uses more rigorous science, the wetter perimeter method. The US Forest Service holds an instream water reservation, 43B 30065395, that reserves 12 CFS in Rock Creek based on wetted perimeter methodology that takes in considerations of low-flow summer periods. 43B 30065395 is a water reservation that is located above the confluence of Stoughten Creek and Rock Creek but that is used by the Applicant as a general representative of the desired flow rate in Rock Creek. The Applicant also has flow rate measurements from 2013 and 2014 of Rock Creek at the proposed measurement point, seen on Figure 1, that shows flow rates lower than the 12 CFS, generally outside of peak hydrograph time, that coincide with high demands on Rock Creek during seasonal irrigation periods. Based on the evidence provided by the Applicant, the Department agrees, that the proposed project will aid in restoring instream flow in Rock Creek closer to natural conditions.

49. The Department finds the maximum protected flow rate of 10.59 CFS and a maximum volume of 856.38 AF at the historical POD for instream fisheries use to be a beneficial use of water. The Department finds protecting a flow rate of 2.54 CFS and a volume of 816.80 AF within

the proposed reach from May 1 to October 10 for instream fisheries use to be a beneficial use of water. The protected flow rate and volumes can be seen on Table 21.

ADEQUATE DIVERSION

FINDINGS OF FACT

50. The proposed change of Statements of Claim 43B 194822-00, 43B 194823-00, 43B 194824-00, 43B 194343-00, 43B 194222-00, 43B 194344-00, and 43B 194825-00 does not require a means of diversion or conveyance. Per § 85-2-402(2)(b), MCA, a change in appropriation right for instream flow pursuant to § 85-2- 436, MCA, is exempt from the adequacy of diversion criterion.

POSSESSORY INTEREST

FINDINGS OF FACT

51. Pursuant to § 85-2-402(2)(d), MCA, the Applicant is not required to prove that they have 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 because this application involves a change in appropriation right for instream flow per § 85-2-436, MCA.

TEMPORARY PROTECTED REACH/ MEASUREMENT PLAN

FINDINGS OF FACT

52. The Applicant is proposing to temporarily change the purpose and place of use of Statements of Claim 43B 194822-00, 43B 194823-00, 43B 194824-00, 43B 194343-00, 43B 194222-00, 43B 194344-00, and 43B 194825-00 to instream flow for the benefit of the fishery resource in Rock Creek for a period of 30 years with the option to renew. During the term of this temporary change, the Applicant will not divert water from Stoughten Creek or Rock Creek for irrigation use and allow water to continue in Rock Creek until the confluence with Yellowstone River. As a result of this change, the Applicant will appropriate 2.54 CFS in the proposed 0.44-mile instream place of use in the Rock Creek, which will extend from the Stewart Ditch headgate in NENESW Section 19, T7S, R7E, to the confluence of Rock Creek and the Yellowstone River in NENESE Section 19, T7S, R7E, all within Park County. The proposed period of use is May 1 to October 10. The volume available to be appropriated instream is 816.80 AF.

53. The Applicant leases water from the Water Right Owner of Record, Point of Rocks Ranch. The Applicant proposes to change Claims 43B 194822-00, 43B 194823-00, 43B 194824-00, 43B 194343-00, 43B 194222-00, 43B 194344-00, and 43B 194825-00 to instream flow for 30 years as part of a water conservation project. The Water Right Lease Agreement requires Point of Rocks

Ranch LLC to secure a portion of the Park County Conservation District water reservation to replace the irrigation water from the leased water rights with water from the Yellowstone River.

54. This project meets the requirement of a water conservation project pursuant to §85-2-436(3) as 816.8 AF will no longer be consumed from the Stoughten Creek and Rock Creek waterways, conserving water in Rock Creek for fisheries, and as the life of this project is proposed to be 30 years or greater. The Lessor (Point of Rocks Ranch LLC) proposed irrigation infrastructure (pump and pipeline) from the Yellowstone River that supports the proposed 30-year lifespan of this project.

