Processing Materials

- Work copies of applicant-submitted information
- Deficiency letter
- Deficiency response
- Correct & complete determination
- Any correspondence with the applicant after application receipt and prior to sending the Draft PD

Processing Materials

Water Resources Division – Kalispell Regional Office
655 Timberwolf Pkwy, Ste. 4
Kalispell, MT 59901-1215
(406) 752-2288
DNRCKalispellWater@mt.gov

February 3, 2026

JACKSON PROPERTY GROUP LLC
ATTN: SHAYNE JACKSON
PO BOX 497
NORTH BEND WA 98045-0497

RANDY AND DORI BOCK
2315 PARKISON LN
LIBBY MT 59923-7993

Subject: Correct and Complete Application to Change a Water Right No. 76C 30165242

Dear Applicants,

The Department of Natural Resources and Conservation (Department) has determined that your application is correct and complete pursuant to Administrative Rules of Montana 36.12.1601. Please remember that correct and complete **does not mean that your application will be granted**. The purpose of this letter is to indicate that the Department has enough information to analyze your water right application.

The Department will issue a Draft Preliminary Determination within 60 days of the date of this letter per §85-2-307(2)(b), Montana Code Annotated (MCA).

Following issuance of the Draft Preliminary Determination, you (Applicant) will have 15 business days to request an extension of time to submit additional information, if desired pursuant to §85-2-307(3)(a), MCA.

If no extension of time is requested and the Draft Preliminary Determination decision is to grant your application or grant your application in modified form, the Department will prepare a notice of opportunity to provide public comment, per §85-2-307(4)(a), MCA.

If no extension of time is requested and the Draft Preliminary Determination decision is to deny your application, the Department will adopt the Draft Preliminary Determination as the final determination per §85-2-307(3)(d)(ii), MCA.

Please contact me at (406) 752-2746 or Travis.Wilson@mt.gov if you have any questions.

Sincerely,

Travis Wilson
Water Resource Specialist
Kalispell Regional Water Resources Office

Cc via email: Cole Peebles, PE, WGM Group

Form 606P: Follow-up & Amended Responses Attachment

Water Right No. 76C 25338-00

Table 39.a.C Amended Response
Summary of DNRC Standard Historical Diverted Volume (HDV) Right 76C 25338 for POU serviced.

Historical Irrigation Types *Standard HDV procedure*	*200 Ac POU for Proposed Change Application Proposed HDV for Right 76C 25338 Only* **Sprinkler Portion** (12 Acres) Piped – No Losses	**Contour Flood Portion** (75 Acres) [40% of Flood Acreage]	**Wild Flood Portion** (113 Acres) [60% of Flood Acreage]
1. Total Historic Consumptive Volume w/o IL As determined by 36.12.1902.	**5.21 Acre-Feet**	**32.56 Acre-Feet**	**49.05 Acre-Feet**
2. Right 76C 25338 portion of the HCV_{25338}. Multiply Row 1 by DF (32.9%) Refer to Duty of Water. [4]	**1.71 Acre-Feet** (1.71 = 5.21 x 0.329)	**10.71 Acre-Feet** (10.71 = 32.56 x 0.329)	**16.14 Acre-Feet** (16.14 = 49.05 x 0.329)
3. Determine On-Farm Efficiency	**70%**	**55%**	**25%**
4. Determine Seepage Loss	0.00	~~6.26~~ Acre-Feet 4.86	~~6.05~~ Acre-Feet 7.33
5. Determine Vegetation Loss	0.00	~~1.19~~ Acre-Feet 0.05	~~0.90~~ Acre-Feet 0.08
6. Determine Ditch Evaporation	0.00	~~0.03~~ Acre-Feet 0.02	~~0.05~~ Acre-Feet 0.02
7. Determine Total Conveyance Loss	**0.00**	**~~7.48~~ Acre-Feet** 4.93	**~~7.00~~ Acre-Feet[5]** 7.43
8. Divide the HCV by the On-Farm Efficiency. Then add the total Conveyance Loss.	**~~2.44~~ Acre-Feet** (~~2.44~~ = 1.71 / .70 + 0) 2.45	**~~26.95~~ Acre-Feet** (26.95 = 10.71 / .55 + ~~7.48~~ 4.93) 24.41	**71.56 Acre-Feet** (71.56= 16.14 / .25 + ~~7.00~~ 7.43) 71.98
Subtotal Historical Diverted Volume per Standard in ARM 36.12.1902	**~~100.95~~ Acre-Feet** (~~100.95~~ = ~~2.44~~ + 26.95 + 71.56) 2.45 + 24.41 + 71.98		98.84
Total Historical Diverted Volume Per 606P-HUA for Right 76C 25338-00	**~~274.20~~ Acre-Feet** $HDV_{Total} = HDV_{pre} + HDV_{ARM\ 36.12.1902} + HDV_{post}$[6] (274.20= 148.50 + ~~100.95~~ 98.84 +24.75 AF)		272.09

Even though historical diversions and applications typically started around the date of April 25, the calculations of the HDV in the preceding table are based upon the HCV, therefore losses in the conveyance system downstream of the confluence of Ferguson and McGinnis Creeks are determined only during the course of the 92 days of irrigation demand as determined by the DNRC's Standard IWR Program inputs. (June 1 to August 31).

[4] Based on the proposed *Duty of Water* discussion within the Follow-up Response for Questions 40.a.i.2.h.i.1. & 40.a.i.2.h.i.2, the Applicant asserts that a Duty Factor of 32.9% should be applied to the total historical consumptive volume attributable to Right 76C 25338 for the 200-Ac supplemental place of use.
[5] For conciseness, the calculations used to produce the historical conveyance loss components for Ferguson Creek Water Right 76C 25338 (in rows 4, 5 and 6) are included in the Supplementary Materials Attachment.
[6] Refer to the proposed modified HDV calculations following.

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Change Application 76C 30165242

Form 606P: Follow-up & Amended Responses Attachment

Water Right No. 76C 25338-00

The Applicants affirm that historically, Ferguson Creek's early runoff flows have been diverted and beneficially applied to the POU for irrigation as soon as practicable beginning in April. The Applicants and their predecessors have typically made use of early season flows in conjunction with McGinnis Flows to sufficiently saturate soil profiles for the growing season, then later as supplemental fall irrigation aimed at replenishing carryover moisture and sustaining nutrition for fall and post-harvest grazing. The Applicants have sustained these historical diversion practices as being necessary for maximizing yields during the growing period and improving forage after the harvest.

For this proposed change, April 25th has been utilized as the initial historical diversion date, which coincides with DNRC's Area V standards and aligns roughly with typical operational practices. Based upon mean temperature data, the DNRC's Standard IWR Program inputs present May 24th as the start date for growth, with net irrigation demand estimated to commence on June 1st. However, based upon the noted historical beneficial diversion practices (and monthly mean flow estimates), the Applicants propose that 30 days of irrigation diversion at full flow rate (2.5 cfs) within the period between April 25 to June 1st be added to the standardized HDV value as calculated by ARM 36.12.1902 [Subtotaled Previously: 100.95 AF] for Ferguson Creek according to the following:

$$HDV_{pre} = (Maximum\ Flow\ Rate)(Conversion\ Factor)(No.\ Days\ Diverted)$$

$$HDV_{pre} = (2.5\ cfs)(1.98\ Ac\text{-}ft/day\ per\ cfs)(30\ days)$$

HDV_{pre} = 148.50 Acre-feet.

Similarly, based upon historical practices, the Applicants propose that 25 days of Ferugson Creek diversion (at the mean monthly flow rate of 0.5 cfs) be added to the HDV subtotal for the period between September 1 and the typical diversion end date of October 5. The proposed 25 day irrigation period allows for up to ten-days of non-diversion in order to cut and bale potential third-cutting hay following the end of the growth period.

$$HDV_{post} = (Mean\ Monthly\ Flow\ Rate)(Conversion\ Factor)(No.\ Days\ Diverted)$$

$$HDV_{post} = (0.5\ cfs)(1.98\ Ac\text{-}ft/day\ per\ cfs)(25\ days) = 24.75$$

24.75

HDV_{post} = ~~27.75~~ Acre-feet.

Based on the historical and current beneficial application of these additional diverted volumes between April 25 and October 5, **the Applicant proposes that the total historical diverted volume of Ferguson Creek under Right 76C 25338 be accounted as 274.20 AF**, determined as follows.

$$HDV_{Total} = HDV_{pre} + HDV_{ARM\ 36.12.1902} + HDV_{post}$$

98.84

$$HDV_{Total} = 148.50 + \text{~~100.95~~} + 24.75\ AF$$

$HDV_{Total\ 25338}$ = ~~274.20~~ AF 272.09

Refer also to the responses to 606P-HUA Questions 10, 11, 12 & 13 as well as the follow-up response to Questions 40.a.i.2.h.i.1. & 40.a.i.2.h.i.2.

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Change Application 76C 30165242

Form 606P: Follow-up & Amended Responses Attachment

Water Right No. 76C 25338-00

Proposed Conveyance Ditch Properties:

606P Question 125.g. – Amended Response

Add the following additional information after the existing statements:

"The USDA's Web Soil Survey indicates that the proposed Ferguson Ditch will be constructed predominantly within the Andic Dystric Eutrochrept Soil Units. The established ditch bottom is likely to be populated by surfacial cobbles. However, within the hyporheic zone, soil materials are expected to be comprised of Silty Loams with Sand (CL-ML). Based on the anticipated sub-soil type and *Seepage Loss Figure 2-50* (see Change Application Manual), the seepage loss rate (LR) for soils underlying the proposed Ferguson Ditch is estimated at 0.6 ft^3/ft^2 per day.

$$LR = 0.6\ ft^3/ft^2\ per\ day$$

Description of Conveyance Losses in Proposed New Ferguson Ditch:

606P Question 174 – Amended Response

Replace the response entirely with the following:

The following calculations are performed according to ARM 36.12.1902(10) and detail the conveyance losses anticipated within the proposed Ferguson Ditch from the proposed POD#2 to the first proposed secondary diversion point on the proposed ditch. The ditch length (l) between these points is approximately 1,150 feet.

800 ft to field (0.152 miles)

$$L = \sout{1,150\ ft}\ [0.218\ miles]$$

According to the DNRC's standard administrative procedures, the total Conveyance Loss (CL) is the sum of Seepage Loss (SL), Vegetative Loss (VL) and Ditch Evaporation (DE) in acre-feet.

$$CL = SL + VL + DE$$

The seepage loss term is defined as follows:

$$SL = (WP)(l)(LR)(D)/(43{,}560\ ft^2/acre)$$

For this determination, the Applicant anticipates an average diverted flow rate (FR) of 1.5 cfs through the proposed Ferguson Ditch, which is assumed to represent a flow depth of 1.0 feet within the ditch. The ditch bottom width will be approximately 3.0 feet. Assuming side slopes of approximately 1H:1V in a trapezoidal channel, the average diverted flow will occupy a top width (W) of 5.1 feet and a wetted perimeter (WP) of approximately 5.2 feet. The number of days (D) is set at 92 (June 1 to August 31) to align with the calculations for the historical consumptive volume. Diverted flows are assumed to arrive at the POU (and secondary diversions) in under a day's time following ditch saturation.

Ditch x-section

5.83 800

$$SL = (\sout{5.2\ ft})(\sout{1{,}150\ ft})(0.6\ ft^3/ft^2\ per\ day)(92\ days)/(43{,}560\ ft^2/acre)$$

$$SL = \sout{7.58\ AF}\ \boxed{5.91}$$

$1^2 + 1^2 = \sqrt{2} = 1.4142 \times 2 = 2.828 + 3.0 = 5.828'$

The vegetative loss in the proposed length of Ferguson Ditch is described following:

$$VL = (0.0075/mile[13])(FR)(D)(l)(2[14])$$

$$VL = (0.0075/mile)(1.5\ cfs)(92)(0.218\ miles)(2\ AF\ per\ cfs\text{-}days)$$

0.152

VL = 0.45 AF 0.315 AF

Seepage Loss = 5.91
Veg Loss = 0.315
Ditch Evap = 0.066

The DNRC's Gridded Net Monthly Evaporation rates over the 92-day (June 1 to August 31) irrigation water requirement period were utilized to determine the project Evaporation Rate for these conveyance loss calculations.

$$ER = (ER_{Jun} + ER_{Jul} + ER_{Aug})/(12\ in/ft)$$

$$ER = (1.472\ in + 2.217\ in + 4.894\ in)/(12\ in/ft)$$

$$ER = 0.715\ ft$$

The ER is utilized to estimate evaporation of water off the flowing surface of the proposed Ferguson Ditch with the relationship following:

$$DE = (W)(l)(ER)$$

$$DE = (5.1\ ft)(1{,}150\ ft)(0.715\ ft)/(43{,}560\ ft^2/acre)$$

5.0 800

DE = 0.10 AF 0.066

The total conveyance loss for the proposed Ferguson Ditch is estimated at 8.13 AF:

$$CL_{Prop} = 7.58 + 0.45\ AF + 0.10\ AF$$

5.91 0.315 0.066

CL_{Prop} = 8.13 AF 6.29

However, as previously noted, it is important to consider that diverting an average of 1.5 cfs (of the maximum 2.5 cfs) into the proposed Ferguson Ditch will reduce the analogous seepage and vegetative loss components of the Ferguson diversion within the McGinnis natural carrier by approximately 60% of the historical value.

$$CL_{Hist\ Reduction} = (6.26 + 6.05 + 1.19 + 0.90\ AF)(60\%)$$

4.86 7.33 0.05 0.08

$CL_{Hist\ Reduction}$ = 8.64 AF 7.39

Combined, the reduction in conveyance losses in the McGinnis Carrier anticipated as a result of proposed POD#2 diversions (averaged at 1.5 cfs) is approximated at 8.64 AF, which is greater than the new conveyance losses estimated for the proposed Ferguson Ditch due to the change application.

[13]Percent loss is defined by the 1993 NEH Standard of 0.75% loss/mile.
[14] Approximate conversion factor from flowrate (in cfs) over a day to ac-ft. Actual value is 1.98 AF per cfs-day.

Change Application 76C 30165242

Form 606P: Supplementary Materials Attachment

Water Right No. 76C 25338-00

USDA WEB SOIL SURVEY DATA

Report — Map Unit Description

Kootenai National Forest Area, Montana-Idaho

101—Fluvents, flood plains

Map Unit Setting

National map unit symbol: nvch
Elevation: 1,800 to 4,200 feet
Mean annual precipitation: 20 to 35 inches
Mean annual air temperature: 39 to 45 degrees F
Frost-free period: 70 to 110 days
Farmland classification: Not prime farmland

Map Unit Composition

Fluvents and similar soils: 90 percent

Estimates are based on observations, descriptions, and tra mapunit.

Description of Fluvents

Setting

Landform: Flood plains
Parent material: Mixed alluvium

Typical profile

Oi - 0 to 2 inches: slightly decomposed plant material,
A - 2 to 13 inches: gravelly silt loam
C1 - 13 to 23 inches: very gravelly sandy loam
C2 - 23 to 60 inches: sand

I include as well

Engineering Properties–Kootenai National Fo						
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification	
					Unified	AASHTO
			In			
108—Andic Dystric Eutrochrepts, lacustrine terraces-Andic Dystrochrepts, glacial outwash terraces, complex						
Andic dystric eutrochrept	60	B	0-1	Slightly decomposed plant material	PT	—
			1-10	Silt loam	CL-ML, ML	A-4

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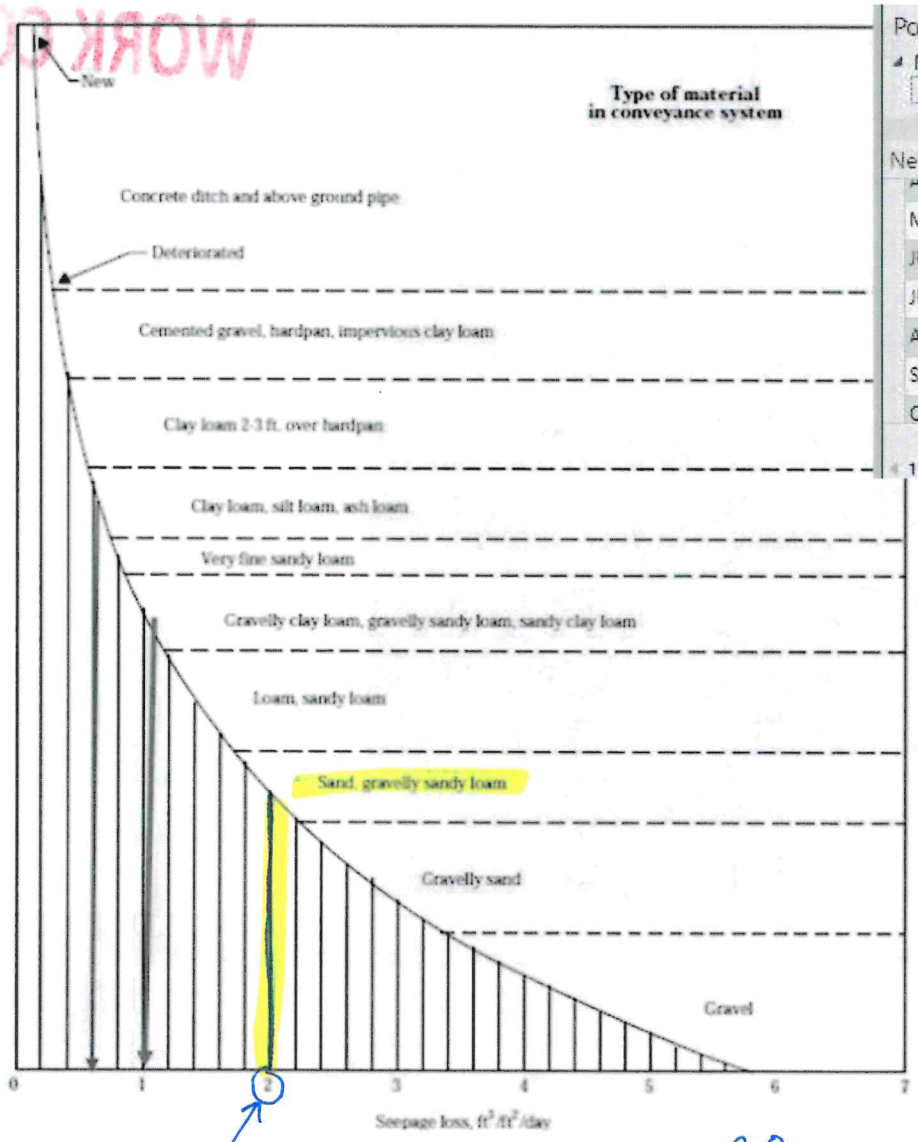
Change Application 76C 30165242

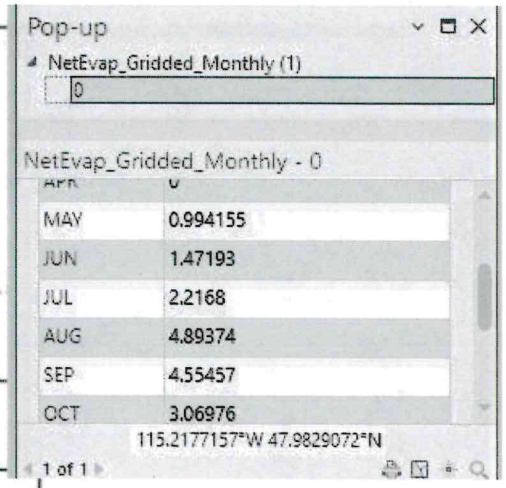
Form 606P: Supplementary Materials Attachment

Water Right No. 76C 25338-00

STANDARD LOSS AND EVAPORATION DATA

Figure 2-50 Method to estimate seepage losses from irrigation delivery systems (adapted from USDA 1985)





13-23" - grav. sand loam
23-60" - sand

$LR_{McGinnis\ Carrier}$ = ~~1.0~~ 2.0 ft^3/ft^2

$LR_{Ferguson\ Ditch}$ = 0.6 ft^3/ft^2

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Change Application 76C 30165242

Form 606P: Supplementary Materials Attachment

Water Right No. 76C 25338-00

HISTORICAL CONVEYANCE LOSS EST. SUPPORTING HDV CALCULATIONS FOR FERGUSON CK

According to DNRC administrative procedures, the total Conveyance Loss (CL) is the sum of Seepage Loss (SL), Vegetative Loss (VL) and Ditch Evaporation (DE) in acre-feet.

$$CL = SL + VL + DE$$

Based on site observations of the McGinnis Creek Channel, assume the following:

- 10' top width (W)
- 6' bottom width
- 2' flow depth
- Channel side slopes of roughly 1H:1V.
- Wetted Perimeter (WP): $11.65' = 2\sqrt{2}' + 6' + 2\sqrt{2}'$

$$SL = (WP)(I)(LR)(D)/(43{,}560\ ft^2/acre)$$

It is approximately 2,350 ft (I) along the McGinnis flowline from existing POD #1 to the main secondary PODs servicing the southern portion of the POU, which accounts for approximately:

- 58 acres contour 75 acres
- 10 acres of wild flood. 113 acres

} 188 acres total

$$SL_{(58+10)} = (11.65\ ft)(2{,}350\ ft)(1\ ft^3/ft^2)(92\ days)/(43{,}560\ ft^2/acre)$$

$$SL_{(58+10)\ Total} = 57.82\ AF \quad \boxed{110.788}$$

However, Ferguson Water on average, is estimated to account for only 11 percent of the historical water within McGinnis Creek as a natural carrier.

$$SL_{(58+10)\ Ferguson} = (SL_{(58+10)\ Total})(11\%\ Factorial)$$

$$SL_{(58+10)\ Ferguson} = (57.82\ AF)(11\%) \quad \boxed{12.187}$$

$$SL_{(58+10)\ Ferguson} = 6.36\ AF$$

Separating the proportions of the seepage loss by irrigation type as follows:

$$SL_{(58+10)\ Contour} = (58/68)\ (SL_{(58+10)\ Ferguson})$$

$$SL_{(58+10)\ Contour} = (58/68)(6.36\ AF)$$

$$\mathbf{SL_{(58+10)\ Contour} = 5.42\ AF} \quad \boxed{4.86}$$

Similarly:

$$\mathbf{SL_{(58+10)\ Wild} = 0.94\ AF.} \quad \boxed{7.33}$$

It is roughly an additional 2,200 ft (I) along the flowlines from existing POD #1 to the main secondary POD servicing the northern portion of the POU, which accounts for approximately:

Change Application 76C 30165242

Form 606P: Supplementary Materials Attachment

Water Right No. 76C 25338-00

- 17 acres contour
- 103 acres of wild flood.

} combined w/ acres on previous page.

~~$SL_{(17+103)} = (11.65\ ft)(2,200\ ft)(1\ ft^3/ft^2)(92\ days)/(43,560\ ft^2/acre)$~~

$SL_{(17+103)\ Total} = 54.13\ AF$

However, Ferguson Water is estimated to account for 11 percent of the historical water within McGinnis Creek as a natural carrier.

$SL_{(17+103)\ Ferguson} = (SL_{(17+103)\ Total})(11\%\ Factorial)$

$SL_{(17+103)\ Ferguson} = (54.13\ AF)(11\%)$

$SL_{(17+103)\ Ferguson} = 5.95\ AF$

Separating the proportions of the seepage loss by irrigation type as follows:

$SL_{(17+103)\ Contour} = (17/120)\ (SL_{(17+103)\ Ferguson})$

$SL_{(17+103)\ Contour} = (17/120)(5.95\ AF)$

$\mathbf{SL_{(17+103)\ Contour} = 0.84\ AF}$

Similarly:

$\mathbf{SL_{(17+103)\ Wild} = 5.11\ AF.}$

The total Seepage Loss in the McGinnis Carrier as a result of Ferguson Creek Diversions under Right 76C 25338 is as Follows.

$SL_{Contour} = 5.42 + 0.84\ AF$

$\mathbf{SL_{Contour} = 6.26\ AF}$

$SL_{Wild} = 0.94 + 5.11\ AF$

$\mathbf{SL_{Wild} = 6.05\ AF}$

Vegetative Loss (VL) is calculated with the wild and contour-flooded portions of the POU are serviced by up to 2.04 cfs of the maximum diversion rate of 2.50 cfs. The sprinkled portions of the historical POU being serviced by the balance of 0.46 cfs of Right 76C 25338.

The calculation for VL within the flooded areas is performed in two parts due to the multiple secondary diversions described within the *Follow-up and Amended Responses Document*.

The conveyances to the middle two 2PODs carry 2.04 cfs of flow to the southern flooded POU over approximate distances of 2,350 ft (0.445 miles). A portion of this flow (estimated at 1.30 cfs) continues northward within the natural carrier to service the northern POU.

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Change Application 76C 30165242

Form 606P: Supplementary Materials Attachment

Water Right No. 76C 25338-00

$$VL = (0.0075/mile^{1})(FR)(D)(l)(2^{2})$$

$$VL_{South} = (0.0075/mile)(2.04\ cfs)(92)(0.426\ miles)(2\ AF\ per\ cfs\text{-}days)$$

VL_{South} = 1.25 AF → 1.20 × 11% = Ferguson 0.13

The southern POU's vegetative loss is split proportionally between 58 acres of contour flood and 10 Acres of wild flood.

$VL_{S\ Contour}$ = 1.07 AF → 0.48 × 11% = Ferguson 0.05

$VL_{S\ Wild}$ = 0.18 AF → 0.72 × 11% = Ferguson 0.08

The natural carrier to the northern 2POD carries 1.30 cfs of flow on to irrigate the northern portions of the flooded POU over an additional distance of 2,200 ft (0.445 miles).

$$VL_{North} = (0.0075/mile)(1.30\ cfs)(92)(0.417\ miles)(2\ AF\ per\ cfs\text{-}days)$$

VL_{North} = 0.84 AF

The northern POU VL is split proportionally between 17 acres of contour flood and 103 Acres of wild flood.

$VL_{N\ Contour}$ = 0.12 AF

$VL_{N\ Wild}$ = 0.72 AF

Summing the total VL for each wild and contour flooded areas results in the following.

$$VL_{Contour} = VL_{S\ Contour} + VL_{N\ Contour}$$

$$VL_{Contour} = 1.07 + 0.12$$

$VL_{Contour}$ = 1.19 AF

$$VL_{Wild} = VL_{S\ Wild} + VL_{N\ Wild}$$

$$VL_{Wild} = 0.18 + 0.72$$

VL_{Wild} = 0.90 AF

The DNRC's Gridded Net Monthly Evaporation rates over the 92-day (June 1 to August 31) irrigation water requirement period were utilized to determine the project Evaporation Rate for these conveyance loss calculations.

$$ER = (ER_{Jun} + ER_{Jul} + ER_{Aug})/(12\ in/ft)$$

[1]Percent loss is defined by the 1993 NEH Standard of 0.75% loss/mile.

[2] Approximate conversion factor from flowrate (in cfs) over a day to ac-ft. Actual value is 1.98 AF per cfs-day.

Form 606P: Supplementary Materials Attachment

Water Right No. 76C 25338-00

$$ER = (1.472\ in + 2.217\ in + 4.894\ in)/(12\ in/ft)$$

$$ER = 0.715\ ft$$

The ER is utilized to estimate evaporation of water off the flowing surface of the McGinnis Channel (Ditch Evaporation, DE) using the following relationship, factored by the mean estimated flow percentage of 11%:

$$DE = (W)(l)(ER)*11\%$$

$$DE = (10.0\ ft)(2{,}250\ ft)(0.715\ ft)(11\%)/(43{,}560\ ft^2/acre)$$

$$\boldsymbol{DE = 0.04\ AF}$$ Ferguson

The "Ditch" Evaporation along the natural McGinnis Channel Carrier is then split between the irrigation types, with 75 total contour flooded acres and 113 wild flood acres inside the POU.

$$DE_{Contour} = (75/188)(0.04\ AF)$$

$$\boldsymbol{DE_{Contour} = 0.016\ AF}$$

$$DE_{Wild} = (113/188)(0.04\ AF)$$

$$\boldsymbol{DE_{Wild} = 0.024\ AF}$$

Application Materials

- Application
- Any information submitted with Application including maps

Application Materials

APPLICATION TO
CHANGE A WATER RIGHT

§ 85-2-302, MCA
Form No. 606 *(Revised 10/2025)*

For Department Use Only

RECEIVED
12 JAN 2026
DNRC
KALISPELL WATER RESOURCES

Application # 30165242 Basin 76C
Priority Date 01/12/2026 Time 12:50 AM/PM
Rec'd By TW
Fee Rec'd $ 1,000.00 Check # 83523
Deposit Receipt # KLU2613562
Payor WGM Group
Refund $ _____ Date _____

FILING FEE

$2500/$1500 – Without/with filing fee reduction.

$400 – ***(The following types do not qualify for a filing fee reduction)***

- **Replacement well greater than 200 feet from original**
- **Replacement reservoir on the same source**

INFORMATION

An application will be eligible for a filing fee reduction and expedited timelines if the applicant completes a preapplication meeting with the Department (ARM 36.12.1302(1)), which includes submitting any follow-up information identified by the Department (ARM 36.12.1302(3)(c)) and receiving either Department-completed technical analyses or Department review of applicant-submitted technical analyses (ARM 36.12.1302(4) and (5)). An application for the proposed project also must be submitted within 180 days of delivery of Department technical analyses or scientific credibility review and no element on the submitted application can be changed from the completed preapplication meeting form (ARM 36.12.1302(6)). If application is eligible for a filing fee reduction, $500 paid for Form 606P-B will be credited toward filing fees shown above.

Applicant Information: *Add more as necessary.*

Applicant Name Shayne A Jackson (Jackson Property Group, LLC)
Mailing Address 6220 McGinnis Meadows Road City Libby State MT Zip 59923
Phone Numbers: Home _____ Work _____ Cell (425) 308-2675
Email Address sj@mmgranch.net LLC Address: PO Box 497, North Bend, WA 98045

Applicant Name Randy Bock
Mailing Address 2315 Parkison Lane City Libby State MT Zip 59923
Phone Numbers: Home _____ Work _____ Cell (406) 405-1057
Email Address randybock1954@gmail.com

Applicant Name Dori Bock
Mailing Address 2315 Parkison Lane City Libby State MT Zip 59923
Phone Numbers: Home _____ Work _____ Cell (406) 405-1057
Email Address doribock6218@gmail.com

Contact/Representative Information: *Add more as necessary.*

Contact/Representative is: ☐ Applicant ☑ Consultant ☐ Attorney ☐ Other
Contact/Representative Name Cole Peebles - WGM Group, Inc.
Mailing Address 1111 East Broadway City Missoula State MT Zip 59802
Phone Numbers: Home _____ Work (406) 728-4611 Cell (406) 289-0531
Email Address cpeebles@wgmgroup.com

NOTE: *If a contact person is identified as an attorney, all communication will be sent only to the attorney unless the attorney provides written instruction to the contrary (ARM 36.12.122(2)). If a contact person is identified as a consultant, employee, or lessee, the individual filing the water right form or objection form will receive all correspondence and a copy may be sent to the contact person (ARM 36.12.122(3)).*

!!Please send a courtesy copy of all correspondence to the Contact/Representative!!

Answer every question and applicable follow-up questions. Use the checkboxes to denote yes ("Y"), no ("N"), or not applicable ("NA"). Questions that require items to be submitted to the Department have a submitted ("S") checkbox, which is marked when the required item is attached to the Application. Label all submitted items with the question number for which they were submitted. Narrative responses that are larger than the space provided can be answered in an attachment. If an attachment is used, specify "see attachment" on this form, and label the attachment with the question number. Constrain narrative responses to the specific question as is asked on the form; do not respond to multiple questions in one narrative. Responses in the form of a table may be entered into the table provided on this form or in an attachment. If an attachment is used, the table must have the exact headings found on this form, and "see attachment" must be entered as a response to the relevant question. Clearly label all units in tables and narrative responses.

PREAPPLICATION AND TECHNICAL ANALYSES INFORMATION

1. ☑ **Y** ☐ **N** Do you elect for Department technical analyses to be used for criteria assessment?

2. ☑ **Y** ☐ **N** Did you have a preapplication meeting AND complete a Change Preapplication Meeting Form Part A and Part B (Form 606P-A and 606P-B)?

IF QUESTION 2 IS NO, answer 2.a and 2.b:

2.a. ☐ **S** Submit the Technical Analyses Addendum (Form 606-TAA).

2.b. ☐ **S** ☐ **NA** Submit the technical analyses, if you elected in question 1 for Applicant technical analyses to be used for criteria assessment. Select "NA" if you elected for Departmental technical analyses.

IF QUESTION 2 IS YES, answer 2.c, 2.d, and 2.e:

2.c. ☐ **Y** ☑ **N** Has any element of the project described in this application changed from the mandatory elements of the project described in the completed Form 606P? **If yes,**

2.c.i. Please explain.

2.c.ii. ☐ **S** Submit the Technical Analyses Addendum (Form 606-TAA).

2.d. ☑ **Y** ☐ **N** Are the technical analyses to be used for criteria assessment exactly the same as those completed during the preapplication process? **If no:**

2.d.i. Please explain.

2.d.ii. ☐ **S** Submit the Technical Analyses Addendum (Form 606-TAA)

2.e. ☑ **Y** ☐ **N** Did you elect in question 1 for Department technical analyses to be used for criteria assessment? **If no:**

2.e.i. ☐ **S** Submit the technical analyses.

APPLICATION ADDENDA AND REVIEW

3. ☐ **S** ☑ **NA** If the proposed change involves one or more places of storage, submit a Change Storage Addendum (Form 606-SA). This does not include reservoirs, pits, pit-dams, or ponds with a capacity less than 0.1 AF; water tanks; or cisterns (ARM 36.12.113(6)).

4. ☐ **S** ☑ **NA** If the project involves an appropriation that is greater than 5.5 CFS and 4,000 acre-feet, submit a Reasonable Use Addendum (Form 606-B).

5. ☐ **S** ☑ **NA** If the project involves out-of-state water use, submit an Out-of-State Use Addendum (Form 600/606-OSA).

6. ☐ **S** ☑ **NA** If the proposed purposes include marketing or selling water, submit a Water Marketing Purpose Addendum (Form 600/606-WMA). This doesn't include marketing for mitigation/aquifer recharge.

7. ☐ **S** ☑ **NA** If the proposed purpose includes instream flow, submit a Change to Instream Flow Addendum (Form 606-IFA).

8. ☐ **S** ☑ **NA** If the proposed purposes include mitigation, aquifer recharge, or marketing for mitigation/ aquifer recharge, submit a Mitigation Purpose Addendum (Form 606/606-MIT).

9. ☐ **S** ☑ **NA** If the project is in designated sage grouse habitat, submit a review letter from the Montana Sage Grouse Habitat Conservation Program.

10. ☐ **S** ☑ **NA** If you propose to add a point of diversion or place of use on State of Montana Trust Land, submit documentation of consent from DRNC Trust Lands Management Division. If you propose to add a place of use on Trust Land with all points of diversion on private land, then, at a minimum, that component of the change authorization will be temporary for the duration of the lease term (§ 85-2-441, MCA).

11. ☑ **Y** ☐ **NA** You must provide a written notice of the application to each owner of an appropriation right sharing a point of diversion or means of conveyance (e.g., canal, ditch, flume, pipeline, or constructed waterway) pursuant to § 85-2-302(4)(c), MCA. Submit a copy of this notice and the recipient list.

APPLICATION DETAILS

12. How many change applications will be needed for this project? Refer to ARM 36.12.1305 for more information. One

13. Fill out the table below for the water rights proposed for change.

Water Right No.	**Current Authorized Flow Rate**			**Flow Rate Needed for Project**			**Means of Diversion**
	Flow	*GPM*	*CFS*	*Flow*	*GPM*	*CFS*	
76C 25338 00	2.50	☐	☑	2.50	☐	☑	Pump/Headgate w/Ditch or Pipeline (Confluence w/McGinnis Ck)
		☐	☐		☐	☐	
		☐	☐		☐	☐	
		☐	☐		☐	☐	
		☐	☐		☐	☐	

14. Is the source surface water or groundwater? Surface water

15. What is the source name? Ferguson Creek

16. Identify the water right elements proposed for change, with a checkmark, for each water right proposed for change.

Water Right No.	76C 25338 00				
Point of Diversion	☑	☐	☐	☐	☐
Place of Use	☐	☐	☐	☐	☐
Purpose of Use	☐	☐	☐	☐	☐
Place of Storage	☐	☐	☐	☐	☐

17. ☑ **S** Submit a historical use map created on an aerial photograph or topographic map that shows the following: section corners, township and range, scale bar, north arrow, all historical points of diversion (POD) labeled with a unique POD ID ("H" followed by a number), all historical places of use (POU), all historical conveyance structures, all historical places of storage, and historical place of use for all overlapping water rights. More than one map may be submitted, if necessary, to clearly convey all required information.

18. ☑ **S** Submit a proposed use map created on an aerial photograph or topographic map that shows section corners, township and range, scale bar, north arrow, and the following elements: points of diversion labeled with a unique POD ID ("P" followed by a number), places of use, conveyance structures, places of storage, and place of use for all overlapping water rights. Include all elements that will be on the water rights after the proposed change, regardless of whether the element will be modified by the change. The map should fully depict the water rights, as proposed, after the change. More than one map may be submitted, if necessary, to clearly convey all required information.

19. ☑ **Y** ☐ **N** Does the proposed change involve a change in point of diversion?

IF YES,

19.a. Describe the location for all *new* and *unchanged* points of diversion to the nearest 10 acres. Label POD ID with the same POD ID number assigned for the proposed use map (question 18).

POD ID	¼	¼	¼	Sec.	Twp.	Rge.	County	Lot	Block	Tract	Subdivision	Gov. Lot	New or Unchanged
H1	SE	SE	SE	20	26N	28W	Lincoln	-	-	-	-	-	Unchanged
P1	sw	NE	sw	20	26N	28W	Lincoln	-	-	-	-	-	New

Note: POD O1 [as depicted on the Proposed Use and Ditch Map (Q18)] is not included in the above table as it is relevant ONLY to the supplemental water rights with overlapping places of use.

19.b. ☑ **NA** Describe the location of all historical PODs you propose to *retire*. Label POD ID with the same POD ID assigned for the historical use map (question 17). If none are proposed for retirement, select "NA" checkbox.

POD ID	¼	¼	¼	Sec.	Twp.	Rge.	County	Lot	Block	Tract	Subdivision	Gov. Lot

19.c. What is the means of diversion for all *new* PODs? Means of diversion for surface water includes headgate, pump, dam, and others. Means of diversion for groundwater includes well, developed spring, pit pond, and others.

The proposed P1 diversion will consist of an in-line concrete, flow-through structure with a flashboard opening at its default outlet to the historical Ferguson Creek Channel as well as a slide/disc gate w/ outlet pipe capable of diverting flow into the Proposed Ferguson Ditch.

20. ☐ **Y** ☑ **N** Does the proposed change involve a change in place of use?

IF YES,

20.a. What are the geocodes of the proposed place of use?

20.b. Describe the legal land description of the proposed place of use, and if the water rights being changed will have an irrigation or lawn and garden purpose, list the number of irrigated acres.

Acres	Gov't Lot	¼	¼	¼	Sec.	Twp.	Rge.	County
	Total							

21. ☐ **Y** ☑ **N** Does the proposed change involve a change in place of use or purpose?

IF YES,

21.a. ☐ **Y** ☐ **N** Do other water rights supplement or overlap the proposed place of use?

IF YES,

21.a.i. How will the water rights be operated to serve the proposed purposes?

_____

_____

_____

_____

21.a.ii. For each supplemental or overlapping water right, please list the average period of diversion and use (MM/DD-MM/DD), flow rate (GPM or CFS), and the volume of water (AF) contributed.

Water Right No.	**Avg. Period of Diversion**	**Avg. Period of Use**	**Flow Rate**			**Volume Contributed**
	MM/DD-MM/DD	*MM/DD-MM/DD*	*Flow*	*GPM*	*CFS*	*AF*
				☐	☐	
				☐	☐	
				☐	☐	
				☐	☐	

22. ☐ **Y** ☑ **N** Are you filing on behalf of another entity? If yes, describe.

_____

_____

23. ☑ **Y** ☐ **N** Do you own the entire historical place of use for all water rights proposed for change?

IF QUESTION 23 IS NO,

23.a. ☐ **Y** ☐ **N** Was the water historically used for sale, rental, distribution, municipal use, or any other context in which water is being supplied to another and it is clear that the ultimate user would not accept the supply without consenting to the use of water on the user's place of use?

IF QUESTION 23.a IS NO,

23.a.i. ☐ **Y** ☐ **N** List the water rights for which you do not own the entire historical place of use.

_____

23.a.ii. ☐ **Y** ☐ **N** Are the water rights listed in question 23.a.i severed from the historical place of use?

IF QUESTION 23.a.ii IS YES,

23.a.ii.1. ☐ **Y** ☐ **N** Do you own the entirety of the severed water rights proposed for change? If yes, skip to question 24. If no, answer question 23.a.iii.

IF QUESTION 23.a.ii OR 23.a.ii.1 IS NO,

23.a.iii. ☐ **Y** ☐ **N** ☐ **NA** Are all owners of the historical place of use or, if applicable, owners of the severed water rights, willing to sign the application?

IF QUESTION 23.a.iii IS NO,

23.a.iii.1. ☐ **S** Submit a Form 641 or 642 to split the water rights being changed for which all owners will not sign.

ADVERSE EFFECT

24. Explain how you can control your diversion in response to a call being made.

Refer to Answer 19.c. The proposed in-line, flow-through P1 diversion structure will incorporate a flashboard opening at its default outlet to the historical Ferguson Creek Channel. In the event of a senior call (or valid, shared-priority call), the slide/disc gate to the proposed Ferguson Ditch will be closed (or adjusted proportionately), and the 'called' portion of Ferguson Ck will flow through the structure, defaulting down the historical Ferguson Creek Channel and toward its confluence with McGinnis Creek. Conveyed flows will co-mingle with McGinnis Ck.

The flashboard opening will be sized to fully convey the 5-yr return interval event in Ferguson Ck. The native Ferguson Creek overbanks & floodplain will accommodate flows exceeding the design.

25. Describe plans you have for ensuring existing water rights will be satisfied during times of water shortage.

The Applicants' operation of the proposed and historical diversions--as well as the use of water right 76C 25338-00, in priority--will abide by valid, senior calls for water. In times when there is not enough foregoing flow in Ferguson Creek to satisfy senior water diversions AND shared- priority diversions along with the maximum flow rate of water right 76C 25338, the Applicants will share in any diversion reduction(s) proportionate to their ownership of right 76C 25338 and proportionate to other valid, shared-priority rights that are exercised concurrently. The Owners of shared-priority rights may also agree to cooperatively alternate Ferguson Flow diversions in a manner that does not exceed the composite flow of their individual (or shared) rights.

26. ☐ **Y** ☑ **N** Are you aware of any calls that have been made on the source of supply or, if groundwater, on nearby surface water sources?

26.a If yes, explain.

27. Describe how the proposed change will or will not affect your ability to make call.

Geographically, the Applicants are the most upstream historical diverters of Ferguson Creek Water. As such, the proposed addition of POD P1 (upstream of POD H1) will not affect their ability to make call. The proposed new primary point of diversion (P1) will improve water control, provide reliable flow and diversion measurement, better align with irrigation practices, and promote ease of diversion access for water right 76C 25338.

28. ☐ **Y** ☑ **N** Does a water commissioner distribute water or oversee water distribution on your proposed source, or if groundwater, on nearby surface water sources?

28.a. If yes, list the sources.

29. When was the last time each water right proposed for change was appropriated and used beneficially?

Water right 76C 25338 was used to irrigate pasture and grow hay crops through the 2025 season.

IF THERE HAS BEEN A PERIOD OF NONUSE,

29.a. Why was the water right not used?

29.b. Why will a resumption of use not adversely affect other water users?

29.c. ☐ **Y** ☐ **N** Is the period of nonuse greater than 10 years for any of the water rights proposed for change? If yes, list which water rights.

29.d. ☐ **Y** ☐ **N** Have new water rights been authorized to use the source during the period of nonuse for any of the water rights proposed for change? If yes, explain.

30. ☑ **Y** ☐ **N** Do you propose to add one or more points of diversion or use new or existing conveyance infrastructure that will be shared with one or more existing water rights?

30.a. If yes, describe how the capacity of the shared points of diversion and/or conveyance infrastructure is sufficient for all water rights and how the proposed project will not adversely affect these water rights.

Existing historical shared POD H1 will remain in use & unchanged by the proposed change to add new POD P1. As described in Answers 19.c, 24 & 25, herein, the proposed diversion will include a full-capacity, flow-through configuration w/ the historical Ferguson Channel and overbanks as the default conveyance for the entirety of Ferguson Ck. New P1 will only be utilized by the Applicants & will allow improved operational flexibility within the POU for right 76C 25338 w/o negatively impacting any of the rights diverting at H1.

Flows not diverted into the Ferguson Ditch will continue down the historical channel to H1.

31. ☐ **NA** Answer questions 31.a to 31.b for point of diversion changes. If you do not propose a point of diversion change, mark "NA" instead.

31.a. Are the proposed points of diversion upstream or downstream of the historical points of diversion?

The proposed POD P1 is located upstream of the historical POD H1. Besides the Applicants, there are no other water users located geographically between the proposed and historical PODs.

31.b. ☐ **Y** ☑ **N** Are there intervening water users between the historical and proposed points of diversion?

31.b.i. If yes, list the water rights.

ADEQUATE MEANS OF DIVERSION AND OPERATION

32. ☑ **S** Submit a diagram of how you will operate your system from all proposed points of diversion to all proposed places of use.

See enclosed Irrigation System Diagram and Diversion Operation Diagram.

33. Describe specific information about the capacity of all proposed diversionary structures. This may include, where applicable: pump curves and total dynamic head calculations, headgate design specifications, and dike or dam height and length.

Refer also to Answers 19.c, 24, 25, and 30, herein. The proposed P1 Diversion structure will be designed with a fully adjustable irrigation headgate & incorporate an outlet pipe sized to discharge up to 2.5 cfs into the Ferguson Ditch via water right 76C 25338 under normal operating head conditions. Headgate, pipe and check opening specifications are detailed in Answer 34.