55. The Applicant will monitor flow rates and volumes appropriated for the instream flow purpose by measuring the flow rate of Rock Creek at one location on the protected reach, seen on Figure 1, at a FWP gage site. The Applicant states that the flow rate measurements will be simultaneously measured and recorded at the gage site from May thought October. If a call is placed on the Applicant, an additional measurement point will be on Stoughten Creek at the Pfohl Ditch headgate, see adverse effect FOF 43. The volume available to be appropriated instream is 816.80 AF. The Applicant will be required to meet the following conditions:

WATER MEASUREMENT INFORMATION

THE APPLICANT OR A DESIGNEE SHALL MEASURE THE PROTECTED REACH ACCORDING TO THE MEASUREMENT PLAN AUTHORIZED IN THE PRELIMINARY DETERMINATION ORDER USING DEPARTMENT-APPROVED MEASURING DEVICE. MEASUREMENT RECORDS SHALL BE SUBMITTED TO THE DEPARTMENT ANNUALLY BY DECEMBER 31ST. MEASUREMENT RECORDS SHALL BE MADE AVAILABLE TO THE DEPARTMENT UPON REQUEST. THE APPROPRIATOR SHALL MAINTAIN THE MEASURING DEVICES, SO THEY ALWAYS OPERATE PROPERLY AND MEASURE FLOW RATE ACCURATELY.

PLAN OF OPERATION

IN THE EVENT THAT THE APPROPRIATOR MAKES A CALL FOR WATER OR WATER COMMISSIONER IS APPOINTED, THE FOLLOWING OPERATION FOR PROTECTION PREPRESENTING UNDIVIDED, CONTINUOUS FLOW RATES OF WATER RIGHT AND VOLUME LIMITATIONS ON THE WATER RIGHT. THE APPROPRIATOR MAY PROTECT THE FOLLOWING AMOUNTS.

THE APPROPRIATOR MAY PROTECT A CONTINUOUS FLOW RATE OF 10.59 CFS UP TO THE FULL HISTORICALLY DIVERTED VOLUME OF 856.38 AF TO THE HISTORICAL POINT OF DIVERSION IN THE NENESW SECTION 19, T7S, R7E, PARK COUNTY, WITHIN THE PERIOD OF EACH WATER RIGHT INCLUDED IN CHANGE APPLICATION 43B 30159989.

THE PROTECTED REACH ENCOMPASSES THE STRETCH OF ROCK CREEK FROM THE HISTORICAL HEADGATE AT A POINT IN THE NENESW SECTION 19, T7S, R7E, PARK COUNTY TO THE CONFLUENCE OF ROCK CREEK AND YELLOWSTONE RIVER. THE APPROPRIATOR MAY PROTECT A CONTINUOUS FLOW RATE OF 2.54 CFS ALONG THIS REACH WITHIN THE PERIOD OF EACH WATER RIGHT INCLUDED IN CHANGE APPLICATION 43B 30159989. THIS EQUATES TO A TOTAL 816.80 AF OF WATER BEING PROTECTED WITHIN THE PERIOD OF EACH WATER RIGHT INCLUDED IN THE CHANGE.

56. Each water right included in this Change Application will have an additional informational remark that will identify the maximum flow rate, volume, and period in which water will be protected for instream fishery use within the protected reach. The informational remarks will follow information provided in Tables 2 and 22.

57. The Department finds the Applicant has met the additional criteria for a temporary change in appropriation right to maintain or enhance instream flow to benefit a fishery resource under the provisions of § 85-2-408, MCA.

CONCLUSIONS OF LAW

HISTORICAL USE AND ADVERSE EFFECT

58. 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).[7]

59. 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*

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

Royston, 249 Mont. at 429, 816 P.2d at 1057; *Hohenlohe*, ¶¶ 43-45.[8]

60. 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.[9] A comparative analysis of the historic use of the water right to the proposed change in use is necessary to prove the change will not result in expansion of the original right, or adversely affect water users who are entitled to rely upon maintenance of conditions on the source of supply for their water rights. *Quigley*, 103 P.2d at 1072-75 (it is necessary to ascertain historic use of a decreed water right to determine whether a change in use expands the underlying right to the detriment of other water user because a decree only provides a limited description of the right); *Royston*, 249 Mont. at 431-32, 816 P.2d at 1059-60 (record could not sustain a conclusion of no adverse effect because the Applicant failed to provide the Department with evidence of the historic diverted volume, consumption, and return flow); *Hohenlohe*, ¶ 44-45; Town of Manhattan v. DNRC, Cause No. DV-09-872C, Montana Eighteenth Judicial District Court, *Order Re Petition for Judicial Review,* Pgs. 11-12 (proof of historic use is required even when the right has been decreed because the decreed flow rate or volume establishes the maximum appropriation that may be diverted, and may exceed the historical pattern of use, amount diverted or amount consumed through actual use); Matter of Application For Beneficial Water Use Permit By City of Bozeman, *Memorandum*, Pgs. 8-22 (Adopted by DNRC *Final Order* January 9,1985)(evidence of historic use must be compared to the proposed change in use to give effect to the implied limitations read into every decreed right that an

[8] *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).