Following installation of the proposed diversion, the Applicants will split the maximum shared flow available under 76C 25338 (up to 2.5 cfs) between the proposed Ferguson Ditch & the historical Ferugson Ck Channel at the P1 diversion. Up to 2.5 cfs may be diverted into the proposed Ferguson Ditch under right 76C 25338 w/ the balance of creek flows being passed through the default check opening integral to the proposed P1 diversion structure and down the historical Ferguson Creek Channel. Note that the TA document reviewed 1.5 cfs as an estimated average of the diverted flow rate into the proposed Ferguson Ditch via proposed P1 during the season in order to approximate potential changes in conveyance losses associated w/ 76C 25338. The Applicants plan to divert up to the full 2.5 cfs (as available, in priority) into the proposed Ferguson Ditch, or, up to 2.5 cfs of the right down the historical Ferguson Channel to historical diversion H1. The maximum combined, shared diversion rate will be up to 2.5 cfs under right 76C 25338 (and in cooperation with split right 76C 30165589, accordingly). The Ferguson Ditch, as summarized in Table 10 of the TA will safely convey flows well in excess of the up to 2.5 cfs proposed for diversion of Right 76C 25338 under this change via proposed POD P1.

34. Describe the size, materials, capacity, and configuration of infrastructure to convey water from all proposed points of diversion to all proposed places of use.

The following dimensions materials, and configurations and the layout depicted in the Diversion Operating Diagram for Question 32 are based upon the current preliminary design:

- The proposed in-line diversion structure will be constructed with 6-inch-thick, cast in-place concrete floors and walls. Walls will be approx. 3 ft tall to provide adequate head & capacity.
- The flow-through flashboard check opening will measure approximately 3 ft wide by 2.5 ft tall & will act as a rectangular contracted weir to measure flows down the historical channel. The outlet pipe to the Ferguson Ditch will be 15-inch Diameter PIP PVC with an approximate length of 20 ft. The pipe will vented at the inlet and may incorporate outlet flow measurement.
- The fully adjustable gate attached to the outlet pipe headwall is planned as a 15-inch dia., cast-iron, bolt-on, disc-style irrigation canal gate with threaded stem, steel guiderails, and a hand-operated adjustment wheel. The pipe, gate, structure, and check opening have been sized not only based on hydraulic conveyance properties, but also on commonly available and economically prudent configurations. Structure/piping is also sized to allow for forced backwater (full-pipe) flow to accommodate potential propeller-style flow metering.

The flashboard opening will be sized to fully convey the 5-yr return interval event (approx. 26.4 cfs) in Ferguson Ck. The surrounding native overbanks & floodplain will accommodate flows exceeding the design.

35. ☑ **Y** ☐ **N** Does the proposed conveyance require easements?

35.a. If yes, explain.

Licenses/easements (as required) for construction and operation of the proposed P1 Diversion and proposed Ferguson Ditch will be developed between the Applicants following an authorized change. Such instruments (as required) will be prepared as private agreements between the Applicants.

36. Describe your plan of operations, including specific information about how water is delivered within the place of use. This may include, where applicable, the range of flow rates needed for a pivot.

Within the unchanged historical POU, up to 2.5 cfs of Ferguson Creek water (shared, in priority under Right 76C 25338) will continue to be delivered via historical POD H1 through the existing system including: natural channels, pressurized mains, secondary diversions and secondary/lateral ditches, contour ditches, and overland flood infrastructure. Additionally, portions of the unchanged POU west of the McGinnis Creek Channel are proposed to be more effectively serviced via up to 2.5 cfs under Right 76C 25338 diverted via proposed POD P1 and the proposed Ferguson Ditch. Ferguson Right 76C 25338 is the senior right for the described overlapping POU area (as shown on the Map for Question18 herein). 76C 25338 will continue to be diverted up to the maximum, shared 2.5 cfs during the irrigating season. Ferguson diversions under the POU are supplemented with McGinnis Creek Flows under diversions of the four McGinnis Rights indicated on the Q18 Map. The proposed diversion structure as well as the Ferguson Ditch will be designed, constructed, and operated to effectively and safely divert up to the maximum shared flow of 2.5 cfs (as available, in priority) under right 76C 25338. Refer also to the responses to Questions 33 and 34, herein.

37. ☑ **Y** ☐ **N** ☐ **NA** If you propose to add one or more points of diversion, do you own the land where all proposed points of diversion are located? If you do not propose to add one or more points of diversion, mark "NA" instead.

37.a. ☐ **S** If no, submit documentation to show you have the right to use all points of diversion located on each property you do not own. This may include, but is not limited to, a well agreement, an easement, or permission of the party that owns the property where the proposed point(s) of diversion are located.

38. ☐ **Y** ☑ **N** Will your system be designed to discharge water from the project?

38.a. If yes, explain the wastewater disposal method.

38.b. ☐ **Y** ☐ **N** ☑ **NA** Have the necessary permits been obtained to comply with §§ 75-5-410 and/or 85-2-364, MCA?

39. ☐ **Y** ☑ **N** Is the means of diversion for any proposed point of diversion a well?

IF YES,

39.a. ☐ **Y** ☐ **N** Have all wells been drilled?

39.b. For all wells that have been drilled, what is the name of the well driller and, if available, what is their license number?

39.c. ☐ **Y** ☐ **N** ☐ **NA** For all wells yet to be drilled, will a licensed well driller construct the wells? If no wells are yet to be drilled, mark "NA" instead.

39.d. ☐ **S** ☐ **NA** Submit any well logs not yet submitted to the Department, such as for wells drilled after submittal of Form 606P. If all well logs have been submitted to the Department, mark "NA."

BENEFICIAL USE

Refer to the Department's Technical Analysis (TA), dated October 17, 2025 (Application No. 76C 30165242).

40. ☑ **Y** ☐ **N** Does the Department have a standard period of diversion, period of use, flow rate, and/or volume for any of the purposes for which water is used? Department standards can be found in the DNRC Water Calculation Guide, ARM 36.12.112, ARM 36.12.115, and ARM 36.12.1902.

40.a. If yes, list the purposes for which the Department has a standard and note whether the water use falls within or outside the standard.

Project in Climate Area VI. Period Use/Diversion: 4/25 to 10/5, as noted following and within TA.

~~Flow rate: 17 gpm/acre, use w/in standard. Refer to TA Sections 2.1 thru 2.4.~~

The Applicants employed ARM 36.12.1902 to calculate historical consumptive and field applied volumes.

40.b. For any of the purposes with no Department standard or with proposed beneficial use that falls outside of Department standards, explain how the use is reasonable for that purpose.

The DNRC has no Volume Standard for Climate Area 6. The Applicants proposed that Climate Area 5 be utilized as the nearest representative climate areas for calculation of volumes. As part of the Preapplication Meeting and Follow-up processes, the Applicants submitted a Historical Use Addendum (HUA) to deviate from the DNRC standard practice for evaluating the historical diverted volume of right 76C 25338. Refer to TA Sections 2.1 thru 2.4 for descriptions of volume calculations, which are reasonable for the historically practiced beneficial use. The TA discussion accounts for diverted flows outside of the IWR net irrigation demand period. The Applicants agree with the calculative methodology utilized to compute volumes as well as the methodology employed by the Department to summarize the proposed use within the TA Document. However, note that Table 4 of the TA (along with subsequent Apportionment Tables w/in the TA) should be clarified to read "Up To" 32.9%, "Up To" 33.04 AF, and "Up To" 86.48 AF, etc. for Ferguson Ck Right 76C 25338. In seasons where Right 76C 25338 is used to its fullest (32.9% of the composite application), the supplementary McGinnis Creek right contributions sum to 67.1%, 67.29 AF, and 176.38 AF, respectively, for the coincidental areas of the overlapping POU (Table 4). However, there will be dry seasons when Ferguson Creek is NOT available for diversions up to the maximum, shared flow rate due to diminished flows. In such years, use of the suite of supplementary McGinnis Rights will be increased & apportioned as "Up To" 100% of the flow/ volumes on the coincidental areas of the overlapping places of use.

41. ☐ **Y** ☑ **N** Will your proposed project be subject to Montana Department of Environmental Quality (DEQ) requirements for a public water supply (PWS) system or Certificate of Subdivision Approval (COSA)?

42. ☐ **Y** ☑ **N** Are you proposing to use surface water for in-house domestic use?

~~**42.a.** ☐ **Y** ☐ **N** If yes, does a COSA exist for the proposed place of use?~~

42.a.i. ☐ **S** If yes, submit the COSA.

POSSESSORY INTEREST

43. ☐ **Y** ☑ **N** Do you meet one of the exceptions to possessory interest requirements, pursuant to ARM 36.12.1802 and § 85-2-402(2)(d), MCA? Exceptions include cases where the application is for sale, rental, distribution, or is a municipal use, or in any other context in which water is being supplied to another and it is clear that the ultimate user will not accept the supply without consenting to the use of water on the user's place of use, and applications for the purposes of instream flow, mitigation, and marketing for mitigation.

43.a. If yes, explain.

44. ☑ **Y** ☐ **N** ☐ **NA** Do you own all proposed places of use? Mark "NA" if you meet one of the exceptions to the possessory interest requirement. All places of use under right 76C 25338 are owned by the Applicants.

44.a. ☐ **S** If no, explain and submit documentation that shows you either have possessory interest or written permission of the parties with possessory interest of the proposed place of use.

PROPOSED COMPLETION PERIOD

45. How many years will be needed to complete this project and to submit to the DNRC a Project Completion Notice (Form 618)? Ten (10) Years

46. Describe why this amount of time is needed to complete this project.
The completion period will allow adequate time for design, construction, and implementation of the proposed new P1 Diversion. The specified period will allow the Applicants to take measurements across a variety of field and hydrological conditions. The period will allow reasonable time for minor diversion adaptations to site conditions (as may be required).

AFFIDAVIT & CERTIFICATION

Read carefully before you sign and review with legal counsel if you have any questions. All owners (or trustees) must sign the form. ***If the owner is a business or trust, include the title of the representative(s) signing the form (i.e., president, trustee, managing partner, etc.) and provide documentation that establishes the authority of the representative to sign the application.*

I affirm the information provided for this application is to the best of my knowledge true and correct. If a preapplication meeting form was submitted, I am aware that my application for this project will not qualify for a discounted filing fee and expedited timelines if upon submittal of the application to the Department, I changed any element of the proposed application from the preapplication meeting form and follow-up materials (ARM 36.12.1302(6)(a)).

I affirm I have 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, unless this application meets an exception to the possessory interest requirements in ARM 36.12.1802(1)(b).

I understand that making a false statement under oath or affirmation in this application and official proceedings throughout the examination of my application may subject me to prosecution under § 45-7-202, MCA, a misdemeanor punishable by a jail term not to exceed 6 months or a fine not to exceed $500, or both. I have read this Affidavit and understand the terms and conditions.

I declare under penalty of perjury and under the laws of the state of Montana that the foregoing is true and correct.

Printed Name Shayne A Jackson (Jackson Property Group, LLC, by Shayne A Jackson, Principal Owner)

Applicant Signature Shayne Jackson Shayne Jackson (Dec 29, 2025 20:43:59 MST) Date: Dec 29, 2025

Printed Name Randy Bock

Applicant Signature Randy Bock Randy Bock (Jan 4, 2026 08:08:11 MST) Date: Jan 4, 2026

Printed Name Dori Bock

Applicant Signature Dori Bock Dori Bock (Jan 5, 2026 08:02:19 MST) Date: Jan 5, 2026

606_76C25338_Change Application

Final Audit Report 2026-01-05

Created:	2025-12-29
By:	Morgan Plasmier (mplasmier@wgmgroup.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAA6eVVyo4Fh-wJkB5DBwKplEZ_Kuzs1Sxt

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NOTICE OF APPLICATION to CHANGE WATER RIGHT No. : 76C 25338

Background & Application Information:

Applicant(s): Shayne A Jackson, Jackson Property Group LLC, Dori Bock, and Randy Bock

Basin: Fisher River (76C) Source: Ferguson Ck Priority Date: (1903/08/26) Application No: 76C 30165242

- PER § 85-2-302(4)(c), MCA, this document is used notify owner(s) of water right(s) sharing a point of diversion [POD] (or conveyance infrastructure) with a proposed application for change in appropriation of another water right. **You are hereby notified of proposed change(s) to Water Right: 76C 25883.**

- Elements Affected: ☑Point of Diversion (POD) ☐Place of Use (POU) ☐Purpose of Use ☐Place of Storage

- Summary/Clarification(s): The proposed change application seeks to add a new POD to the right and will not change or modify the existing historical, shared POD, which is located in the SESESE, Section 20, T26N, R28W. *Contact the DNRC's Regional Water Resources Office in Kalispell at 406-752-2288 for additional information.*

Rights of Shared POD and/or Conveyance Infrastructure (list in table below, or ☐ Attached separately)

Water Right No.	Quarter-Quarter	Section	Township	Range	County	Source	Priority Date
76C 25321	SESESE	20	26N	28W	Lincoln	McGinnis Ck	October 9, 1931
76C 25322	SESESE	20	26N	28W	Lincoln	McGinnis Ck	October 9, 1931
76C 25323	SESESE	20	26N	28W	Lincoln	McGinnis Ck	April 18, 1919
76C 25324	SESESE	20	26N	28W	Lincoln	McGinnis Ck	October 11, 1931
76C 25325	SWSESE	20	26N	28W	Lincoln	Ferguson Ck	August 26, 1903
76C 25339	SESESE	20	26N	28W	Lincoln	McGinnis Ck	October 9, 1931
76C 25340	SESESE	20	26N	28W	Lincoln	McGinnis Ck	October 11, 1931
76C 25341	SESESE	20	26N	28W	Lincoln	McGinnis Ck	April 18, 1919
76C 25342	SESESE	20	26N	28W	Lincoln	McGinnis Ck	October 9, 1931
76C 134977	SESESE	20	26N	28W	Lincoln	McGinnis Ck	April 18, 1919
76C 30165589	SESESE	20	26N	28W	Lincoln	Ferguson Ck	August 26, 1903

Mailing List for this Notice of Application to Change Water Right (list in table below, or ☐ Attached separately)

Notified for Water Right No.(s)	Owner/Entity Name(s)	Mailing Address
76C 25321, 76C 25322, 76C 25323, 76C 25324, 76C 25325, 76C 25339, 76C 25340, 76C 25341, 76C 25342	Jackson Property Group, LLC	PO Box 497, North Bend, WA, 98045-0497
76C 25321, 76C 25323, 76C 25324, 76C 25325, 76C 25339, 76C 25340, 76C 25341, 76C 25342, 76C 134977	Shayne A Jackson	PO Box 497, North Bend, WA, 98045-0497
76C 25321, 76C 25322, 76C 25323, 76C 25324, 76C 25325, 76C 25339, 76C 25340, 76C 25341, 76C 25342	Dori Bock	2315 Parkison Ln, Libby, MT, 59923-7993
76C 25321, 76C 25322, 76C 25323, 76C 25324, 76C 25325, 76C 25339, 76C 25340, 76C 25341, 76C 25342	Randy Bock	2315 Parkison Ln, Libby, MT, 59923-7993
76C 25339, 76C 25340, 76C 25341, 76C 25342, 76C 30165589	Paul A Bourdeau	1180 Wildflower St, Rialto, Ca, 92377-8854
76C 25340, 76C 25341, 76C 25342, 76C 30165589	Jolene M Leduc	PO Box 1485, Libby, MT 59923-1485

9589 0710 5270 3171 1349 53

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OFFICIAL USE

Certified Mail Fee	$5.30
$	$0.00
Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy)	$ $0.00
☐ Return Receipt (electronic)	$ $0.00
☐ Certified Mail Restricted Delivery	$ $0.00
☐ Adult Signature Required	$ $0.00
☐ Adult Signature Restricted Delivery	$
Postage	$0.78
$	
Total Postage and Fees	$6.08
$	

0851 44 MILLTOWN MT Postmark Here DEC 22 2025 USPS 5998 9998 12/22/2025

Sent To: Dori Bock
Street and Apt. No., or PO Box No.: 2315 Parkison Lane
City, State, ZIP+4®: Libby MT 59923

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

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$	$0.00
Extra Services & Fees (check box, add fee as appropriate)	
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☐ Return Receipt (electronic)	$ $0.00
☐ Certified Mail Restricted Delivery	$ $0.00
☐ Adult Signature Required	$ $0.00
☐ Adult Signature Restricted Delivery	$
Postage	$0.78
$	
Total Postage and Fees	$6.08
$	

0851 44 MILLTOWN MT Postmark Here DEC 22 2025 USPS 5998 9998 12/22/2025

Sent To: Randy Bock
Street and Apt. No., or PO Box No.: 2315 Parkison Lane
City, State, ZIP+4®: Libby MT 59923

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

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☐ Return Receipt (electronic)	$ $0.00
☐ Certified Mail Restricted Delivery	$ $0.00
☐ Adult Signature Required	$ $0.00
☐ Adult Signature Restricted Delivery	$
Postage	$0.78
$	
Total Postage and Fees	$6.08
$	

0851 44 MILLTOWN MT Postmark Here DEC 22 2025 USPS 5998 9998 12/22/2025

Sent To: Jackson Property Group
Street and Apt. No., or PO Box No.: PO Box 497 North Bend, WA
City, State, ZIP+4®: North Bend, WA 98045

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

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$	$0.00
Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy)	$ $0.00
☐ Return Receipt (electronic)	$ $0.00
☐ Certified Mail Restricted Delivery	$ $0.00
☐ Adult Signature Required	$ $0.00
☐ Adult Signature Restricted Delivery	$
Postage	$0.78
$	
Total Postage and Fees	$6.08
$	

0851 44 MILLTOWN MT Postmark Here DEC 22 2025 USPS 5998 9998 12/22/2025

Sent To: Shayne Jackson
Street and Apt. No., or PO Box No.: PO Box 497
City, State, ZIP+4®: North Bend WA 98045

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

7021 0950 0002 0825 3756

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Libby, MT 59923

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$	$0.00
Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy)	$ $0.00
☐ Return Receipt (electronic)	$ $0.00
☐ Certified Mail Restricted Delivery	$ $0.00
☐ Adult Signature Required	$ $0.00
☐ Adult Signature Restricted Delivery	$
Postage	$0.78
$	
Total Postage and Fees	$6.08
$	

MISSOULA MT HELLGATE STATION 59802 Postmark Here DEC 23 2025 12/22/2025

Sent To: Jolene Ledue
Street and Apt. No., or PO Box No.: PO Box 1485
City, State, ZIP+4®: Libby MT 59923

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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Rialto, CA 92377

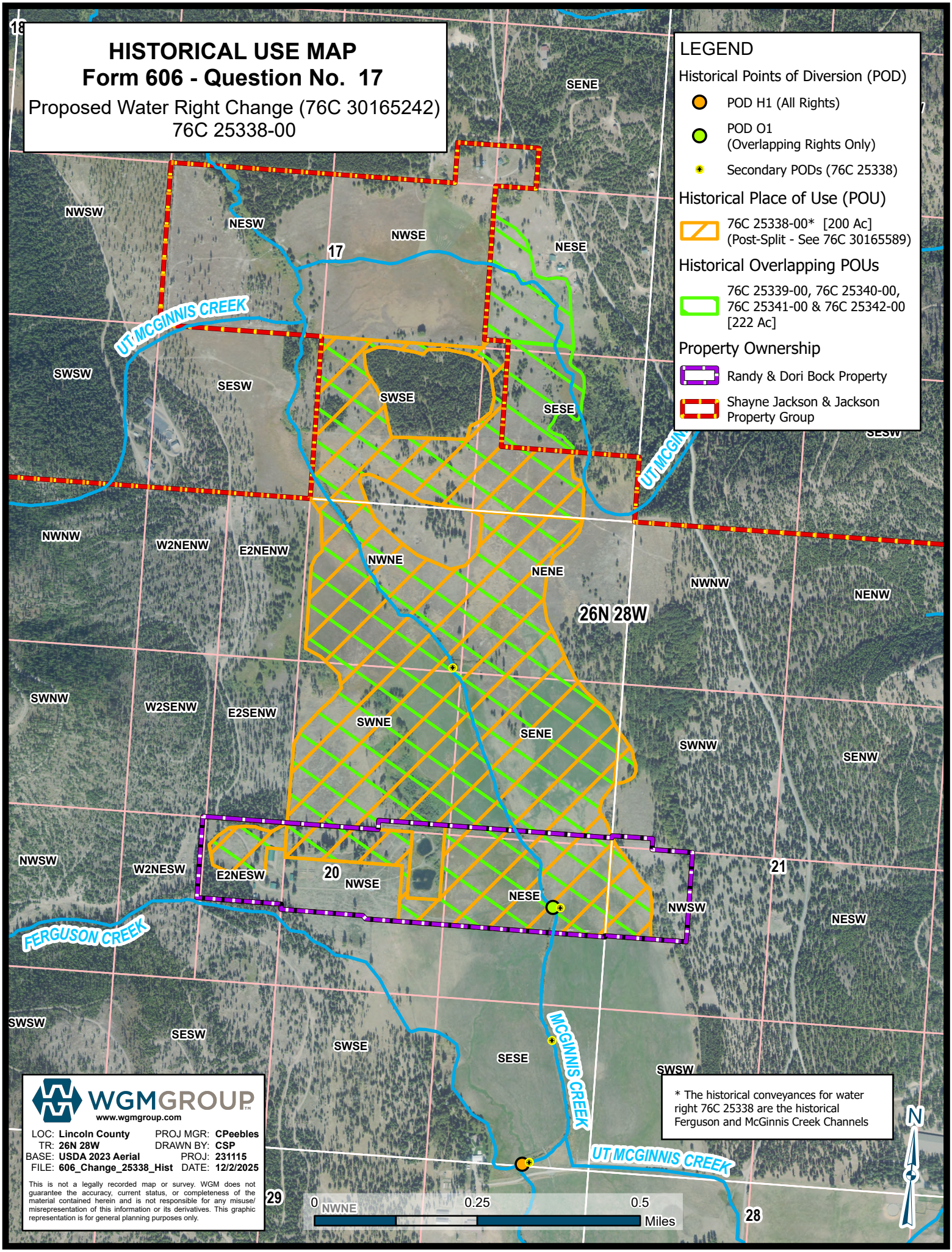
OFFICIAL USE

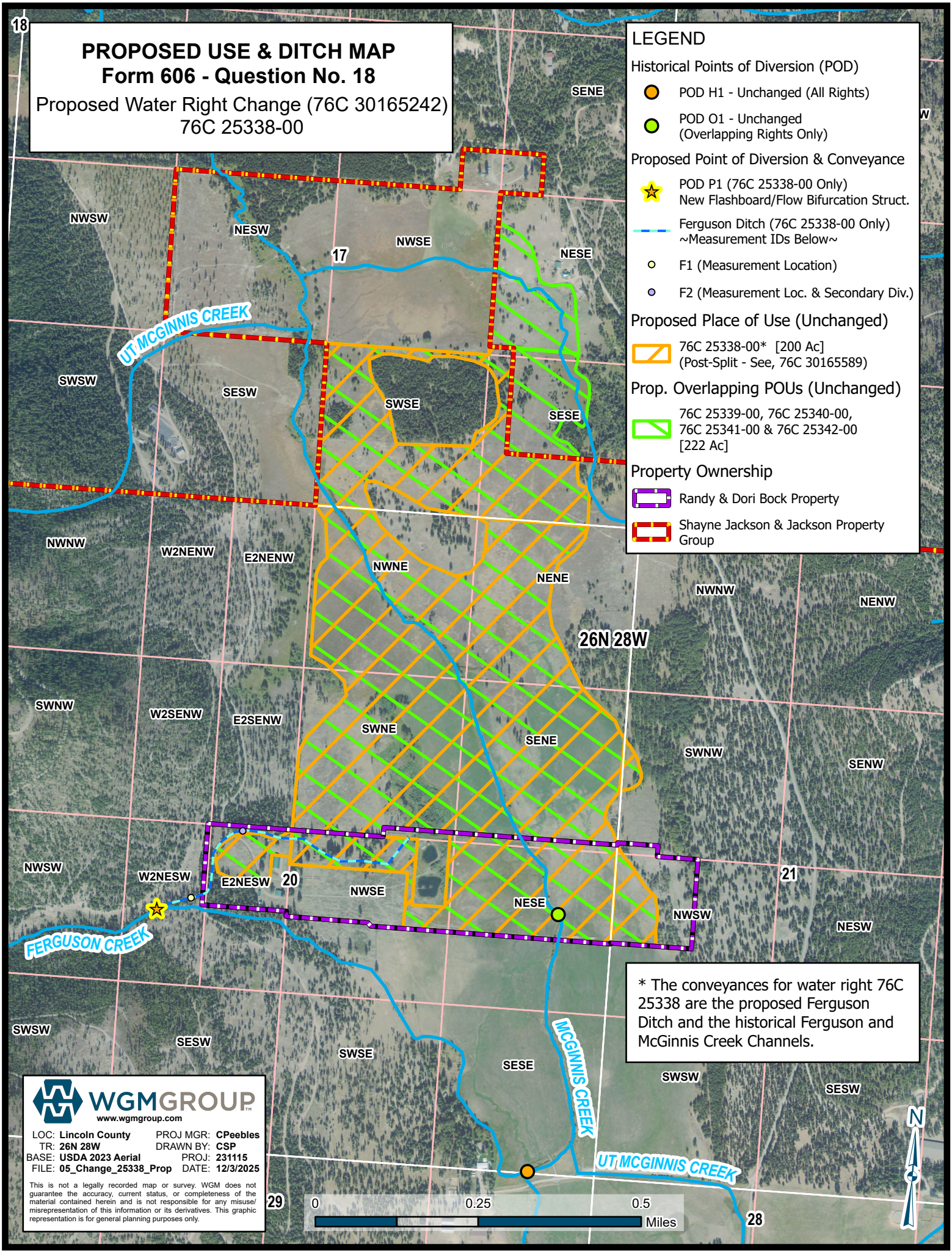
Certified Mail Fee	$5.30
$	$0.00
Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy)	$ $0.00
☐ Return Receipt (electronic)	$ $0.00
☐ Certified Mail Restricted Delivery	$ $0.00
☐ Adult Signature Required	$ $0.00
☐ Adult Signature Restricted Delivery	$
Postage	$0.78
$	
Total Postage and Fees	$6.08
$	

0851 44 MILLTOWN MT Postmark Here DEC 22 2025 USPS 5998 9998 12/22/2025

Sent To: Paul Bordeau
Street and Apt. No., or PO Box No.: 1180 Wildflower St
City, State, ZIP+4®: Rialto, CA 92377

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions


HISTORICAL USE MAP
Form 606 - Question No. 17
Proposed Water Right Change (76C 30165242)
76C 25338-00
LEGEND
Historical Points of Diversion (POD)
POD H1 (All Rights)
POD O1
(Overlapping Rights Only)
Secondary PODs (76C 25338)
Historical Place of Use (POU)
76C 25338-00* [200 Ac]
(Post-Split - See 76C 30165589)
Historical Overlapping POUs
76C 25339-00, 76C 25340-00,
76C 25341-00 & 76C 25342-00
[222 Ac]
Property Ownership
Randy & Dori Bock Property
Shayne Jackson & Jackson
Property Group
SENE
NWSW
NESW
NWSE
NESE
17
UT MCGINNIS CREEK
SWSW
SESW
SWSE
SESE
NWNW
W2NENW
E2NENW
NWNE
NENE
NWNW
NENW
26N 28W
SWNW
W2SENW
E2SENW
SWNE
SENE
SWNW
SENW
NWSW
W2NESW
E2NESW
20
NWSE
NESE
NWSW
21
NESW
FERGUSON CREEK
SWSW
SESW
SWSE
SESE
SWSW
MCGINNIS CREEK
UT MCGINNIS CREEK
29
28
0
0.25
0.5
Miles
N
* The historical conveyances for water right 76C 25338 are the historical Ferguson and McGinnis Creek Channels
WGMGROUP
www.wgmgroup.com
LOC: Lincoln County
TR: 26N 28W
BASE: USDA 2023 Aerial
FILE: 606_Change_25338_Hist
PROJ MGR: CPeebles
DRAWN BY: CSP
PROJ: 231115
DATE: 12/2/2025
This is not a legally recorded map or survey. WGM does not guarantee the accuracy, current status, or completeness of the material contained herein and is not responsible for any misuse/misrepresentation of this information or its derivatives. This graphic representation is for general planning purposes only.


PROPOSED USE & DITCH MAP
Form 606 - Question No. 18
Proposed Water Right Change (76C 30165242)
76C 25338-00
LEGEND
Historical Points of Diversion (POD)
POD H1 - Unchanged (All Rights)
POD O1 - Unchanged
(Overlapping Rights Only)
Proposed Point of Diversion & Conveyance
POD P1 (76C 25338-00 Only)
New Flashboard/Flow Bifurcation Struct.
Ferguson Ditch (76C 25338-00 Only)
~Measurement IDs Below~
F1 (Measurement Location)
F2 (Measurement Loc. & Secondary Div.)
Proposed Place of Use (Unchanged)
76C 25338-00* [200 Ac]
(Post-Split - See, 76C 30165589)
Prop. Overlapping POUs (Unchanged)
76C 25339-00, 76C 25340-00,
76C 25341-00 & 76C 25342-00
[222 Ac]
Property Ownership
Randy & Dori Bock Property
Shayne Jackson & Jackson Property Group
* The conveyances for water right 76C 25338 are the proposed Ferguson Ditch and the historical Ferguson and McGinnis Creek Channels.
UT MCGINNIS CREEK
FERGUSON CREEK
MCGINNIS CREEK
26N 28W
18
17
20
21
29
28
NWSW
NESW
NWSE
NESE
SWSW
SESW
SWSE
SESE
NWNW
W2NENW
E2NENW
NWNE
NENE
NENW
SWNW
W2SENW
E2SENW
SWNE
SENE
SENW
W2NESW
E2NESW
NWSE
NESE
NWSW
NESW
SWSW
SESW
SWSE
SESE
SWSW
SESW
WGMGROUP
www.wgmgroup.com
LOC: Lincoln County
TR: 26N 28W
BASE: USDA 2023 Aerial
FILE: 05_Change_25338_Prop
PROJ MGR: CPeebles
DRAWN BY: CSP
PROJ: 231115
DATE: 12/3/2025
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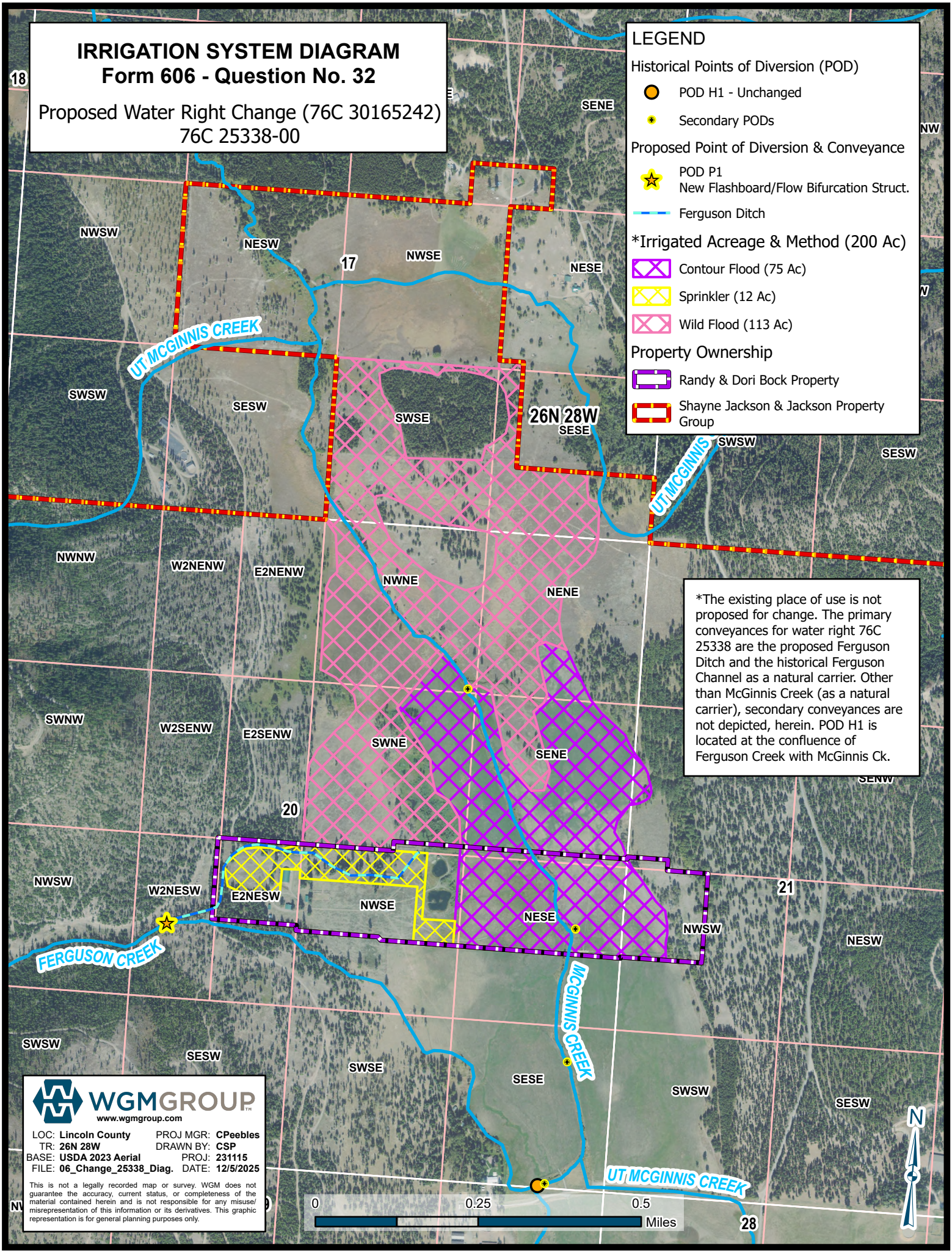
0
0.25
0.5
Miles
N

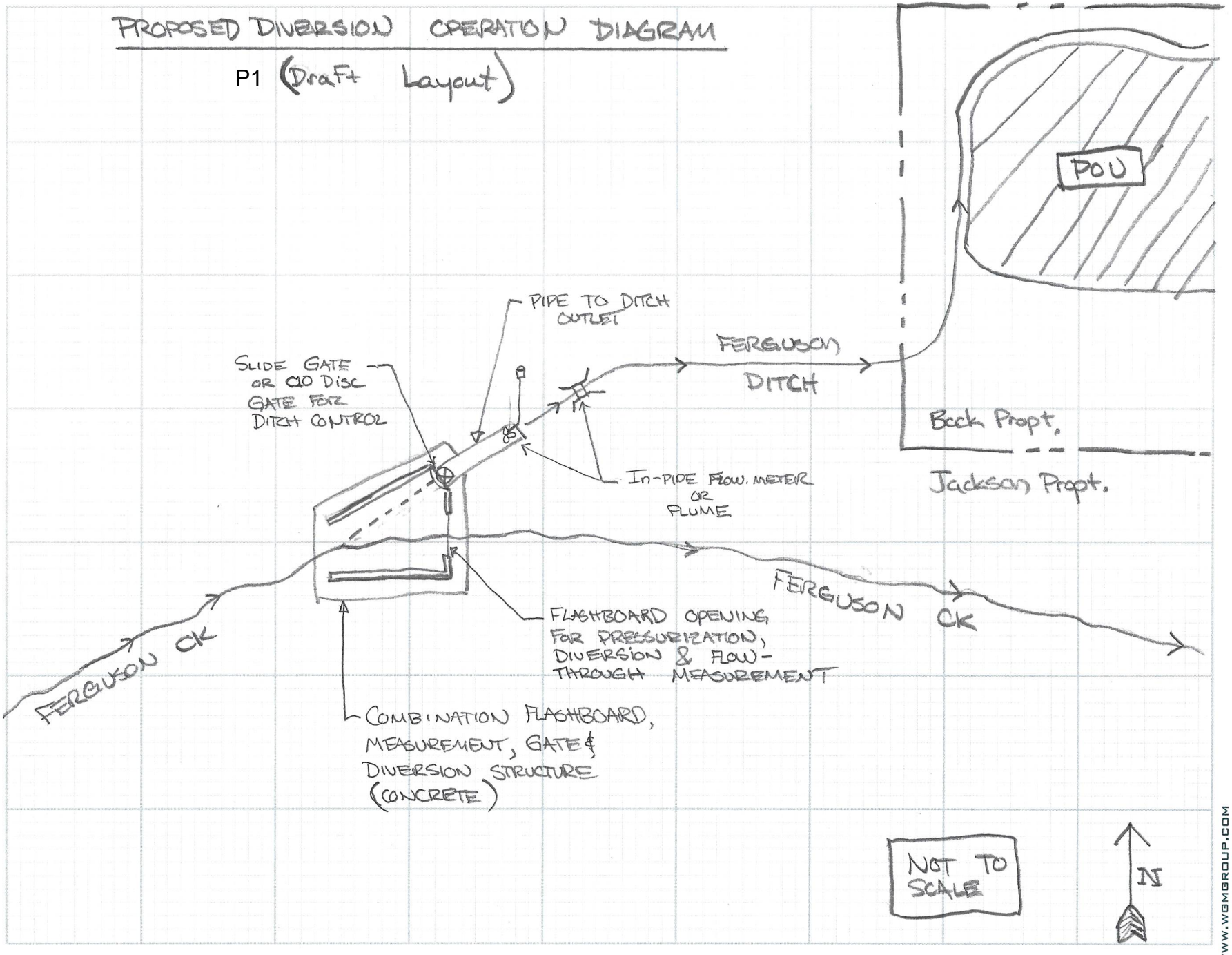

IRRIGATION SYSTEM DIAGRAM
Form 606 - Question No. 32
Proposed Water Right Change (76C 30165242)
76C 25338-00
LEGEND
Historical Points of Diversion (POD)
POD H1 - Unchanged
Secondary PODs
Proposed Point of Diversion & Conveyance
POD P1
New Flashboard/Flow Bifurcation Struct.
Ferguson Ditch
*Irrigated Acreage & Method (200 Ac)
Contour Flood (75 Ac)
Sprinkler (12 Ac)
Wild Flood (113 Ac)
Property Ownership
Randy & Dori Bock Property
Shayne Jackson & Jackson Property Group
*The existing place of use is not proposed for change. The primary conveyances for water right 76C 25338 are the proposed Ferguson Ditch and the historical Ferguson Channel as a natural carrier. Other than McGinnis Creek (as a natural carrier), secondary conveyances are not depicted, herein. POD H1 is located at the confluence of Ferguson Creek with McGinnis Ck.
UT MCGINNIS CREEK
FERGUSON CREEK
MCGINNIS CREEK
26N 28W
18
17
20
21
28
NWSW
NESW
NWSE
NESE
SWSW
SESW
SWSE
SESE
NWNW
W2NENW
E2NENW
NWNE
NENE
SWNW
W2SENW
E2SENW
SWNE
SENE
W2NESW
E2NESW
NWSE
NESE
NWSW
NESW
SWSW
SESW
SWSE
SESE
SWSW
SESW
0
0.25
0.5
Miles
N
WGMGROUP
www.wgmgroup.com
LOC: Lincoln County
TR: 26N 28W
BASE: USDA 2023 Aerial
FILE: 06_Change_25338_Diag.
PROJ MGR: CPeebles
DRAWN BY: CSP
PROJ: 231115
DATE: 12/5/2025
This is not a legally recorded map or survey. WGM does not guarantee the accuracy, current status, or completeness of the material contained herein and is not responsible for any misuse/misrepresentation of this information or its derivatives. This graphic representation is for general planning purposes only.

Form 606 - Question 32

DATE: 1/15/2025 FORM 606 P
PROJECT ID: 231115 (ToC 25338)
SHEET #: 1 OF: 1
TYPE OF COMPUTATION: QUESTION
CALCULATED BY: CSP CHECKED BY:

PROPOSED DIVERSION OPERATION DIAGRAM

P1 (Draft Layout)



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From: Wilson, Travis
To: Cole Peebles
Cc: Ferch, James; john@montanawaterlaw.com; Shayne Jackson; Randy Bock; doribock6218@gmail.com
Subject: RE: 606 - Application to Change Water Right 76C 25338-00 (Application No. 76C 30165242)
Date: Monday, January 12, 2026 4:55:00 PM
Attachments: image001.png
image002.png
image003.jpg

Hi Cole,

Payment was received today, so the clock has started. Thank you.

Regards,
Travis

Travis Wilson | water Resource Specialist
water Rights Bureau, New Appropriations, Kalispell Regional Office
Montana Department of Natural Resources and Conservation
655 Timberwolf Pkwy, Ste. 4, Kalispell, MT 59901
DESK: 406-752-2746 **EMAIL**: Travis.Wilson@mt.gov
Website | **Facebook** | **X (Twitter)** | **Instagram**
How did we do? Let us know here: Feedback Survey

Interested in Montana stream flows? Check out our Stream and Gage Explorer:
https://gis.dnrc.mt.gov/apps/StAGE/

From: Wilson, Travis
Sent: Wednesday, January 7, 2026 10:40 AM
To: Cole Peebles <cpeebles@wgmgroup.com>
Cc: Ferch, James <JFerch@mt.gov>; john@montanawaterlaw.com; Shayne Jackson <sj@mmgranch.net>; Randy Bock <randybock1954@gmail.com>; doribock6218@gmail.com
Subject: RE: 606 - Application to Change Water Right 76C 25338-00 (Application No. 76C 30165242)

Greetings Cole,

Email and attachments received.

I will officially receive (and start the clock for timelines) once the payment is received in office.

Regards,
Travis

Travis Wilson | water Resource Specialist
water Rights Bureau, New Appropriations, Kalispell Regional Office
Montana Department of Natural Resources and Conservation

655 Timberwolf Pkwy, Ste. 4, Kalispell, MT 59901
DESK: 406-752-2746 **EMAIL**: Travis.Wilson@mt.gov
Website | **Facebook** | **X (Twitter)** | **Instagram**
How did we do? Let us know here: Feedback Survey

Interested in Montana stream flows? Check out our Stream and Gage Explorer:
https://gis.dnrc.mt.gov/apps/StAGE/

From: Cole Peebles <cpeebles@wgmgroup.com>
Sent: Wednesday, January 7, 2026 10:05 AM
To: Wilson, Travis <Travis.Wilson@mt.gov>
Cc: Ferch, James <JFerch@mt.gov>; john@montanawaterlaw.com; Kiel, Kristal <Kristal.Kiel@mt.gov>; Howerton, Joseph <Joseph.Howerton@mt.gov>; Shayne Jackson <sj@mmgranch.net>; Randy Bock <randybock1954@gmail.com>; doribock6218@gmail.com
Subject: [EXTERNAL] 606 - Application to Change Water Right 76C 25338-00 (Application No. 76C 30165242)

Travis,

Good Morning,

On behalf of the Applicants, WGM submits **Application (No. 76C 30165242) to Change Water Right 76C 25338** via this Email and the attached PDF documents. A scan of the Application Fee Check for $1,000 (mailed USPS, today) is also attached. The $500 preapplication fee has already been processed by the DNRC (Total Fee: $1,500). I will also upload copies of this 606 Application and its attachments to Travis via Montana's electronic File Transfer Service website as I've had issues sending large attachments State Recipients before.

Form 606 Questions marked as application Addenda (and Submittals) are answered (or addressed) via the individual PDF attachments, which are summarized below and labeled with the correlating Question Number (Q#, where applicable). The Department's Technical Analysis (TA) for this application is incorporated into the application by reference and is attached herein for convenience.

- Q11 – Notice List and Notice of Application to Change Water Right 76C 25338
- Q17 – Historical Use Map
- Q18 – Proposed Use & Ditch Map
- Q32 (Part a) – Irrigation System Diagram
- Q32 (Part b) – Diversion Operation Diagram
- Department Technical Analysis (TA, Oct. 17, 2025)

- Affidavit & Certification: Documentation of Signatory Authority for Shayne Jackson on Behalf of Jackson Property Group, LLC

- Scanned copy of Final Fee Check

Please respond with a confirmation of your receipt of this email submittal. I ask that you reach out to me directly with any concerns, questions, status updates, findings, or other notices regarding this application.

I hope you have a nice week.

Sincerely,

Cole Peebles, PE
Water Resources Project Engineer • WGM Group

Technical Analyses Report/ Scientific Credibility Review

- Departmental Technical Analyses Report/ Scientific Credibility Review
- Any correspondence relating to the Technical Analyses Report

Technical Analyses Report / Scientific Credibility Review

Water Resources Division – Kalispell Regional Office
655 Timberwolf Pkwy, Ste. 4
Kalispell, MT 59901-1215
(406) 752-2288
DNRCKalispellWater@mt.gov

October 17, 2025

JACKSON PROPERTY GROUP LLC
ATTN: SHAYNE JACKSON
PO BOX 497
NORTH BEND WA 98045-0497

RANDY AND DORI BOCK
2315 PARKISON LN
LIBBY MT 59923-7993

Subject: Completed Technical Analyses Report for Change Preapplication No. 76C 30165242

Dear Applicants,

As designated on the submitted Preapplication Meeting Form per §85-2-302(3)(b), MCA, the Department of Natural Resources and Conservation (Department) has completed the technical analyses for Change Preapplication No. 76C 30165242 based on the information provided in your Preapplication Meeting Form accepted by the Department on August 1, 2025. The technical analyses can be found in the attached report.

This Technical Analyses Report **IS**: A collection of facts that the DNRC has gathered, including content provided in the Preapplication Meeting Form materials. The Department will use these data to analyze the criteria in §85-2-402, MCA if you submit an application for the project described in the completed Preapplication Meeting Form.

This Technical Analyses Report **IS NOT**: An analysis or discussion of whether the Preapplication Meeting Form as filed meets the criteria in §85-2-402, MCA.

You have 180 days to submit the Change Application Form 606 considering the information provided in the technical analyses and Preapplication Meeting Form. If the Application Form is not submitted to the Kalispell Regional Office by April 15, 2026, a new preapplication meeting will be required to process the Application with expedited timelines (ARM 36.12.1302(6)(b)). If any details described in the submitted Application are changed from that of the submitted Preapplication Meeting Form, the discounted filing fee and expedited timelines will not apply (ARM 36.12.1302(6)(a)). Please note that the technical analyses will expire one year from the date of this letter (ARM 36.12.1302(8)).