[9] 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

appropriator has no right to expand his appropriation or change his use to the detriment of juniors).[10]

61. An Applicant must also analyze the extent to which a proposed change may alter historic return flows for purposes of establishing that the proposed change will not result in adverse effect. The requisite return flow analysis reflects the fundamental tenant of Montana water law that once water leaves the control of the original appropriator, the original appropriator has no right to its use and the water is subject to appropriation by others. *E.g., Hohenlohe*, ¶ 44; *Rock Creek Ditch & Flume Co. v. Miller*, 93 Mont. 248, 17 P.2d 1074, 1077 (1933); *Newton v. Weiler*, 87 Mont. 164, 286 P. 133 (1930); *Popham v. Holloron*, 84 Mont. 442, 275 P. 1099, 1102 (1929); *Galiger v. McNulty*, 80 Mont. 339, 260 P. 401 (1927); *Head v. Hale*, 38 Mont. 302, 100 P. 222 (1909); *Spokane Ranch & Water Co.*, 37 Mont. at 351-52, 96 P. at 731; *Hidden Hollow Ranch v. Fields*, 2004 MT 153, 321 Mont. 505, 92 P.3d 1185; ARM 36.12.101(56) (Return flow - that part of a diverted flow which is not consumed by the appropriator and returns underground to its original source or another source of water - is not part of a water right and is subject to appropriation by subsequent water users).[11]

62. Although the level of analysis may vary, analysis of the extent to which a proposed change

[10] 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.)

[11] 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).

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.

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

> The question of adverse effect under §§ 85-2-402(2) and -408(3), MCA, implicates return flows. A change in the amount of return flow, or to the hydrogeologic pattern of return flow, has the potential to affect adversely downstream water rights. There consequently exists an inextricable link between the "amount historically consumed" and the water that re-enters the stream as return flow. . . .
> An appropriator historically has been entitled to the greatest quantity of water he can put to use. The requirement that the use be both beneficial and reasonable, however, proscribes this tenet. This limitation springs from a fundamental tenet of western water law-that an appropriator has a right only to that amount of water historically put to beneficial use-developed in concert with the rationale that each subsequent appropriator "is entitled to have the water flow in the same manner as when he located," and the appropriator may insist that prior appropriators do not affect adversely his rights.
> This fundamental rule of Montana water law has dictated the Department's determinations in numerous prior change proceedings. The Department claims that historic consumptive use, as quantified in part by return flow analysis, represents a key element of proving historic beneficial use.
> We do not dispute this interrelationship between historic consumptive use, return flow, and the amount of water to which an appropriator is entitled as limited by his past beneficial use.

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

64. 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.

65. 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).

66. 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).

67. 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).

68. The Department has adopted a rule providing for the calculation of historic consumptive use where the Applicant proves by a preponderance of the evidence that the acreage was historically irrigated. ARM 36.12.1902(16). In the alternative an Applicant may present its own evidence of historic beneficial use. In this case Applicant has elected to proceed under ARM 36.12.1902. (FOF No.25-27).

69. 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").

70. Based upon the Applicant's evidence of historic use, the Applicant has proven by a preponderance of the evidence the historic use of 43B 194222-00 to be a diverted volume of 5.30 AF, a historically consumed volume of 0.60 AF, and flow rate of 0.33 CFS. 43B 194822-00 to be a diverted volume of 76.20 AF, a historically consumed volume of 13.80 AF, and flow rate of 1.50 CFS. 43B 194823-00 to be a diverted volume of 76.20 AF, a historically consumed volume of 13.80 AF, and flow rate of 1.50 CFS. 43B 194824-00 to be a diverted volume of 76.20 AF, a historically consumed volume of 13.80 AF, and flow rate of 1.50 CFS. 43B 194343-00 to be a diverted volume of 76.20 AF, a historically consumed volume of 13.80 AF, and flow rate of 1.50 CFS. 43B 194344-00 to be a diverted volume of 289.68 AF, a historically consumed volume of 44.90 AF, and flow rate of 2.26 CFS. 43B 194825-00 to be a diverted volume of 256.60 AF, a historically consumed volume of 39.80 AF, and flow rate of 2 CFS. (FOF Nos. 18-38)

71. Based upon the Applicant's comparative analysis of historic water use and return flows to water use and return flows under the proposed change, the Applicant has proven that the proposed change in appropriation right will not adversely affect the use of the existing water rights of other persons or other perfected or planned uses or developments for which a permit or

certificate has been issued or for which a state water reservation has been issued. Section 85-2-402(2)(b), MCA. (FOF Nos. 42)

BENEFICIAL USE

72. 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).