Please contact me at (406) 752-2746 or Travis.Wilson@mt.gov if you have any questions about the application process.

Sincerely,

Travis Wilson
Water Resource Specialist
Kalispell Regional Office

Encl.: Surface Water Change Technical Analyses Report for Change Preapplication No. 76C 30165242

Cc via email: Cole Peebles, PE, WGM Group

Surface Water Change Technical Analyses Report

Department of Natural Resources and Conservation (DNRC/ Department)
Water Resources Division

Travis Wilson, Water Resource Specialist, Kalispell Regional Office

Applicants	JACKSON, SHAYNE; JACKSON PROPERTY GROUP LLC; BOCK, RANDY/DORI
Application No.	76C 30165242
Proposed Point of Diversion	SWNESW Section 20, Township 26 N, Range 28 W, Lincoln County

Overview

This report analyzes data submitted by the Applicant in support of the above-mentioned water right change application. This report provides technical analyses as required under the Administrative Rules of Montana (ARM) 36.12.1303 in support of the water rights criteria assessment as required in § 85-2-402, Montana Code Annotated (MCA). This report was completed by regional office staff.

This Surface Water Change Technical Analyses Report contains the following sections:

1.0 Application Details

The Applicant proposes changing the point of diversion for Statement of Claim No. 76C 25338-00 (version 3 – split) by adding an additional (second) point of diversion. The proposed additional point of diversion is in the SWNESW of Section 20, Township 26 N, Range 28 W, Lincoln County (Figure 1). Refer to Table 2 and Figure 1 for the proposed places of use. The project is in Lincoln County, and the source is Ferguson Creek.

Table 1: Summary of Water Right Proposed for Change

Water Right Number	Priority Date	Purpose	Flow Rate (CFS)	Volume (AF)	Period of Diversion & Use	Means of Diversion	Point of Diversion	Places of Use
76C 25338-00 (Version 3 – Split)	August 26, 1903	Irrigation (200.0 acres)	2.5	880.0	01/01 – 12/31	Pump/ headgate w/ditch or pipeline	SESESE of Section 20, Twp 26N, Rge 28W, Lincoln County	See Table 2

Table 2: Summary of the Places of Use for the Water Right Proposed for Change

POU ID	1/4	1/4	1/4	Section	Township	Range	County
1	---	S2	SE	17	26N	28W	Lincoln
2	---	---	NE	20	26N	28W	Lincoln
3	NE	NE	SW	20	26N	28W	Lincoln
4	---	N2	SE	20	26N	28W	Lincoln
5	---	SW	NW	21	26N	28W	Lincoln
6	W2	NW	SW	21	26N	28W	Lincoln

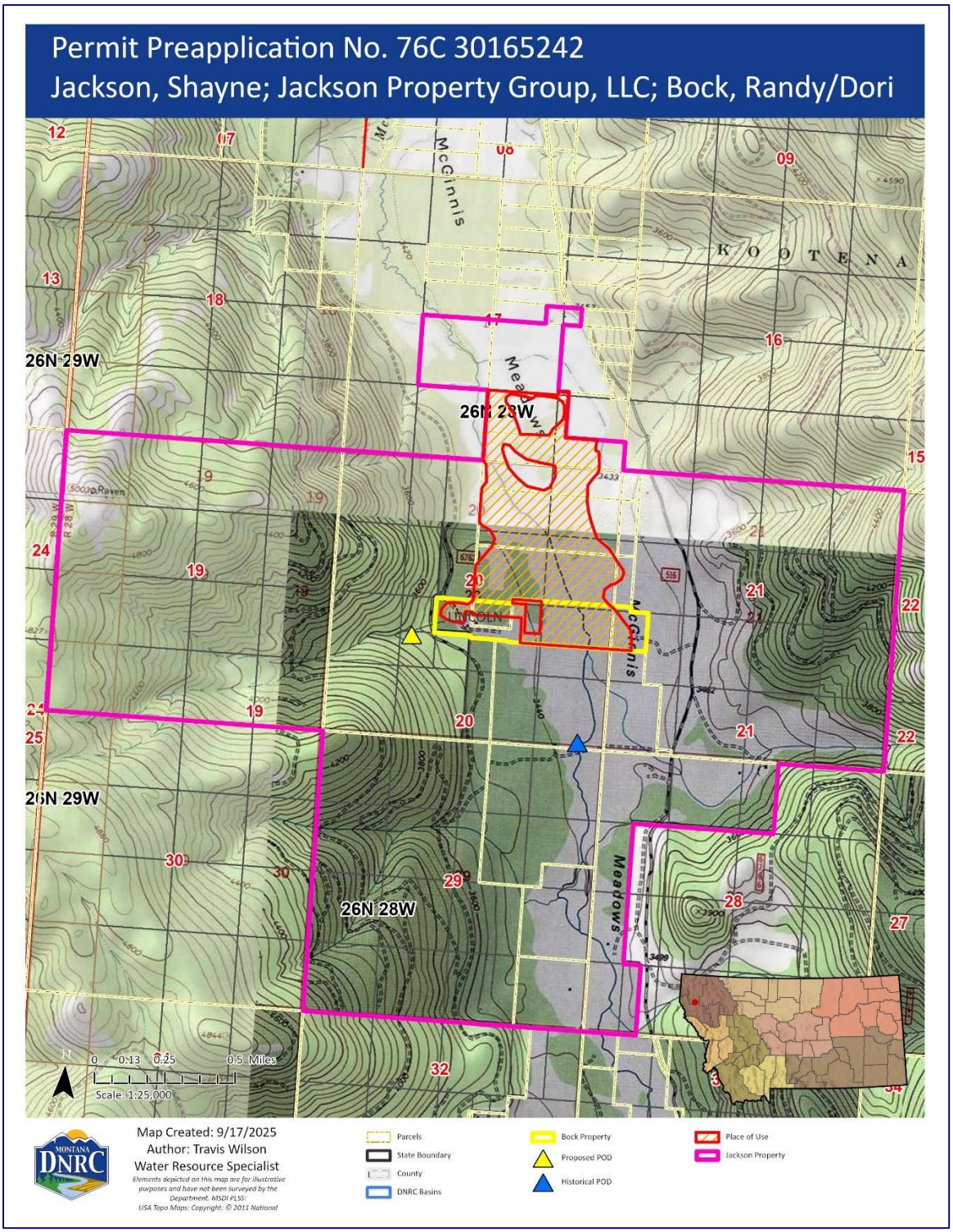

Figure 1: Vicinity map of the Applicants' historical POD, proposed POD, and the historical and proposed place of use within the composited Jackson property.

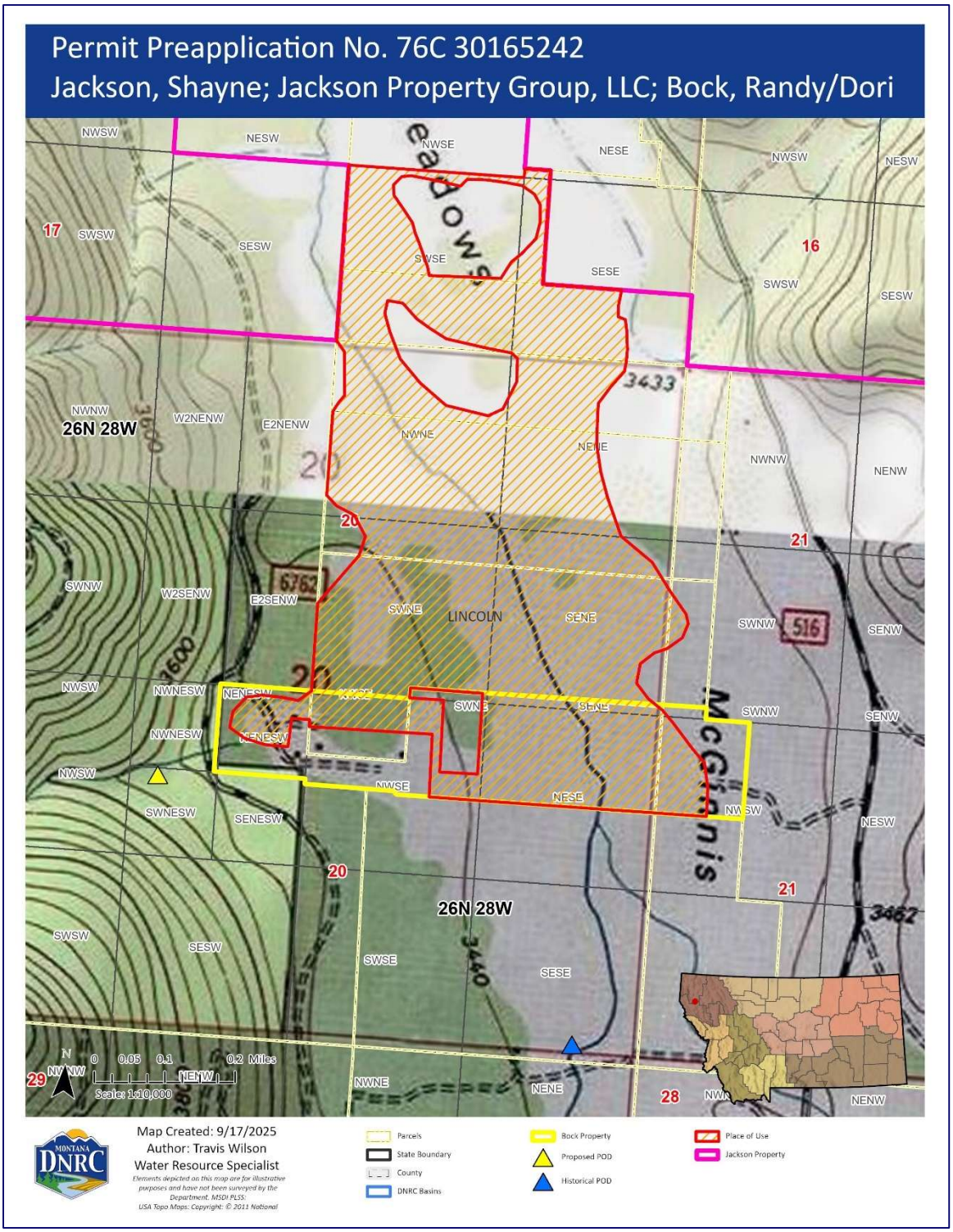

Figure 2: Detail map of the Applicants' historical POD, proposed POD, and the historical and proposed place of use.

2.0 Historical Use Technical Analysis

2.1 Historical Field Consumed and Applied Volumes

The Applicants submitted a Historical Use Addendum (HUA) because they intend to deviate from the DNRC standard practice for evaluating historical diverted volume of their water right.

The Applicant employed the standard procedures in ARM 36.12.1902 to calculate the historical consumptive and field applied volumes. The Department verified the Applicants' calculations using the DNRC Irrigation and Conveyance Loss Calculator.

The consumed volume for irrigation is based on the net irrigation requirement (NIR) in inches from USDA Natural Resources Conservation Service Irrigation Water Requirements (IWR) at a representative weather station. The NIR is multiplied by a county-wide management factor (from ARM 36.12.1902) to produce an adjusted NIR representative of actual crop yields in Montana. Crop consumption is determined by multiplying the adjusted NIR in inches by the number of acres of irrigation and dividing by 12 to convert acre-inches to acre-feet. Crop consumption is then divided by the field efficiency identified from the irrigation method and values presented in the on-farm efficiency section of DNRC Memorandum: Development of standardized methodologies to determine Historic Diverted Volume (2012). Irrecoverable losses (IL) are 5% of the field applied volume for flood irrigation or 10% for sprinkler irrigation. The total consumed volume for irrigation is the crop consumption plus irrecoverable losses. The total non-consumed volume is the field applied volume minus the total consumed volume.

The historical place of use for irrigation under Statement of Claim No. 76C 25338-00 (version 3 - split) is 200.0 acres in Sections 17, 20, and 21 of Township 26 N, Range 28 W, Lincoln County (see Table 2 for full place of use description). Historically, irrigation occurred via sprinkler on 12.0 acres, contour ditch flood (design slope = 1.5-3.0%) on 75.0 acres, and wild flood on 113.0 acres.

The historically consumed and field applied volumes for the place of use have been calculated with the inputs shown in Table 3 following the methods described above and in ARM 36.12.1902.

Table 3: Historically consumed and field applied volumes on the Place of Use										
Purpose	**Method**	**IWR (in)[1]**	**Mgmt. Factor[2]**	**Field Efficiency**	**Acres**	**Crop Consumption (AF)**	**Non-consumed Applied Volume (AF)**	**Irrecoverable Losses (AF)**	**Total Consumed Volume (AF)**	**Field Application Volume (AF)**
Irrigation	Sprinkler	11.06	0.47	0.70	12.00	5.21	1.49	0.74	5.95	7.44
	Flood (contour ditch)			0.55	75.00	32.56	23.68	2.96	35.52	59.20
	Flood (wild)			0.25	113.00	49.05	137.35	9.81	58.86	196.22
Total					200.00	86.82	162.52	13.51	100.33	262.86

[1]Libby IWR Weather Station.
[2]Lincoln County Historical Use Management Factor (1964-1973).

Statements of Claim Nos. 76C 25339-00, 76C 25340-00, 76C 25341-00, 76C 25342-00 (all with a source of McGinnis Creek), supplement irrigation to the entire 200.0 acres irrigated under the subject water right Statement of Claim No. 76C 25338-00 (version 3 - split). These four supplemental water rights also irrigate an additional 22.0 acres that were previously irrigated under Statement of Claim No. 76C 25338-00 prior to those 22.0 acres being split off from 76C 25338-00 under their own water right (76C 30165589).

The historical POD is located at the confluence of Ferguson Creek with McGinnis Creek, where Ferguson Creek water comingles with McGinnis Creek water. From that point, McGinnis Creek becomes a natural carrier of Ferguson Creek water through which Ferguson Creek water flows along with McGinnis Creek water downstream approximately 2,250 feet to the place of use and beyond to secondary PODs.

The Applicant provided a "Duty of Water" analysis to demonstrate the approximate seasonal ratios as part of the typical composite water diversions from Ferguson Creek and McGinnis Creek for beneficial application on the 200.0-acre place of use under the five water rights contributing to the place of use. The Applicant calculated a standardized composite irrigation flow rate of 7.59 CFS for the 200.0-acre place of use based on the DNRC adjudication examination standard of 17.0 gallons per minute (GPM) per irrigated acre for alfalfa crops (17.0 GPM/acre x 200.0 acres ÷ 448.8 GPM/CFS = 7.59 CFS). During periods when Ferguson Creek water has been available for diversion of water under Statement of Claim No. 76C 25338-00 at its maximum flow rate of 2.5 CFS throughout the entire growing season, Statement of Claim No. 76C 25338-00 has contributed 32.9% of the historically consumed volume (2.5 CFS ÷ 7.59 CFS = 0.329). The Applicant refers to this proportion as the "Duty Factor" for Statement of Claim No. 76C 25338-00.

By applying the Duty Factor to the total historically consumed volume for the 200.0-acre place of use, the Applicant calculates a maximum historically consumed volume (HCV) for Statement of Claim No. 76C 25338-00 of 33.04 AF (100.33 AF HCV x 0.329 = 33.04 AF). Similarly, the Applicant calculates a maximum historically field-applied volume (HFAV) for Statement of Claim No. 76C 25338-00 of 86.58 AF (262.86 AF HFAV x 0.329 = 86.58 AF). The remainder of the HCV and HFAV is attributable to Statements of Claim Nos. 76C 25339-00, 76C 25340-00, 76C 25341-00, 76C 25342-00.

Table 4: Apportionment of historical use by water right

Water Right Number	Source	Flow Rate (CFS)	Percentage of Flow	Apportioned HCV *(Including IL)*	Apportioned Field Application Volume (AF)
76C 25338-00	Ferguson Creek	2.5	32.9%	33.04	86.48
76C 25339-00	McGinnis Creek	6.0	67.1%	67.29	176.38
76C 25340-00	McGinnis Creek	3.0			
76C 25341-00	McGinnis Creek	6.0			
76C 25342-00	McGinnis Creek	3.0			
Total		7.59*	**100.0%**	**100.33**	**262.86**

*Standardized composite irrigation flow rate based on the DNRC adjudication examination standard of 17.0 GPM/acre.

2.2 Historical Conveyance Losses

Per ARM 36.12.1902(10), the historical conveyance loss volume is equal to the sum of the historical seepage loss, vegetation loss, and ditch evaporative loss volumes.

Historically, the McGinnis Creek channel has been used as a natural carrier of Ferguson Creek water under Statement of Claim No. 76C 25338-00 (version 3 - split). The primary historical POD is the confluence of Ferguson Creek with McGinnis Creek, from which water is carried by the McGinnis Creek channel downstream to the place of use. Immediately downstream of the primary POD is a secondary POD that pumps up to 0.46 CFS to the 12.0 sprinkler irrigated acres through closed pipeline with which no conveyance losses are associated. The remaining 2.04 CFS of the maximum diversion of 2.5 CFS flows through the McGinnis Creek channel approximately 2,250 feet downstream to the point where the McGinnis Creek channel first intercepts the place of use. Per DNRC Memorandum: Development of standardized methodologies to determine Historic Diverted Volume (2012), ditch length is the distance from the diversion to the field, which the DNRC considers to be the location at which the conveyance structure first intercepts the place of use.

The Applicant provided an analysis of the Ferguson Creek and McGinnis Creek basin characteristics and estimated monthly flows. During the three months (June, July, and August) predicted by IWR to have net irrigation demand, the estimated monthly proportions of Ferguson

Creek flow within the total composite mean flow, including McGinnis Creek near the confluence, are 8%, 11.0%, and 14.0% for June, July, and August, respectively. For ease of calculating historical conveyance losses, the proposed change application assumes an average Ferguson flow contribution of 11% to the combined total flows in the McGinnis Creek natural carrier, throughout June, July, and August, with the remaining 89% of flow being attributed to McGinnis Creek Statements of Claim Nos. 76C 25339-00, 76C 25340-00, 76C 25341-00, 76C 25342-00.

Table 5 below summarizes the conveyance loss experienced by the conveyance (McGinnis Creek as a natural carrier of Ferguson Creek water) from the POD down to the first interception of McGinnis Creek with the place of use.

Table 5: Conveyance losses for all rights contributing to the place of use

Seepage Loss	***Ditch Wetted Perimeter (ft)***	***Ditch Length (ft)***	***Ditch Loss Rate ($ft^3/ft^2/day$)***	***Days Irrigated***	***Seepage Loss (AF)***
	11.66	2,250.00*	2.00**	92.00	110.82
Vegetation Loss	***% Loss/Mile***	***Historic Flow Rate (CFS)***	***Days Irrigated***	***Ditch Length (mi)***	***Vegetation Loss (AF)***
	0.75	2.04	92.00	0.43*	1.20
Ditch Evaporation Loss	***Ditch Width (ft)***		***Ditch Length (ft)***	***Ditch Evaporation Rate (ft)***	***Ditch Evaporation (AF)***
	10.00		2,250.00*	0.72	0.37
Total conveyance loss volume (AF)					112.39

*Distance from the POD to the initial interception of the McGinnis Creek channel with the place of use.
**The Applicant provided a typical flow depth in the McGinnis Creek of two feet. With the upper portion of the flow profile interfacing with gravelly silt loam (2 to 13 inches) and the lower portion of the flow profile interfacing with very gravelly sandy loam (13 to 23 inches) and sand (23 to 60 inches), the Department found that a loss rate of 2.0 ft^3/ft^2/day was more appropriate than the Applicant provided loss rate of 1.0 ft^3/ft^2/day (per Figure 2-50 of NEH 1993[1]).

Table 6: Apportionment of conveyance loss volume by water right

Water Right Number	Percent of Total Conveyance Loss	Total Apportioned Conveyance Loss Volume (AF)
76C 25338-00	11%	12.36
76C 25339-00	89%	100.03
76C 25340-00		
76C 25341-00		
76C 25342-00		
Total	100%	112.39

[1] *National Engineering Handbook Part 623. 1993. Chapter 2. Irrigation Water Requirements. Pages 183-186.*

2.3 Historical Diverted Volume

The Applicants submitted a Historical Use Addendum (HUA) because they intend to deviate from the DNRC standard practice for evaluating historical diverted volume of their water right. Per ARM 36.12.1902(10), the historically diverted volume (HDV) is equal to the sum of the historical field application volume (which is the historical consumptive volume divided by on-farm efficiency) and historical conveyance loss volume.

i. HDV per ARM 36.12.1902(10):

   a. Sprinkler irrigation (12.0 acres):
      (5.21 AF HCV x 0.329 Duty Factor ÷ 0.70 on-farm efficiency) + 0.0 AF conveyance losses = 2.45 AF

   b. Flood (contour) irrigation (75.0 acres):
      (32.56 AF HCV x 0.329 Duty Factor ÷ 0.55 on-farm efficiency) + 4.93 AF conveyance losses = 24.41 AF

   c. Flood (wild) irrigation (113.0 acres):
      (49.05 AF HCV x 0.329 Duty Factor ÷ 0.25 on-farm efficiency) + 7.43 AF conveyance losses = 71.98 AF

   d. Total (200.0 acres): 2.45 AF + 24.21 AF + 71.98 AF = 98.84 AF

The Applicants' modified HDV calculation includes the standard diverted volume determined following the calculations detailed in ARM 36.12.1902(10) and proposes that the ARM calculation be supplemented with additional volume to account for:

i. historically diverted early season flows which have been utilized to saturate soil profiles in preparation for the growing season; and,
ii. historically diverted fall irrigation flows aimed at replenishing carryover moisture and sustaining nutrition and growth for fall grazing within the historical places of use.

The Applicants assert that historical and current operational practices support the consideration of additional early and late season diverted volumes outside of the period of net irrigation demand given by IWR for the place of use.

The Applicants assert that they have historically diverted up to the full claimed flow rate of 2.5 CFS for up to 30 days between April 25 and June 1 and up to 0.5 CFS for up to 25 days between September 1 and October 5 for the aforementioned purposes. These additional early- and late-season diversions add 148.5 AF and 24.75 AF, respectively, to the standardized HDV value as calculated per ARM 36.12.1902(10). The total modified HDV is detailed below:

i. Early-season HDV = 2.5 CFS x 1.98 AF/day/CFS x 30 days = 148.5 AF

ii. HDV per ARM 36.12.1902(10) = 98.84 AF

iii. Late-season HDV = 0.5 CFS x 1.98 AF/day/CFS x 25 days = 24.75 AF

iv. Total modified HDV = 148.5 AF + 98.84 AF + 24.75 AF = 272.09 AF

Table 7 summarizes the historical field applied and conveyance loss volumes.

Table 7: Apportionment of historic diverted volume by water right

Water Right No.	Field Application Apportionment Percent	Apportioned Field Application Volume	Apportioned Conveyance Loss Volume	Apportioned HDV (excluding additional early- and late-season diversions)	Apportioned HDV (including additional early- and late-season diversions)
76C 25338-00	32.9%	86.48	12.36	98.84	272.09
76C 25339-00	67.1%	176.38	100.03	276.41	276.41 (no additional early/late-season diversions added)
76C 25340-00					
76C 25341-00					
76C 25342-00					
Total	100%	262.86	112.39	375.25	548.50

2.4 Summary of Historical Use

The Department will consider the following values when evaluating the historical use of Statement of Claim No. 76C 25338-00 (version 3 - split) for the adverse effect criterion:

Table 8: Summary of historical use of 76C 25338-00

Water Right No.	Historical Purpose	Maximum Historical Acres	Historical Place of Use	Historical Point of Diversion	Maximum Historical Flow Rate (CFS)	Historically Consumed Volume (AF)	Historically Diverted Volume (AF)
76C 25338-00	Irrigation	200.0	See Table 2	SESESE of Section 20, Twp 26N, Rge 28W, Lincoln County	2.5	33.04	272.09

3.0 Analysis of Impacted Surface Water Sources

3.1 Summary of Proposed Use

The Applicant proposes using Statement of Claim No. 76C 25338-00 as shown in Table 9 below.

The Applicant proposes adding an additional (second) POD on Ferguson Creek which will divert up to 1.5 CFS through a headgate and a new conveyance ditch, referred to as the Ferguson Ditch, to irrigate 200.0 acres. The remaining 1.0 CFS will be diverted into the McGinnis Creek channel

at the historical/existing POD. When the full 1.5 CFS is being diverted into the Ferguson Ditch, there will be 60% less flow being conveyed through the McGinnis Creek channel to the place of use (1.5 CFS ÷ 2.5 CFS = 0.6).

The Ferguson Ditch will convey water 800 feet from the proposed POD to the point where the ditch first intercepts the place of use. While this 800-foot stretch of the Ferguson Ditch will experience new conveyance losses (detailed in Table 10), the proportional reduction in flow being diverted from Ferguson Creek to be comingled with McGinnis Creek water and conveyed through the McGinnis Creek channel will result in a 60% reduction in the seepage and vegetative conveyance losses experienced by Statement of Claim No. 76C 25338-00 in the McGinnis Creek channel. This will result in an overall reduction in the total conveyance losses associated with Statement of Claim No. 76C 25338-00. Since no change to the place or purpose of use is proposed, the addition of a second POD will not change the historically consumed of field-applied volumes.

Table 9: Summary of the Proposed Use of Statement of Claim No. 76C 25338-00

Water Right Number	Purpose and Acres	Flow Rate (CFS)	Consumptive Volume (AF)	Diverted Volume (AF)	Period of Diversion & Use	Means of Diversion	Points of Diversion	Places of Use
76C 25338-00 (Version 3 – Split)	Irrigation --- 200.0 acres	2.5	33.04	270.96	04/25 – 10/05	Pump/ headgate w/ditch or pipeline	SESESE of Section 20, Twp 26N, Rge 28W, Lincoln County	See Table 2 (no change proposed to place of use)
						Headgate	**SWNESW Section 20, Twp 26N, Rge 28W, Lincoln County***	

** Bold underlined text indicates a changed water right element.*

Table 10: Conveyance losses for the proposed Ferguson Ditch

Seepage Loss	***Ditch Wetted Perimeter (ft)***	***Ditch Length (ft)***	***Ditch Loss Rate ($ft^3/ft^2/day$)***	***Days Irrigated***	***Seepage Loss (AF)***
	5.83	800.00*	0.60	92	5.91
Vegetation Loss	***% Loss/Mile***	***Historic Flow Rate (CFS)***	***Days Irrigated***	***Ditch Length (mi)***	***Vegetation Loss (AF)***
	0.75	1.50	92	0.15*	0.32
Ditch Evaporation Loss	***Ditch Width (ft)***		***Ditch Length (ft)***	***Ditch Evaporation Rate (ft)***	***Ditch Evaporation (AF)***
	5.00		800.00*	0.72	0.07
Total conveyance loss volume (AF)					6.29

*Per DNRC Memorandum: Development of standardized methodologies to determine Historic Diverted Volume (2012), ditch length is the distance from the diversion to the field, which the DNRC considers to be the location at which the conveyance structure first intercepts the place of use.

The reduction in the seepage and vegetative conveyance losses experienced by Statement of Claim No. 76C 25338-00 in the McGinnis Creek channel is as follows:

i. Seepage losses: 12.19 AF historical x 0.6 = 7.31 AF

ii. Vegetative losses: 0.13 AF historical x 0.6 = 0.08 AF

iii. Total reduction: 7.31 AF + 0.08 AF = 7.39 AF

Since the reduction in conveyance losses in the McGinnis Creek channel is greater than the new conveyance losses that will be experienced in the proposed Ferguson Ditch, proposed change will result in a net reduction in conveyance losses, and thus the total diverted volume, of 1.1 AF.

i. 76C 25338-00 HDV: 272.09 AF (Table 8)

ii. Proposed Ferguson Ditch conveyance losses: 6.29 AF (Table 10)

iii. McGinnis Creek channel conveyance loss reduction: 7.39 AF

iv. Proposed total diverted volume: 272.09 AF + 6.29 AF - 7.39 AF = 270.99 AF

Table 11: Volumes associated with historical use and proposed use for 76C 25338-00

Purpose	Historically Consumed Volume (AF)	Historically Diverted Volume (AF)	Proposed Consumptive Volume (AF)	Proposed Diverted Volume (AF)
Irrigation	33.04	272.09	33.04	270.99

3.2 Area of Potential Adverse Effect

The Department has considered a potentially affected reach on the source of supply. This reach was determined by accounting for the location of the proposed and historical point of diversion. This reach extends from the SWNESW of Section 20, Township 26 N, Range 28 W, Lincoln County (the location of the proposed POD), downstream to the SESESE of Section 20, Township 26 N, Range 28 W, Lincoln County (the historical POD which is the point of confluence of Ferguson Creek with McGinnis Creek). There are nine water rights within the reach, as illustrated in Appendix A.

Review

This document has been reviewed by the Department on October 17, 2025.

References

Department Standard Practice for Determining Historical Use
Department Standard Practice for Analyzing Area of Potential Adverse Effect

Appendix A: Water Rights within the Area of Potential Adverse Effect

Water Rights within the Area of Potential Adverse Effect					
Water Right Number	**Purpose**	**Source Name**	**Means of Diversion**	**Period of Diversion**	**Flow Rate (CFS)**
76C 134979 00	STOCK	FERGUSON CREEK	LIVESTOCK DIRECT FROM SOURCE	01/01 to 12/31	0.08*
76C 134974 00	IRRIGATION	FERGUSON CREEK	DIKE	05/15 to 10/19	2.24
76C 30165589	IRRIGATION	FERGUSON CREEK	PUMP/HEADGATE W/DITCH OR PIPELINE	01/01 to 12/31	2.50
76C 25325 00	STOCK	FERGUSON CREEK	MULTIPLE	01/01 to 12/31	0.08*
76C 25308 00	DOMESTIC	FERGUSON CREEK	PUMP	01/01 to 12/31	0.05
76C 25304 00	DOMESTIC	FERGUSON CREEK	PUMP	01/01 to 12/31	0.05
76C 25305 00	DOMESTIC	FERGUSON CREEK	PUMP	01/01 to 12/31	0.05
76C 25306 00	DOMESTIC	FERGUSON CREEK	PUMP	01/01 to 12/31	0.05
76C 25307 00	DOMESTIC	FERGUSON CREEK	PUMP	01/01 to 12/31	0.05

**To account for livestock direct from source rights, Department practice is to assign one combined total flow rate of 35 GPM (0.08 CFS) for all stock rights without a designated flow rate.*

Preapplication Materials

- Preapplication Meeting Request
- Preapplication Meeting Form
- All attachments
- All correspondence prior to application receipt

Preapplication Materials

Water Resources Division – Kalispell Regional Office
655 Timberwolf Pkwy, Ste. 4
Kalispell, MT 59901-1215
(406) 752-2288
DNRCKalispellWater@mt.gov

August 1, 2025

JACKSON PROPERTY GROUP LLC
ATTN: SHAYNE JACKSON
PO BOX 497
NORTH BEND WA 98045-0497

RANDY AND DORI BOCK
2315 PARKISON LN
LIBBY MT 59923-7993

Subject: Complete Preapplication Form for Change Application No. 76C 30165242

Dear Applicants,

The Kalispell Regional Office of the Department of Natural Resources and Conservation (DNRC or Department) received your Preapplication Meeting Form 600P-B and preapplication meeting fee on July 25, 2025, and the Department deems the submitted Preapplication Meeting Form to be successfully completed per ARM 36.12.1302 on August 1, 2025.

As designated on the submitted Preapplication Meeting Form per § 85-2-302(3)(b), MCA, the Department will produce the technical analyses based on the parameters included in the Preapplication Meeting Form (ARM 36.12.1302(4)) by September 15, 2025, which is 45 days from August 1, 2025.

If you have any questions, please contact me at (406) 752-2746 or Travis.Wilson@mt.gov.

Sincerely,

Travis Wilson
Water Resource Specialist
Kalispell Regional Office

Cc via email: Cole Peebles, PE, WGM Group

PREAPPLICATION MEETING FORM
CHANGE
§ 85-2-302(3)(b)
Form No. 606P *(Revised 4/2024)*

For Department Use Only

Application # 30165242 Basin 76C
Meeting Date 01/28/25 Time 1300 AM/PM
Completed Form Deadline 07/27/2025

RECEIVED
25 JUL 2025
DNRC
KALISPELL WATER RESOURCES

Completed Form Received 07/25/2025
Fee Rec'd $ 500.00 Check # Card
Deposit Receipt # Not yet assigned
Payor WGM Group, Inc.
Refund $ _____ Date _____

PREAPPLICATION MEETING FEE
$ 500

FILING FEE REDUCTION & EXPEDITED TIMELINE
An application will be eligible for a filing fee reduction and expedited timelines if the applicant completes a preapplication meeting with the Department (ARM 36.12.1302(1)), which includes submitting any follow-up information identified by the Department (ARM 36.12.1302(3)(c)) and receiving either Department-completed technical analyses or Department review of applicant-submitted technical analyses (ARM 36.12.1302(4) and (5)). An application for the proposed project also must be submitted within 180 days of delivery of Department technical analyses or scientific credibility review and no element on the submitted application can be changed from the completed preapplication meeting form (ARM 36.12.1302(6)).

The Department will fill out Form No. 606P and will identify follow-up during the preapplication meeting. The Department and Applicant will sign the Preapplication Meeting Affidavit and Certification within five business days. Within 180 days of the preapplication meeting, the Applicant will complete identified follow-up on a separate document with the question numbers clearly labeled.

Applicant Information: *Add more as necessary.*

Applicant Name Shayne A Jackson (Jackson Property Group, LLC)
Mailing Address 6220 McGinnis Meadows Road City Libby State MT Zip 59923
Phone Numbers: Home _____ Work _____ Cell (425) 308-2675
Email Address sj@mmgranch.net LLC Address: PO Box 497, North Bend, WA 98045

Applicant Name Randy Bock & Dori Bock
Mailing Address 2315 Parkinson Ln & 3307 Parkinson Ln City Libby State MT Zip 59923
Phone Numbers: Home _____ Work _____ Cell (406) 405-1057
Email Address randybock1954@gmail.com

Contact/Representative Information: *Add more as necessary.*

Contact/Representative is: ☐ Applicant ☑ Consultant ☐ Attorney ☐ Other (describe) _____
Contact/Representative Name Cole Peebles - WGM Group, Inc.
Mailing Address 1111 East Broadway St City Missoula State MT Zip 59802
Phone Numbers: Home _____ Work _____ Cell 406-289-0531
Email Address cpeebles@wgmgroup.com

NOTE: *If a contact person is identified as an attorney, all communication will be sent only to the attorney unless the attorney provides written instruction to the contrary. If a contact person is identified as a consultant, employee, or lessee, the individual filing the water right form or objection form will receive all correspondence and a copy may be sent to the contact person.*

Meeting Attendees: *Add more as necessary.*

Name	Organization	Position
Cole Peebles	WGM Group, Inc.	Water Resources Project Engineer
John Ferguson	Ferguson & Coppes, PLLC	Water Rights Attorney
Jim Ferch	DNRC	Regional Manager
Travis Wilson	DNRC	Water Resource Specialist
Kristal Kiel	DNRC	Water Resource Specialist
Joe Howerton	DNRC	Water Resource Specialist

Table of Contents

This proposed change application is proposed immediately following a proposed Form 641 Ownership Update for Divided Interest. The Ownership Split is being filed retroactively. An explanation of conveyance was included within the previously submitted Form 641 attachments. The proposed change application would add a second, primary point of diversion to improve water control, better match current irrigation practices, and promote diversion access for water right 76C 25338-00. Applicants ("Sellers") wish to add the proposed new primary POD to their parent right immediately AFTER the concurrent Ownership Split is final.

Application Details

The following questions are mandatory and must be filled out before the Preapplication Meeting Form is determined to be complete. Narrative responses that are larger than the space provided can be answered in an attachment. If an attachment is used, mark the see attachment ("A") checkbox on this form and label the attachment with the question number. Constrain narrative responses to the specific question as is asked on the form; do not respond to multiple questions in one narrative. Label units in narrative responses. Responses in the form of a table may be entered into the table provided on this form or in an attachment. Responses in the form of a table that are larger than the table provided on this form should be placed in an attachment. If an attachment is used, the table must have the exact headings found on this form, and the see attachment ("A") checkbox must be marked. For tables in this form, circle correct unit at header of column when faced with a choice of units. For tables in attachments, label all units. Questions that require Applicant to submit items to the Department have a submitted ("S") checkbox, which is marked when the required item is attached to the Preapplication Meeting Form. Label all submitted items with the question number for which they were submitted. For all questions where follow-up is necessary, mark the "F" checkbox in the "Follow-Up" column and write the question number on the "Follow-Up Page".

Questions, Narrative Responses, and Tables	Check-boxes	Follow-Up
1. Do you elect to have DNRC conduct Technical Analyses?	■ Y ☐ N	☐ F
2. Which water right(s) are proposed for change? Include water right number, currently authorized flow rate (GPM or CFS), and flow rate needed for project (GPM or CFS).	■ A	☐ F

Water Right Number	Current Flow Rate (GPM or CFS)	Flow Rate Needed for Project (GPM or CFS)
76C 25338 00	2.50 CFS	2.50 CFS

3. Is the proposed change on a non-filed water project?	☐ Y ■ N	☐ F
a. If yes, please submit a Non-Filed Water Project Addendum (Form 606/634-NFWPA). The project must meet the requirements of the addendum. The addendum is required before the Preapplication Meeting Form is completed.	☐ S	☐ F
4. How many change applications will be needed for this project? Please refer to ARM 36.12.1305 for more information. one		☐ F
5. Please submit a historical use map created on an aerial photograph or topographic map that shows the following: section corners, township and range, a north arrow, all historical points of diversion (POD) labeled with a unique POD ID letter, all historical places of use (POU), all historical conveyance structures, all historical places of storage, and historical place of	☐ S	■ F

use for all overlapping water rights.		
6. Please submit a proposed use map created on an aerial photograph or topographic map that shows the following: section corners, township and range, a north arrow, all proposed points of diversion labeled with a unique POD ID number, all proposed places of use, all proposed conveyance structures, all proposed places of storage, and proposed place of use for all overlapping water rights.	☐ S	■ F
7. Identify the water right elements proposed for change, with an "X", for each water right proposed for change.	☐ A	☐ F

Water Right #	76C 25338 00						
Point of diversion	X						
Place of use							
Purpose of use							
Place of storage							

Existing POD #1 to remain, unchanged. Proposed New Primary POD: POD #2. Both existing and proposed POD's are listed below.

8. Does the change involve a change in point of diversion?	■ Y ☐ N	☐ F
a. If yes, describe the proposed location of the new point(s) of diversion to the nearest 10 acres, if source is groundwater (GW) or surface water (SW), source name, and means of diversion (e.g., pump, headgate, well). Label POD ID with the same numbers as the proposed use map (Question 6).	■ A	☐ F

	POD #	¼	¼	¼	**Sec**	**Twp**	**Rge**	**County**	**Lot**	**Block**	**Tract**	**Subdivision**	**Gov Lot**	**GW or SW**	**Source Name**	**Means**
Existing	1	SW	SE	SE	20	26N	28N	Lincoln						SW	Ferguson Creek	Confluence McGinnis
Proposed	2	SW	NE	SW	20	26N	28N	Lincoln						SW	Ferguson Creek	Ditch/Headgate

Existing primary POD #1 is at the confluence of the historical Ferguson Creek Channel and McGinnis Creek.

9. Does the change involve a change in place of use?	☐ Y ■ N	☐ F
a. If yes,		
i. What are the geocodes of the proposed place of use?	☐ A	☐ F

ii. Describe the legal land description of the proposed place of use and, if the water rights being changed will have an irrigation or lawn and garden purpose, list the number of irrigated acres.	☐ A	☐ F

Acres	Gov't Lot	¼	¼	¼	Sec	Twp	Rge	County
	Total							

b. Are you proposing to add a place of use on State of Montana Trust Land?	☐ Y ■ N	☐ F
i. If yes, you must submit an Authorization for Temporary Change in Appropriation Right Consent Form from the DNRC Trust Lands Management Division before the Preapplication Meeting Form is complete. A change authorization to add a POU on Trust Land will be temporary for the duration of the lease term. Answer project-specific questions for temporary changes (question 99 to 105).	☐ S	☐ F
10. Does the proposed change include a change in purpose of use? If yes, answer questions 106 to 109 for change in purpose of use.	☐ Y ■ N	☐ F
11. Do you propose to add or modify one or more place(s) of storage (reservoir or pond) with a storage capacity greater than 0.1 acre-feet? If yes, answer questions 110 to 119.	☐ Y ■ N	☐ F
12. Are conveyance ditches used for historical or proposed uses? If yes, answer ditch-specific questions 120 to 126.	■ Y ☐ N	☐ F
13. Do you have ownership of the entire historical POU for the water right(s) being changed?	■ Y ☐ N	☐ F
a. If no,		
i. List the water right(s) for which you do not own the entire historical POU. _____ _		☐ F
ii. Are the water right(s) listed in question 13.a.i severed from the historical POU?	☐ Y ☐ N	☐ F
1. If yes, do you own the entirety of the severed water right(s) proposed for change?	☐ Y ☐ N	☐ F

Note regarding Question 13: The Applicants request that the proposed change be processed immediately following approval of the divided interest split request submitted on 12/17/2024. This application for change assumes that the requested split application has retroactively removed owners Leduc and Marquette Bourdeau from Parent Right 76C 25338-00. As such, the entire POU (remaining post-split) under this requested change is viewed as being owned by the Applicants.

iii. Are you filing on behalf of another entity? If yes, describe. _____	☐ Y ☐ N	☐ F
iv. Are all owners of the historical place of use willing to sign the application?	☐ Y ☐ N	☐ F
1. If no,		
a. A Form 641 or 642 to split the water right(s) being changed must be received and processed by the Department prior to application submittal	☐ S	☐ F
b. Describe how the water right(s) will be split, and which part of the split water right(s) will be proposed for change. _____ _____	☐ A	☐ F
14. Is the proposed use temporary? If yes, answer questions 99 to 105 for temporary changes.	☐ Y ▣ N	☐ F
15. Is the application to change the purpose of use or place of use of an appropriation of 4,000 or more acre-feet (AF) of water a year and 5.5 or more cubic feet per second (CFS)? If yes, you must submit a Reasonable Use Addendum (Form 606-B) with the application. The reasonable use criteria are found in §85-2-402(4-5), MCA.	☐ Y ▣ N	☐ F
16. Will you be transporting water for use outside of Montana? If yes, you will need submit an Out-of-State Use Addendum (Form 600/606- OSA) with the application. The out-of-state use criteria are outlined in §85-2-402(6), MCA.	☐ Y ▣ N	☐ F
17. Is the project located in designated sage grouse habitat? If yes, you must have a consultation with and review of your project by the Montana Sage Grouse Habitat Conservation Program. The review letter will be required at application submittal.	☐ Y ▣ N	☐ F
18. Does the application include the water marketing purpose? If yes, answer questions 127 to 134 for water marketing. A Water Marketing Purpose Addendum (Form 600/606-WMA) will be required with application submittal.	☐ Y ▣ N	☐ F
19. Does the proposed purpose include instream flow? If yes, answer questions 135 to 145 for Instream Flow Changes. A Change to Instream Flow Addendum (Form 606-IFA) will be required with application submittal.	☐ Y ▣ N	☐ F
20. Will the proposed use include salvage water? If yes, answer questions 146 to 150 for Salvage Water.	☐ Y ▣ N	☐ F

Historical Use

The following questions are mandatory and must be filled out for both Surface Water and Groundwater Applications before the Preapplication Meeting Form is determined to be complete.

Questions, Narrative Responses, and Tables	Check-boxes	Follow-Up
21. What type of water right(s) are proposed for change? Answer question 22 for each Statement of Claim, 23 for each Provisional Permit, and 24 for other types of water rights. Statement of Claim	☐ A	☐ F
22. In the table below, write the water right number for each Statement of Claim proposed for change in the "Statement of Claim" column. If there is one or more previous change authorizations, write the application numbers for the change authorizations in the "Previous Change Authorization" column and if there are no previous change authorizations, write "none" instead. Write the date of the Project Completion Notice for each previous change authorization in the "Project Completion Notice" column and if the previous change authorization does not have a Project Completion Notice, write "none" instead. In the "Previous Historical Use Analysis" column, write "full" or "partial" if a historical use analysis was conducted for the previous change authorization, and "none" if no previous historical use analysis was conducted. In the "Use Historical Use Analysis for Current Application" column, write "yes" if the previous historical use analysis will be used for the current application and "no" if a new historical use analysis will be conducted.	☐ A	☐ F

Statement of Claim	Previous Change Authorization	Project Completion Notice	Previous Historical Use Analysis	Use Historical Use Analysis for Current Application
76C 25338 00	None	None	None	No

23. In the table below, write the water right number for each Provisional Permit proposed for change in the "Provisional Permit" column. If a Project Completion Notice has been submitted, write the date in the "Project Completion Notice" column, and if no Project Completion Notice has been submitted, write "none" instead. For each Provisional Permit proposed for change, if there are one or more previous change authorizations, write the application number for the change authorizations in the "Previous Change Authorization" column. If there are no previous change authorizations, write "none" in the "Previous Change Authorization" column and "NA" in all the remaining columns. Write the date of the Project	☐ A	☐ F

Completion Notice for each previous change authorization in the "Previous Change Project Completion Notice" column and if the previous change authorization does not have a Project Completion Notice, write "none" instead. In the "Previous Change Historical Use Analysis" column, write "full" or "partial" if a historical use analysis was conducted for the previous change authorization, and "none" if no previous historical use analysis was conducted. In the "Use Historical Use Analysis for Current Application" column, write "yes" if the previous historical use analysis will be used for the current application, "no" if a new historical use analysis will be conducted.

Provisional Permit	Project Completion Notice	Previous Change Authorization	Previous Change Project Completion Notice	Previous Change Historical Use Analysis	Use Historical Use Analysis for Current Application

24. In the table below, write the water right number for each water right with another type proposed for change, the type of water right, and the date of issuance.

☐ A ☐ F

Other Water Right Type Number	Other Water Right Type Description	Date of Issuance

25. Are there previous Montana Water Court approved stipulations, Water Master reports, or prior Montana Water Court or Department decisions related to the water right(s) being changed?