73. *In the Matter of Application for Beneficial Water Use Permit No. 76LJ-115-831 by Benjamin and Laura Weidling*, (DNRC Final Order 2003), *aff'd on other grounds*, *In the Matter of Application for Beneficial Water Use Permit No. 76LJ-115-83100 by Benjamin and Laura Weidling and No. 76LJ-1158300 by Ramona S. and William N. Nessly*, *Order on Motion for Petition for Judicial Review*, Cause No. BDV-2003-100 (Mont. 1st Jud. Dist) (2004), Montana First Judicial District (Applicant did not prove that the quantity of water proposed to be used for fish and wildlife was the minimum amount necessary for the proposed beneficial use.).

74. *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).

75. *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*, Cause No. BDV-2007-186, *Nunc Pro Tunc Order on Petition for Judicial Review* (Mont. 1st Jud. Dist.) (2008) (permit denied in part because of failure to support quantity of water needed for pond); *see also* § 85-2-312(1) (a), MCA.

76. The Department may issue a change authorization for less than the amount of water requested, but may not issue a change authorization for more water than is requested or more water than can be beneficially used without waste for the purpose stated in the application. Section 85-2-312, MCA; *see also, McDonald v. State*, 220 Mont. 519, 722 P.2d 598 (1986); *Toohey v. Campbell*, 24 Mont. 13, 60 P. 396 (1900).

77. The Department can also consider waste in a change proceeding. *Hohenlohe*, ¶ 71. Waste is defined to include the "application of water to anything but a beneficial use." Section 85-2-102(23), MCA. An absence of evidence of waste does not prove the amount requested is for a beneficial use. *E.g., Stellick, supra*.

78. *Matter of Application for Permit No. 76LJ-24668 by Hammell* (DNRC Proposal for Decision 1981) (Applicant requested enough water to irrigate 22 acres. Permit was reduced because Applicant only provided evidence that 5 acres would actually be irrigated.)

79. In *Sitz Ranch v. DNRC*, the applicant could only demonstrate need for 200 to 300 acre-feet of water but requested 800 acre-feet. *Sitz Ranch v. DNRC*, DV-10-13390, 2-3, Fifth Judicial District Court, Order Affirming DNRC Decision (2011). The court upheld DNRC's decision that the applicant requested more water than could be beneficially used and thus did not prove beneficial use.

80. Applicant proposes to use water for instream fisheries use which is a recognized beneficial use. Section 85-2-102(5), MCA. Applicant has proven by a preponderance of the evidence instream fisheries use is a beneficial use and that 856.38 acre-feet of diverted volume and 10.59 CFS flow rate of water requested is the amount needed to sustain the beneficial use. Section 85-2-402(2)(c), MCA (FOF Nos. 47-49).

ADEQUATE MEANS OF DIVERSION

81. Pursuant to § 85-2-402 (2)(b), MCA, the Applicant is not required to prove that the proposed means of diversion, construction, and operation of the appropriation works are

adequate because this application involves a temporary change in appropriation right for instream flow pursuant to § 85-2-436 MCA.

POSSESSORY INTEREST

82. Pursuant to § 85-2-402(2)(d), MCA, the Applicant is not required to prove 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 because this application involves a change in appropriation right for instream flow pursuant to § 85-2-436 MCA.

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. 43B 30159989 should be granted subject to the following.

The Applicant is authorized to protect 10.59 CFS and 856.38 AF under Statements of Claim 43B 194822-00, 43B 194823-00, 43B 194824-00, 43B 194343-00, 43B 194222-00, 43B 194344-00, and 43B 194825-00 from May 1 to October 10 of each year along the reach of Rock Creek at the historical POD in NENESW Section 19, T7S, R7E, Park County. The Applicant is authorized to protect 2.54 CFS and 816.80 AF under Statements of Claim 43B 194822-00, 43B 194823-00, 43B 194824-00, 43B 194343-00, 43B 194222-00, 43B 194344-00, and 43B 194825-00 from May 1 to October 10 of each year along the reach of Rock Creek from the historical POD in NENESW Section 19, T7S, R7E, to the confluence of Rock Creek and the Yellowstone River in NENESE Section 19, T7S, R7E, all within Park County. The Applicant shall measure streamflow at the proposed measurement point in NENESE Section 19, T7S, R7E, Park County, and shall make the measurement records available to the Department upon request.

The purpose of Statements of Claim 43B 194822-00, 43B 194823-00, 43B 194824-00, 43B 194343-00, 43B 194222-00, 43B 194344-00, and 43B 194825-00 will be temporarily changed to instream flow protect, maintain, or enhance stream flows to benefit the fishery resource of Rock Creek for the next 30 years. The POU for these water rights will be temporarily changed to the reach of Rock Creek from the historical POD (Stewart Ditch Headgate) to the confluence of Rock Creek and Yellowstone River. The POD will be temporarily changed to NENESW Section 19, T7S, R7E, Park County.