☐ Y ■ N ☐ F

a. If yes, explain. ☐ A ☐ F

_____

_____

_____

_____

_____

_____

_____

26. Fill in the table below based on ARM 36.12.1902(1) and the information provided in questions 21 to 25. In column "Water Right Number" list all water rights proposed for change. Select one of the three options from column "Historical Use Analysis Options" and fill in the "Information Required for Historical Use" associated with that option. Select "Full Historical Use Analysis NA" only if an unperfected Provisional Permit will be used to serve as historical use in lieu of analysis. If the "Existing Historical Use Analysis" or "Full Historical Use Analysis NA" option is selected, skip to question 42 because this section is complete.	☐ A	☐ F

Water Right No. Proposed for Change	**Historical Use Analysis Option and Information Required for Historical Use**
76C 25338 00	■ New Historical Use Analysis. Date for new Historical Use Analysis: _____
	☐ Existing Historical Use Analysis. Change authorization number with existing Historical Use Analysis: _____
	☐ Full Historical Use Analysis NA. Water right number serving as historical use in lieu of analysis: _____
	☐ New Historical Use Analysis. Date for new Historical Use Analysis: _____
	☐ Existing Historical Use Analysis. Change authorization number with existing Historical Use Analysis: _____
	☐ Full Historical Use Analysis NA. Water right number serving as historical use in lieu of analysis: _____
	☐ New Historical Use Analysis. Date for new Historical Use Analysis: _____
	☐ Existing Historical Use Analysis. Change authorization number with existing Historical Use Analysis: _____
	☐ Full Historical Use Analysis NA. Water right number serving as historical use in lieu of analysis: _____

	☐ New Historical Use Analysis. Date for new Historical Use Analysis: _____
	☐ Existing Historical Use Analysis. Change authorization number with existing Historical Use Analysis: _____
	☐ Full Historical Use Analysis NA. Water right number serving as historical use in lieu of analysis: _____
	☐ New Historical Use Analysis. Date for new Historical Use Analysis: _____
	☐ Existing Historical Use Analysis. Change authorization number with existing Historical Use Analysis: _____
	☐ Full Historical Use Analysis NA. Water right number serving as historical use in lieu of analysis: _____
	☐ New Historical Use Analysis. Date for new Historical Use Analysis: _____
	☐ Existing Historical Use Analysis. Change authorization number with existing Historical Use Analysis: _____
	☐ Full Historical Use Analysis NA. Water right number serving as historical use in lieu of analysis: _____

27. Do you have actual knowledge of historical use?	■ Y ☐ N	☐ F
a. If yes,		
i. Is this firsthand knowledge?	■ Y ☐ N	☐ F
ii. Who has this knowledge and what was their role? Shayne Jackson and Randy Bock. Both long-term property owners and irrigators.	☐ A	☐ F

b. If no,		
i. Where will the historical use data be derived? _____ _____	☐ A	☐ F

Historical Use: Place of Use

The proposed change adds a second, primary point of diversion on Ferguson Creek. No changes to the place of use are proposed. Places of use for supplemental rights are not depicted as the rights were claimed for a difference surface water source.

28. The historical use map provided for question 5 must clearly identify the entire place of use for each overlapping water right that intersects the historical place of use. Does your historical use map meet this requirement? N/A, See above.	☐ Y ■ N	■ F
29. Are you proposing to change all water right(s) associated with the historical place of use?	☐ Y ■ N	☐ F
a. If no, identify the water right(s) associated with the historical place of use that are not included in this application. Provide the priority date for each water right and explain why all overlapping water rights are not included in the application. Include water received via contract from a company, district, or water users' association.	☐ A	☐ F

Water Right No.	Priority Date	Reason Not Included in Change
76C 25339 00	1931/10/09	Different source and conveyance infrastructure
76C 25340 00	1941/10/11	Different source and conveyance infrastructure
76C 25341 00	1919/04/18	Different source and conveyance infrastructure
76C 25342 00	1931/10/09	Different source and conveyance infrastructure

30. Answer the questions below related to the historical purpose for each of the water right(s) being changed.		
a. Irrigation		
i. Is the water right being changed a Statement of Claim?	■ Y ☐ N	☐ F
1. If yes,		
a. Does the Water Resources Survey corroborate the acres irrigated listed on the abstract?	■ Y ☐ N	☐ F
i. If no, provide aerial photograph(s) that can corroborate the historical place of use.	☐ S	☐ F
b. Does the legal land description from the abstract match the actual location of the historical place of use?	■ Y ☐ N	☐ F
i. If no, provide documentation of a written request submitted to the Water Court for amendment of the Claim as well as information to substantiate the requested amendment.	☐ S	☐ F

2. If no, provide one or more aerial photographs that can corroborate the historical place of use.	☐ S	☐ F
b. Lawn and garden		
i. Provide aerial photographs that can corroborate the historical place of use.	☐ S	☐ F
c. Stock		
i. Provide aerial photographs, grazing records, or other records to corroborate the historical place of use.	☐ S	☐ F
ii. Did the stock drink direct from source or direct from ditch?	☐ Y ☐ N	☐ F
1. If no, provide data sources that make clear the location of the stock watering infrastructure.	☐ S	☐ F
d. Multiple domestic, domestic, municipal, mining, commercial, and other purposes		
i. Provide aerial photographs, deeds, other recorded documents or records, affidavits, or other published documents, such as magazine articles, to corroborate the historical place of use.	☐ S	☐ F

Historical Use: Point of Diversion

31. For all historical point(s) of diversion, identify the means, location (¼ ¼ ¼ section), and if they are proposed for change. Label using the same POD ID letter as for the Historical Use Map (question 5).	☐ A	☐ F

POD ID	Means	Location (¼ ¼ ¼ Section)	Proposed for Change?
1	Pump/Headgate	SWSESE Sec 20 T26N R28W (Confluence w/ McGinnis Creek)	Current POD, No Change

32. Does the legal land description from the abstract match the actual location of the historical point(s) of diversion?	■ Y ☐ N	☐ F
a. If no, do you have aerial photograph(s) that clearly show the location of the historical point(s) of diversion?	☐ Y ☐ N	☐ F
i. If yes,		
1. Provide the photograph(s).	☐ S	☐ F
2. Provide an explanation for the discrepancy and, if a Statement of Claim, provide documentation of a written request submitted to the Water Court for amendment of the Claim.	☐ S	☐ F
33. Answer questions below related to the diversion means for each of the historical point(s) of diversion.		
a. Headgate		
i. For each headgate, provide dimensions in feet (FT), slope of the channel at the headgate (%), material of the headgate, estimated historical capacity in gallons per minute (GPM) or CFS and the method used to estimate historical capacity. Label using the same POD ID letter as for the Historical Use Map (question 5).	☐ A	☐ F

The existing, historical primary POD is the confluence of Ferguson Ck with McGinnis Ck. McGinnis Ck is also utilized as natural carrier with several secondary diversion points located downstream. One flashboard check/culvert crossing structure across McGinnis Creek was located just downstream of the historical primary POD. This secondary diversion routed water into the Koebel Ditches. In the 1990s a pumping network (with its suction located downstream of the primary diversion) was installed to distribute water previously delivered via the Koebel Ditches.

POD ID	Dimensions (FT)	Slope (%)	Material	Estimated Capacity (GPM or CFS)	Method
1	2' (Dia.)	4.0	CMP Culvert	12.3 cfs	Diversion=Confluence. No Headgate. Mannings Eq. Half full. Based
				n = 0.024	on road culvert xing over Ferguson Creek 3500' US. The historical
					Ferguson Creek Channel acts as conveyance to the confluence
					with McGinnis Creeks. Historical conveyance conditions and pump
					specifications validated during Nov 2023 Site Visit by WGM Group.

Pumping plant on McGinnis Ck, downstream of historical confluence POD, consists of two (2) electric motor driven, close coupled Berkeley Pentair Centrifugal Pumps manifolded into the same pressure main network.

b. Pump, dike, dam, or other surface water point of diversion		
i. For each pump, dike, dam, or other surface water point of diversion, provide an estimate of the historical capacity (GPM or CFS) and the method used to estimate the historical capacity. Label using the same POD ID letter as for the Historical Use Map (question 5).	☐ A	☐ F

POD ID	Estimated Capacity (GPM or CFS)	Method
1	1370 gpm (3.1 cfs)	Design B6JPBM, 12.75 Dia./60HP (B58127) Based upon pump curves operating at nominal 1775 RPM.
1	666 gpm (1.5 cfs)	Design B3EPBL, 9.25 Dia./60HP (B58060) Based upon pump curves operating at nominal 3540 RPM.
	Total: 4.6 cfs	Design combined from both pumps .
		Note: Additional rights support this combined flowrate.
		Note: 2.5 CFS is what flows from ferguson to mcginnis under this water right.

c. Well, pit, or other groundwater point of diversion		
i. For each well, pit, or other groundwater point of diversion, provide an estimate of the historical capacity (GPM or CFS) and the method used to estimate the historical capacity. Label using the same POD ID letter as for the Historical Use Map (question 5).	☐ A	☐ F

POD ID	Estimated Capacity (GPM or CFS)	Method

34. Do other water rights share the point(s) of diversion?	■ Y ☐ N	☐ F
a. If yes, list the water rights, their flow rates (GPM or CFS), and the nature of the relationship. Label using the same POD ID letter as for the Historical Use Map (question 5).	☐ A	☐ F

The historical POD (POD#1) will not be modified by the proposed change application. 76C 25338 based on Cate & O'Mea Statement of Claim.

POD ID	Water Right No.	Flow (GPM or CFS)	Relationship
1	76C 134974 00	2.24 CFS	Based upon Novy Statement of Claim (SOC). Same Source & POD (Confluence w/ McGinnis Ck)
1	76C 25325 00	--	Stock Right. Based upon Cate & O'Mea SOC. Same Source & POD (Confluence w/ McGinnis Ck)
1	76C 134979 00	--	Stock Right. Based upon Novy SOC. Same Source. Less refined POD (Confluence w/ McGinnis Ck)
			No other Ferguson Creek Rights share the historical POD

Historical Use: Period of Diversion

35. Are the period of diversion and the period of use the same?	■ Y ☐ N	☐ F
a. If no,		
i. Why are they different?	☐ A	☐ F
ii. Is there a place of storage?	☐ Y ☐ N	☐ F
36. When was water diverted for the purpose(s) of the water right(s) being changed?	☐ A	☐ F

Start Date (Month (MM)/Day (DD))	End Date (MM/DD)
01/01	12/31

37. Does the Department have a standard, found in ARM 36.12.112, for the period of diversion for the purposes for which water is used?	■ Y ☐ N	☐ F
a. If yes, does the period of diversion fall within Department standards?	☐ Y ■ N	☐ F
b. If no or if the period of diversion falls outside Department standards, explain how the period of diversion is reasonable for the purpose. The historical POD falls within Climatic Area VI, for which the DNRC generally applies a period of diversion of April 25 to October 5 (per similar Area V).	☐ A	☐ F
38. If the water right(s) being changed have an irrigation purpose, answer the following questions.		
a. What were the crop(s) grown? Alfalfa and hay.		☐ F

i. If the crop(s) grown include hay, how many cuttings were there per season and how many days did they last? Up to three cuttings per season.		☐ F
b. Did diversions ever temporarily cease within the period of use? This may include water shortages or calls based on priority date.	☐ Y ■ N	☐ F
i. If yes, please explain.	☐ A	☐ F

Historical Use: Historical Diverted Volume

39. Answer the questions below related to the historical purposes of the water rights being changed.		
a. Irrigation		
i. Do you want ARM 36.12.1902(11) to be used to calculate historical diverted volume?	■ Y ☐ N	☐ F
1. If no, provide a Historical Water Use Addendum (Form 606-HUA). Form 606-HUA must be submitted to the Department before the Preapplication Meeting Form is completed.	☐ S	☐ F
b. Non-irrigation		
i. How often was water historically diverted? N/A		☐ F
ii. What was the duration of each historical diversion?		☐ F
iii. Was wastewater historically discharged? If yes, what amount was discharged?	☐ Y ☐ N	☐ F
iv. What is the volume of water historically diverted (AF)?		☐ F
v. How did you determine the volume of water historically diverted?	☐ A	☐ F
vi. Did the historical diverted volume serve more than one purpose of use?	☐ Y ☐ N	☐ F

1. If yes, how much of the diverted volume served each purpose of use and how did you determine this?	☐ A	☐ F

Historical Use: Historical Consumed Volume

40. Answer the questions below related to the historical purpose of the water rights being changed.		
a. Irrigation		
i. Will you use Department standards for historical consumptive use as defined in ARM 36.12.1902?	■ Y ☐ N	☐ F
1. If no,		
a. What method will you use to determine historical consumptive use?	☐ A	☐ F
b. Provide a Historical Water Use Addendum (Form 606-HUA) to the Department. Form 606-HUA must be submitted to the Department before the Preapplication Meeting Form is completed.	☐ S	☐ F
2. If yes,		
a. What is the historical irrigation method type and subtype? Irrigation method types include flood and sprinkler. Flood irrigation subtypes include level border, graded border, furrow, contour ditch, or wild flood. Sprinkler subtypes include wheel line and center pivot. Sprinkler - Big Gun, Water-Reel, Handline. Flood - Contour ditch and Wild flood	☐ A	☐ F
b. What was the slope of the historical place of use? 2 to 3%		☐ F
c. Are there any factors beyond irrigation method type/subtype and place of use slope that may influence percent efficiency of irrigation?	☐ Y ■ N	☐ F
i. If yes, provide evidence to support the modified percent efficiency of irrigation in the Historical Water Use Addendum (Form 606-HUA). These factors may include infrastructure age, soil characteristics, or field improvements. Form 606-HUA must be submitted to the Department before the Preapplication Meeting Form is	☐ S	☐ F

completed.		
d. Based on answers to the above questions, what is the percent efficiency of irrigation? 70% for Sprinkler, 55% for Contour Flood, and 25% for Wild Flood		☐ F
e. What is the County Management Factor? 47.1%		☐ F
f. What is evapotranspiration (ET) based on the irrigation method and county? 11.06		☐ F
g. What percent of applied water are irrecoverable losses per ARM 36.12.1902(17)? 10% Sprinkler and 5% flood.		☐ F
h. Do other water rights supplement or overlap the historical place of use that contribute to the irrigation water demand?	■ Y ☐ N	☐ F
i. If yes,		
1. How were the water rights operated to serve the irrigation purpose? The existing diversion is at the confluence of Ferguson Creek with McGinnis Creek. Ferguson Creek flows as part the combined flow are diverted via pumps and flashboard structures across McGinnis Creek. Secondary diversions along McGinnis Creek (as a natural carrier) also divert waters onto the flooded portions of the POU.	☐ A	■ F
2. For each supplemental or overlapping water right, please list the average period of diversion and use (MM/DD-MM/DD), flow rate (GPM or CFS), and the volume of water (AF) contributed to the total irrigation water demand.	☐ A	■ F

Water Right No.	Avg. Period of Diversion (MM/DD-MM/DD)	Avg. Period of Use (MM/DD-MM/DD)	Flow Rate (GPM or CFS)	Volume Contributed (AF)
76C 25339 00	01/01 - 12/31	01/01 - 12/31	6.00 CFS	976.80 (volume not divided)
76C 25340 00	01/01 - 12/31	01/01 - 12/31	3.00 CFS	976.80 (volume not divided)
76C 25341 00	01/01 - 12/31	01/01 - 12/31	6.00 CFS	976.80 (volume not divided)
76C 25342 00	01/01 - 12/31	01/01 -12/31	6.00 CFS	976.80 (volume not divided)
None of the four rights above	share the source w/ the right	proposed for change under	this application. The above	rights are on McGinnis Ck.

b. Lawn and garden		
i. Will you use the Department standards for historical consumptive use volume for lawn and garden? Department standards include 2.5 acre-feet per acre, or a calculated volume based on Irrigation Water Requirements for turf grass.	☐ Y ☐ N	☐ F
1. If yes, which standard? _____		☐ F
2. If no, please provide an estimate of historical water use based on expert analysis and methods used to determine this estimate. _____ _____	☐ A	☐ F
c. Stock		
i. Which volume standard for animal units applies to historical use and why? The standards are either 15 or 30 gallons per animal unit per day. _____		☐ F
ii. How many animal units were historically served? _____		☐ F
iii. Did these animal units rely entirely on the water right(s) proposed for change for their full water demand?	☐ Y ☐ N	☐ F
1. If no, explain. _____ _____	☐ A	☐ F
d. Domestic and multiple domestic		
i. How many households were served? _____		☐ F
ii. Will the Department standard of 1 acre-foot per household be used? The same standard shall be applied to historical and proposed uses.	☐ Y ☐ N	☐ F
1. If no, what standard will be used? _____		☐ F
iii. Did the historical use include wastewater disposal and treatment?	☐ Y ☐ N	☐ F

1. If yes, which of the following best describes the wastewater disposal and treatment system? Individual drain fields, central treatment facility with minimal consumption, or evaporation basin or land application? _____	☐ A	☐ F
e. Municipal		
i. What is the volume of water (AF) historically consumed for municipal purposes? _____		☐ F
ii. Provide evidence to support historical municipal use such as commercial, lawn and garden, and/or multiple domestic uses. The data sources may include records that tie water use to the U.S Census, estimates of historical system capacity and estimates of leakage.	☐ S	☐ F
f. Other		
i. What is the volume of water (AF) historically consumed for other purposes? _____		☐ F
ii. Please submit to the Department evidence to support the volume of water historically consumed.	☐ S	☐ F

Historical Use: Historical Places of Storage

41. Did the historical use include one or more place(s) of storage, which may include reservoirs, ponds, and pits that are greater than 0.1 acre-feet in volume?	☐ Y ▣ N	☐ F
a. If yes, for each historical place of storage please provide the surface area in acres (AC), capacity (AF), annual net evaporation (FT/year), and number of times per year the place of storage was filled.	☐ A	☐ F

ID	Surface Area (AC)	Capacity (AF)	Annual Net Evaporation (FT/YR)	# of Annual Fillings

Surface Water

■ **Applicable**, move on to question 42. ☐ **Not Applicable**, skip to question 67.

The following questions are mandatory for changes to surface water rights and must be filled out before the Preapplication Meeting Form is determined to be complete.

Surface Water: Return Flow Analysis **This Historical Use Section (according to the 2024-03 Change Manual, Pg 73 Table, and ARM 36.12.1303) is not required for a POD-only Change.**

Questions, Narrative Responses, and Tables	Check-boxes	Follow-Up
42. Do the purposes of the water rights proposed for change include irrigation?	■ Y ☐ N	☐ F
a. If yes, does the proposed change include a change in place of use *and/or* a change in purpose? A change in place of use includes retiring acres in the historical place of use and adding any new acres outside the historical place of use.	☐ Y ■ N	☐ F
i. If yes, a return flow analysis is required. Move on to answer question 43.		
ii. If no, this section is complete, and you may skip to question 51.		
43. Does the proposed change include a change in purpose?	☐ Y ☐ N	
a. If yes, what is the consumptive use for the proposed non-irrigation purpose? Please explain. _____ _____ _____ _____ _____ _____	☐ A	☐ F
44. Does the proposed change include a change in place of use? If yes, move on to question 45. If no, this section is complete, and you may skip to question 51.	☐ Y ☐ N	
45. Provide a map showing the historical and proposed places of use created on an aerial photograph or topographic map with section corners, township and range, and a north arrow.	☐ S	☐ F
46. How many acres, if any, will be retired from the historical place of use? _____		☐ F
47. Are irrigated acres proposed that are outside the historical place of use?	☐ Y ☐ N	☐ F
a. If yes,		
i. How many acres? _____		☐ F

ii. What is the proposed irrigation method type (e.g., flood or sprinkler) and subtype (e.g., level border, graded border, furrow, contour ditch, wild flood, center pivot, or wheel line) for the new acres? _____		☐ F
iii. What is the slope of the new place of use? _____		☐ F
iv. Based on 47.a.ii to 47.a.iii, what is the percent efficiency of irrigation for the new acres? _____		☐ F
v. What is the County Management Factor for the new acres? _____		☐ F
vi. What is the ET based on the irrigation method and county for the new acres? _____		☐ F
vii. What percent of applied water are irrecoverable losses for new acres per ARM 36.12.1902(17)? _____		☐ F
viii. Do other water rights supplement or overlap the new place of use that contribute to the irrigation water demand?	☐ Y ☐ N	☐ F
1. If yes,		
a. How will the water rights be operated to serve the irrigation purpose? _____ _____ _____ _____	☐ A	☐ F
b. For each supplemental or overlapping water right, please list the average period of diversion and use (MM/DD-MM/DD), flow rate (GPM or CFS), and the volume of water (AF) contributed to the total irrigation water demand.	☐ A	☐ F

Water Right No.	Avg. Period of Diversion (MM/DD-MM/DD)	Avg. Period of Use (MM/DD-MM/DD)	Flow Rate (GPM or CFS)	Volume Contributed (AF)

48. Do you have information for the Department to consider about the source and location where return flows historically accrued?	☐ Y ▣ N	☐ F
a. If yes, explain. _____ _____ _____	☐ A	☐ F
49. Based on the preliminary data provided by the Department at this preapplication meeting, to what surface water sources do return flows accrue before and after the proposed change? **Return flow data provided by the Department at the preapplication meeting is preliminary and is subject to change during the Technical Analysis.* _____ _____ _____	☐ A	☐ F
50. If an analysis of impacts to identified surface water rights is required as part of the return flow analysis, pursuant to ARM 36.12.1303(3)(c)(iii), do you elect to answer non-mandatory questions 161 to 163 to provide information required for this extended return flow analysis?	☐ Y ☐ N	☐ F
a. If yes, go to question 161. If an analysis of impacts to identified surface water rights is required, this information will be used for the analysis.		
b. If no, did you elect in question 1 for the Department to conduct technical analyses?	☐ Y ☐ N	☐ F
i. If yes, do you elect for the Department to use publicly available water quantity data for the analysis of impacts to identified surface water rights? If the extended return flow analysis is required and sufficient publicly available water quantity data is not available, then the Department will not be able to conduct the extended analysis. You will still have to prove a lack of adverse effect from the proposed change.	☐ Y ☐ N	☐ F
ii. If no, an analysis of impacts to identified surface water rights will need to be completed as part of the extended return flow analysis. The Department will include the extended analysis in its scientific credibility review of the Technical Analyses.		