The Applicant is subject to the following conditions:

WATER MEASUREMENT INFORMATION

THE APPLICANT OR A DESIGNEE SHALL MEASURE THE PROTECTED REACH ACCORDING TO THE MEASUREMENT PLAN AUTHORIZED IN THE PRELIMINARY DETERMINATION ORDER USING DEPARTMENT-APPROVED MEASURING DEVICE. MEASUREMENT RECORDS SHALL BE SUBMITTED TO THE DEPARTMENT ANNUALLY BY DECEMBER 31ST. MEASUREMENT RECORDS SHALL BE MADE AVAILABLE TO THE DEPARTMENT UPON REQUEST. THE APPROPRIATOR SHALL MAINTAIN THE MEASURING DEVICES, SO THEY ALWAYS OPERATE PROPERLY AND MEASURE FLOW RATE ACCURATELY.

PLAN OF OPERATION

IN THE EVENT THAT THE APPROPRIATOR MAKES A CALL FOR WATER OR WATER COMMISSIONER IS APPOINTED, THE FOLLOWING OPERATION FOR PROTECTION PREPRESENTING UNDIVIDED, CONTINUOUS FLOW RATES OF WATER RIGHT AND VOLUME LIMITATIONS ON THE WATER RIGHT. THE APPROPRIATOR MAY PROTECT THE FOLLOWING AMOUNTS.

THE APPROPRIATOR MAY PROTECT A CONTINUOUS FLOW RATE OF 10.59 CFS UP TO THE FULL HISTORICALLY DIVERTED VOLUME OF 856.38 AF TO THE HISTORICAL POINT OF DIVERSION IN THE NENESW SECTION 19, T7S, R7E, PARK COUNTY, WITHIN THE PERIOD OF EACH WATER RIGHT INCLUDED IN CHANGE APPLICATION 43B 30159989.

THE PROTECTED REACH ENCOMPASSES THE STRETCH OF ROCK CREEK FROM THE HISTORICAL HEADGATE AT A POINT IN THE NENESW SECTION 19, T7S, R7E, PARK COUNTY TO THE CONFLUENCE OF ROCK CREEK AND YELLOWSTONE RIVER. THE APPROPRIATOR MAY PROTECT A CONTINUOUS FLOW RATE OF 2.54 CFS ALONG THIS REACH WITHIN THE PERIOD OF EACH WATER RIGHT INCLUDED IN CHANGE APPLICATION 43B 30159989. THIS EQUATES TO A TOTAL 816.80 AF OF WATER BEING PROTECTED WITHIN THE PERIOD OF EACH WATER RIGHT INCLUDED IN THE CHANGE.

Each water right included in this Change Application will have an additional informational remark that will identify the maximum flow rate, volume, and period in which water will be protected for

instream fishery use within the protected reach. The informational remarks will follow information provided in Table 22 below.

Table 22. Plan of operation for each water right included in Change Application 43B 30159989

Water Right	Period of Use Start	Period of Use End	Protected Flow Rate at POD (CFS)	Protected Volume at POD (AF)	Protected Flow Rate in Protected Reach Below POD (CFS)	Protected Volume in Protected Reach Below POD (AF)
43B 194822-00	1-May	10-Oct	1.5	76.20	0.21	69.02
43B 194823-00	1-May	10-Oct	1.5	76.20	0.21	69.02
43B 194824-00	1-May	10-Oct	1.5	76.20	0.21	69.02
43B 194343-00	1-May	10-Oct	1.5	76.20	0.21	69.02
43B 194222-00	1-May	10-Oct	0.33	5.30	0.015	4.75
43B 194344-00	1-May	10-Oct	2.26	289.675	0.82	256.42
43B 194825-00	1-May	10-Oct	2	256.6	0.85	279.55

NOTICE

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

Dated this 18 day of July 2024.

/Original signed by Kerri Strasheim/
Kerri Strashiem Manager
Bozeman Regional Office
Montana Department of Natural Resources and Conservation

CERTIFICATE OF SERVICE

This certifies that a true and correct copy of the PRELIMINARY DETERMINATION TO GRANT was served upon all parties listed below on this 18 day of July, 2024, by first class United States mail.

State of Montana, Department of Fish, Wildlife & Parks
PO Box 200701
Helena, MT 59620-0701

_____

BOZEMAN Regional Office, (406) 586-3136