Surface Water: Mitigation Analysis

51. Are you changing the purpose to mitigation to meet the criteria of issuance for another application? If yes, answer the questions in this section (questions 52 to 60). If no, this section is complete, and you can skip to question 61.	☐ Y ▣ N	☐ F

52. Identify the water right(s) proposed for change to a mitigation purpose, the water right(s) identified as needing mitigation and the application number for the water right(s) identified as needing mitigation.	☐ A	☐ F
53. What source(s) have been identified as needing mitigation water?		☐ F
54. By what means will mitigation water be made available (e.g., infiltration gallery, water left instream)? You must provide a copy of all relevant discharge permits at application submittal (§85-2-364, MCA).	☐ A	☐ F
55. What is the location (¼ ¼ ¼ section of start and end of reach) and length (FT) of the mitigation reach?		☐ F
56. What is the amount, timing, and location (¼ ¼ ¼ section) of water needed for mitigation?	☐ A	☐ F

Month	Days	Amount	Location	Month	Days	Amount	Location
January				July			
February				August			
March				September			
April				October			
May				November			
June				December			

57. How do the priority dates of the water rights proposed for change to mitigation compare to other water rights on the source?	☐ A	☐ F
58. Do you have measurement records or Water Commissioner records that show the reliability of the water right(s) proposed for change to a mitigation purpose?	☐ Y ☐ N	☐ F

a. If yes, describe and submit them to the Department. _____ _____ _____ _____	☐ S	☐ F
59. Do the water rights proposed for change to mitigation have a period of use that is greater than or equal to the period when mitigation is necessary?	☐ Y ☐ N	☐ F
a. If no, how will mitigation water be made available during the entire period when mitigation is necessary? _____ _____	☐ A	☐ F
60. Will other water rights contribute to mitigation water?	☐ Y ☐ N	☐ F
a. If yes, what amount, at what timing, and at which location (¼ ¼ ¼ section) will they contribute?	☐ A	☐ F

Month	Days	Amount	Location	Month	Days	Amount	Location
January				**July**			
February				**August**			
March				**September**			
April				**October**			
May				**November**			
June				**December**			

Surface Water: Aquifer Recharge Analysis

61. Are you changing the purpose to aquifer recharge to serve a current purpose or changing the purpose to marketing for mitigation/aquifer recharge for a future mitigation purpose? If yes, answer the questions in this section (questions 62 to 66). If no, this section is complete, and you can skip to question 67.	☐ Y ▣ N	☐ F
62. Is this aquifer recharge for a current mitigation need or marketing for mitigation/aquifer recharge for a future mitigation need? _____		☐ F
63. What sources have been identified as having net depletions in need of mitigation or as benefiting from marketing for mitigation/aquifer recharge water? _____		☐ F

64. By what means will aquifer recharge water be made available? You must provide a copy of all relevant discharge permits at application submittal (§85-2-364, MCA). _____ _____ _____ _____ _____	☐ A	☐ F
65. How do the priority dates of the water rights proposed for change to aquifer recharge compare to other water rights on the source? _____ _____ _____	☐ A	☐ F
66. Do you have measurement records or Water Commissioner records that show the reliability of the water rights proposed for change to aquifer recharge?	☐ Y ☐ N	☐ F
a. If yes, describe and submit them to the Department. _____ _____ _____ _____	☐ S	☐ F

Groundwater

☐ **Applicable**, move on to question 67. ▣ **Not Applicable**, skip to question 99.

The following questions are mandatory for changes to groundwater rights and must be filled out before the Preapplication Meeting Form is determined to be complete.

Groundwater: Adequacy of Diversion

Questions, Narrative Responses, and Tables	Check-boxes	Follow-Up
67. What is the flow rate (GPM or CFS), volume (AF), and period of diversion (MM/DD-MM/DD) required at each new groundwater point of diversion? Label using the same POD ID number as the Proposed Use Map (question 6) to match this information with the location information.	☐ A	☐ F

POD #	Flow Rate (GPM or CFS)	Volume (AF)	Period of Diversion (MM/DD-MM/DD)

68. Will the monthly pumping schedule differ from an allocation of diverted volume by the number of days in the month for year-round uses or the IWR 80% net irrigation requirements for irrigation/lawn & garden uses (IWR, NRCS 2003)?	☐ Y ☐ N	☐ F
a. If yes, provide the monthly pumping schedule in the table below. Label using the same POD ID number as the Proposed Use Map (question 6).	☐ A	☐ F

Month	POD #	Volume (AF)	Month	POD #	Volume (AF)
January			**July**		
February			**August**		
March			**September**		
April			**October**		
May			**November**		
June			**December**		

69. Answer the following questions specific to the means of groundwater diversion.					
Well/Pit	Questions 70 to 71	**Developed Spring**	Question 72	**Pond**	Questions 73 to 76

Groundwater: Adequacy of Diversion: Well/Pit

☐ Applicable ☐ Not Applicable

70. Have you submitted a completed Form 633 to DNRC for review?	☐ Y ☐ N	☐ F
a. If no, submit Form 633 to DNRC for review. Form 633 is required by the time the Preapplication Meeting Form is deemed complete.	☐ S	☐ F
b. If yes, did the Department identify deficiencies?	☐ Y ☐ N	☐ F
1. If yes, are variances from ARM 36.12.121 needed?	☐ Y ☐ N	☐ F
a. If yes,		
i. Do you have data for aquifer characteristics?	☐ Y ☐ N	☐ F
1. If yes, provide the data to the Department.	☐ S	☐ F
ii. Have you submitted Form 653 to the Department?	☐ Y ☐ N	☐ F
1. If yes, was the variance granted?	☐ Y ☐ N	☐ F
71. Have all the wells/pits been constructed?	☐ Y ☐ N	☐ F
a. If yes, provide a map with the location of each well/pit labeled, the well/pit depth, and, if available, the GWIC ID. Create map on an aerial photograph or topographic map and include the following: well/pit location, well/pit depth, GWIC ID (if available), section corners, township and range, and a north arrow.	☐ S	☐ F
b. If no,		
i. When will the wells/pits be constructed? _____		☐ F
ii. Do you have an initial map with the proposed location of wells/pits?	☐ Y ☐ N	☐ F
1. If yes, provide an initial map to the Department. Create map on an aerial photograph or topographic map and include the following: proposed well/pit location, section corners, township and range, and a north arrow.	☐ S	☐ F
iii. What is the anticipated depth for each new well/pit? Label on the initial map if the proposed location is known. Otherwise provide the depth(s) here: _____ _____	☐ S	☐ F
iv. Is the requested volume for each new well/pit known?	☐ Y ☐ N	☐ F
1. If no, what is the total requested volume (AF) and the number of new PODs? _____		☐ F

Groundwater: Adequacy of Diversion: Developed Spring

☐ Applicable ☐ Not Applicable

72. Have you measured the source?	☐ Y ☐ N	☐ F
a. If yes,		
i. Submit measurements to the Department.	☐ S	☐ F
ii. With what method were measurements collected? _____ _____	☐ A	☐ F
iii. What is the interval of measurements? _____		☐ F
iv. Is the interval of measurements sufficient to comply with ARM 36.12.1703(1)?	☐ Y ☐ N	☐ F
b. If no, or if measurements do not comply with ARM 36.12.1703(1),		
i. When do you plan to measure? _____		☐ F
ii. With what method and at what interval will measurements be collected? _____ _____	☐ A	☐ F

Groundwater: Adequacy of Diversion: Pond

☐ Applicable ☐ Not Applicable

73. Have you submitted Form 653 to apply for a variance from ARM 36.12.121 for the Aquifer Test?	☐ Y ☐ N	☐ F
a. If yes, did the Department approve the variance request?	☐ Y ☐ N	☐ F
74. Submit pond bathymetry data, survey, or engineering plans to the Department.	☐ S	☐ F
75. Submit a map identifying the location of the proposed pond to the Department. Create map on an aerial photograph or topographic map and include the following: pond location, section corners, township and range, and a north arrow.	☐ S	☐ F
76. If you are conducting Technical Analyses, what is your plan to determine depth, surface area, and net evaporation of the pond? If the Department is conducting Technical Analyses, write N/A. _____ _____	☐ A	☐ F

Groundwater: Adverse Effect to Existing Groundwater Rights

All information to calculate the one-foot drawdown contour was collected in previous questions.

Groundwater: Adverse Effect to Surface Water Rights

Groundwater: Adverse Effect to Surface Water Rights: Surface Water Depletion Analysis

77. Does the proposed change include a change in point of diversion or a change in place of use or purpose that will lead to a change in consumptive use or pumping schedule? If you do not know if a change in place of use or purpose will lead to a change in consumptive use or pumping schedule, work through this with the Department. If yes, a surface water depletion analysis is required; move on to question 78. If no, this section is complete; skip to question 80.	☐ Y ☐ N	☐ F
78. Based on the preliminary data provided by the Department at this preapplication meeting, what are the hydraulically connected surface water sources before and after the proposed change? **Net depletion data provided by the Department at the preapplication meeting is preliminary and is subject to change during the Technical Analysis.* _____ _____ _____ _____	☐ A	☐ F
79. If an analysis of impacts to identified surface water rights is required as part of the surface water depletion analysis, pursuant to ARM 36.12.1903(2)(f), do you elect to answer non-mandatory questions 166 to 168 to provide information required for this extended surface water depletion analysis?	☐ Y ☐ N	☐ F
a. If yes, go to question 166. If an analysis of impacts to identified surface water rights is required for the surface water depletion analysis, this information will used for the analysis.		
b. If no, did you elect in question 1 for the Department to conduct technical analyses?	☐ Y ☐ N	☐ F
i. If yes, do you elect for the Department to use publicly available water quantity data for the analysis of impacts to identified surface water rights for the surface water depletion analysis? If this extended surface water depletion analysis is required and sufficient publicly available water quantity data is not available, then the Department will not be able to conduct the extended surface water depletion analysis. You will still have to prove a lack of adverse effect from the proposed change.	☐ Y ☐ N	☐ F
ii. If no, you may still include the analysis of impacts to identified surface water rights with the surface water depletion analysis. The Department will include the extended analysis in its scientific credibility review of the Technical Analyses.		

80. Do the purposes of the water rights proposed for change include irrigation?	☐ Y ☐ N	☐ F
a. If yes, does the proposed change include a change in place of use *and/or* a change in purpose? A change in place of use includes retiring acres in the historical place of use and adding any new acres outside the historical place of use.	☐ Y ☐ N	☐ F
i. If yes, a return flow analysis is required. Move on to answer question 81.		
ii. If no, this section is complete, and you may skip to question 89.		
81. Does the proposed change include a change in purpose?	☐ Y ☐ N	
a. If yes, what is the consumptive use for the proposed non-irrigation purpose? Please explain. _____ _____ _____ _____ _____ _____	☐ A	☐ F
82. Does the proposed change include a change in place of use? If yes, move on to question 83. If no, this section is complete, and you may skip to question 89.	☐ Y ☐ N	
83. Provide a map showing the historical and proposed places of use. Create map on an aerial photograph or topographic map that shows the following: section corners, township and range, and a north arrow.	☐ S	☐ F
84. How many acres, if any, will be retired from the historical place of use? _____		☐ F
85. Are irrigated acres proposed that are outside the historical place of use?	☐ Y ☐ N	☐ F
a. If yes,		
i. How many acres? _____		☐ F
ii. What is the proposed irrigation method type and subtype (e.g., level border, graded border, furrow, contour ditch, or wild flood) for the new acres? _____		☐ F
iii. What is the slope of the new place of use? _____		☐ F
iv. Based on question 85.a.ii to 85.a.iii, what is the percent efficiency of irrigation for the new acres? _____		☐ F

v. What is the County Management Factor for the new acres? _____		☐ F
vi. What is the ET based on the irrigation method and county for the new acres? _____		☐ F
vii. What percent of applied water are irrecoverable losses for new acres? _____		☐ F
viii. Do other water rights supplement or overlap the new place of use that contribute to the irrigation water demand?	☐ Y ☐ N	☐ F
1. If yes,		
a. How will the water rights be operated to serve the irrigation purpose?	☐ A	☐ F
b. For each supplemental or overlapping water right, please list the average period of diversion and use (MM/DD-MM/DD), flow rate (GPM or CFS), and the volume of water (AF) contributed to the total irrigation water demand.	☐ A	☐ F

Water Right No.	Avg. Period of Diversion (MM/DD-MM/DD)	Avg. Period of Use (MM/DD-MM/DD)	Flow Rate (GPM or CFS)	Volume Contributed (AF)

86. Do you have information for the Department to consider about the source and location where return flows historically accrued?	☐ Y ☐ N	☐ F

a. If yes, explain. _____ _____ _____	☐ A	☐ F
87. Based on the preliminary data provided at this preapplication meeting, to what surface water sources will return flows accrue before and after the proposed change? **Return flow data provided by the Department at the preapplication meeting is preliminary and is subject to change during the Technical Analysis.* _____ _____ _____	☐ A	☐ F
88. If an analysis of impacts to identified surface water rights is required as part of the return flow analysis, pursuant to ARM 36.12.1303(5)(d)(iii), do you elect to answer non-mandatory questions 161 to 163 to provide information required for this extended analysis?	☐ Y ☐ N	☐ F
a. If yes, go to question 161. If an analysis of impacts to identified surface water rights is required as part of the return flow analysis, this information will used for the analysis.		
b. If no, did you elect in question 1 for the Department to conduct technical analyses?	☐ Y ☐ N	☐ F
i. If yes, do you elect for the Department to use publicly available water quantity data for the analysis of impacts to identified surface water rights? If this extended return flow analysis is required and sufficient publicly available water quantity data is not available, then the Department will not be able to conduct the extended analysis. You will still have to prove a lack of adverse effect from the proposed change.	☐ Y ☐ N	☐ F
ii. If no, an analysis of impacts to identified surface water rights will need to be completed as part of the return flow analysis. The Department will include the extended analysis in its scientific credibility review of the Technical Analyses.		

Groundwater: Mitigation

89. Do you require mitigation water to meet the criteria of issuance for this change application or for a different application? If yes, answer the questions in this section (questions 90 to 98). If no, this section is complete, and you can skip to question 99.	☐ Y ☐ N	☐ F
90. Please identify the water rights proposed for change to a mitigation purpose and the water rights identified as needing mitigation. _____	☐ A	☐ F

91. What sources have been identified as needing mitigation water?		☐ F
92. By what means will mitigation water be made available?	☐ A	☐ F
93. What is the location (¼ ¼ ¼ section of start and end of reach) and length (feet) of the mitigation reach?		☐ F
94. What is the amount, timing, and location (¼ ¼ ¼ section) of water needed for mitigation?	☐ A	☐ F

Month	Days	Amount	Location	Month	Days	Amount	Location
January				**July**			
February				**August**			
March				**September**			
April				**October**			
May				**November**			
June				**December**			

95. How do the priority dates of the water rights proposed for change to mitigation compare to other water rights on the source?	☐ A	☐ F
96. Do you have measurement records or Water Commissioner records that show the reliability of the water right(s) proposed for change to a mitigation purpose?	☐ Y ☐ N	☐ F
a. If yes, describe and submit them to the Department.	☐ S	☐ F
97. Do the water rights proposed for change to mitigation have a period of use that is greater than or equal to the period when mitigation is necessary?	☐ Y ☐ N	☐ F

a. If no, how will mitigation water be made available during the entire period when mitigation is necessary? _____ _____ _____	☐ A	☐ F
98. Will other water rights contribute to mitigation water?	☐ Y ☐ N	☐ F
a. If yes, what amount, at what timing, and at which location (¼ ¼ ¼ section) will they contribute?	☐ A	☐ F

Month	Days	Amount	Location (¼ ¼ ¼ Section)	Month	Days	Amount	Location (¼ ¼ ¼ Section)
January				**July**			
February				**August**			
March				**September**			
April				**October**			
May				**November**			
June				**December**			

Project-Specific Questions

The following questions are mandatory when applicable and must be filled out before the Preapplication Meeting Form is determined to be complete.

Temporary Change

Questions, Narrative Responses, and Tables	Check-boxes	Follow-Up
99. Does the proposal include a temporary change? If yes, please answer the questions in this section (questions 100 to 105) for each water right being changed. If no, or if you answered these questions earlier in the preapplication meeting, this section is complete and you can skip to question 106.	☐ Y ■ N	☐ F
100. What element(s) of the water right(s) are being temporarily changed? _____		☐ F
101. For how many years will the water right(s) be temporarily changed? _____		☐ F
102. Will the temporary change be intermittent over the years?	☐ Y ☐ N	☐ F
a. If yes, explain. _____	☐ A	☐ F
103. For what purpose will the water rights be temporarily used? _____		☐ F

104. Is the quantity of water subject to the temporary change being made available from the development of a new water conservation or storage project?	☐ Y ☐ N	☐ F
a. If yes, explain the water conservation or storage project. _____ _____ _____	☐ A	☐ F
105. If you are answering Project Specific Questions as they are referenced in Application Details, return to question 10 if you are proposing to add a place of use on State of Montana Trust Land and question 15 if you are proposing a temporary change that does not involve State of Montana Trust Land. If you are answering in consecutive order, go to question 106.		

Change in Purpose

106. Does the project involve a change in purpose? If yes, answer the questions in this section (questions 107 to 109). If no, of if you answered these questions earlier in the preapplication meeting, this section is complete and you can skip to question 110.	☐ Y ▣ N	☐ F
107. Identify the proposed new purpose, flow rate (GPM or CFS), volume (AF), and period of use (MM/DD-MM/DD) for each purpose.	☐ A	☐ F

Purpose	**Flow Rate (GPM or CFS)**	**Volume (AF)**	**Period of Use Start (MM/DD-MM/DD)**	**Period of Use End (MM/DD-MM/DD)**

108. Explain why the requested flow rate and volume is the amount needed for the purpose. _____ _____ _____	☐ A	☐ F
109. If you are answering Project Specific Questions as they are referenced in Application Details, return to question 11 and if you are answering in consecutive order, go to question 110.		

Change in Place of Storage

110. Does the project involve a change in place of storage? If yes, answer the questions in this section (questions 111 to 119) for each individual place of storage (use additional Change in Place of Storage sheet for additional places of storage). If no, or if you answered these questions earlier in the preapplication meeting, this section is complete; skip to question 120.	☐ Y ■ N	☐ F
111. Submit a map showing the location of the place of storage. Create map on an aerial photograph or topographic map that shows the following: place of storage, section corners, township and range, and a north arrow.	☐ S	☐ F
112. Is this application to add a new place of storage or change an existing place of storage? _____		☐ F
a. If application is to change an existing place of storage, list the water rights that include the place of storage and a short description of the proposed change. _____ _____	☐ A	☐ F
113. Is the place of storage located on-stream?	☐ Y ☐ N	☐ F
a. If no, explain the conveyance means to and from the off-stream place of storage and any losses that may occur with that conveyance. _____ _____	☐ A	☐ F
114. What is the proposed capacity of the place of storage? Use bathymetry data, survey, or engineering plans for capacity. Submit the data source used with this form. In lieu of these data sources, use the following equation: *Surface Acres x Maximum Depth (FT) x 0.5 (0.4-0.6 depending on side slope) = Capacity (AF)* _____	☐ S	☐ F
115. Will the place of storage include primary and/or emergency spillways? Preliminary design specifications for primary and emergency spillways must be included with application submittal (ARM 36.12.113).	☐ Y ☐ N	☐ F
116. Will the place of storage be lined?	☐ Y ☐ N	☐ F
117. What is the annual net evaporation of water from the place of storage using the standards in ARM 36.12.116(1) and the Department's Gridded Net Evaporation Layer? _____		☐ F
118. Is the place of storage capacity calculated to be greater than 50 acre-feet?	☐ Y ☐ N	☐ F
a. If yes, have you made an application to the DNRC Water Operations Bureau for a determination of whether the dam or reservoir is a high-hazard dam?	☐ Y ☐ N	☐ F

119. If you are answering Project Specific Questions as they are referenced in Application Details, return to question 12 and if you are answering in consecutive order, go to question 120.		

Ditch-Specific Questions

120. Does the historical use of water include at least one conveyance ditch? If yes, answer questions 121 to 122. If no, or if you answered these questions earlier in the preapplication meeting, skip to question 123.	☐ Y ☒ N	☐ F
121. Submit a Historical Use Ditch Map that shows every ditch conveying water for the historical use of all water right(s) proposed for change. Label the ditch name(s), POD(s), the POU(s), and the ditch measurement locations (requested in question 122.d). The map should be created on an aerial photograph or topographic map with the following: section corners, township and range, and a north arrow. McGinnis Ck Confluence is Primary POD. All ditches on secondary POD. Not Applicable.	☐ S	☐ F
122. For each historical conveyance ditch, answer question 122.a to 122.h. If there is more than one historical conveyance ditch, use an Additional Historical Ditch Sheet for each additional ditch.		
a. What is the ditch name? Ferguson Ck Channel utilized as natural carrier. All diversions secondary to confluence with McGinnis Creek.		☐ F
b. List the water right(s) proposed for change that were conveyed by the ditch.		☐ F
c. What is the distance water was historically carried by the conveyance ditch? Only include segments between the POD and start of the POU; do not include segments within the POU. Water was conveyed in the Ferguson Channel to the McGinnis Creek Confluence	☐ A	☐ F
d. Provide at least one set of ditch measurements, which include width (FT), depth (FT), and slope (%). Discuss ditch characteristics with DNRC to determine the minimum number of ditch measurements. Include the location of each measurement, labeled with the 2-digit measurement ID number, used on the map submitted for question 121.	☐ S	☐ F

ID #	Width (FT)	Depth (FT)	Slope (%)	Date of Measurement

e. What is a reasonable Manning's n value? List the factors used for estimation. If you do not know this value, please work through estimation with the Department.	☐ A	☐ F

f. What type of soils compose the historical conveyance ditch? For lined ditches, write "lined" instead. _____ _____	☐ A	☐ F
g. Are other water rights conveyed by the historical conveyance ditch?	☐ Y ☐ N	☐ F
i. If yes,		
1. What are the water right numbers? _____ _____ _____	☐ A	☐ F
2. What is the sum of the flow rates (GPM or CFS) for all water rights conveyed? _____ _____ _____	☐ A	☐ F
3. Provide a map with your best estimate of the historical POUs for the other water rights conveyed by the historical conveyance ditch. Include only POUs between the historical POD and your historical POU. If you do not know this information, the Department can help you create the map. The map should be created on an aerial photograph or topographic map and show the following: section corners, township and range, and a north arrow.	☐ S	☐ F
h. Were any water rights proposed for change part of one historical water right that was split?	☐ Y ☐ N	☐ F
i. If yes, were all split water rights split in such a way to ensure each post-split water right could stand alone and not be reliant on the others for carriage water?	☐ Y ■ N	☐ F
1. If no, do any of the water right(s) proposed for change have a carriage water requirement?	☐ Y ■ N	☐ F
a. If yes,		
i. List the water right(s) with a carriage water requirement _____		☐ F
ii. Update your Historical Use Ditch Map to label the ditch segments where a carriage water requirement exists for a water right proposed for change. Also, use your best estimate to label the POUs for all water rights included in the carriage water requirement. If you do not know this information, the Department can help you update the map.	☐ S	☐ F
123. Does the proposed use include at least one existing or new conveyance ditch? If yes, answer questions 124 to 126. If no, or if you answered these questions earlier in the preapplication meeting, this section is complete; skip to question 127.	■ Y ☐ N	☐ F

The Applicants understand that the historical flowline of Ferguson Ck was re-aligned north of the historical flowline for the benefit of logging operations at some unconfirmed time after Statement of Claim submittal. The proposed second, primary POD will be constructed near the start of former logging channel change. A new gate structure is proposed to allow the Applicants to divert water north, northeast in the Ferguson Ditch (logging re-alignment channel). Water not diverted at the proposed new primary POD will continue flowing down the historical Ferguson Creek channel to the confluence with McGinnis Creek. This proposed change improves irrigation control and ensures that the water right properly reflects its use.

124. Submit a Proposed Use Ditch Map that shows every ditch conveying the water right(s) proposed for change, including any unchanged portions. Label all unchanged and proposed PODs, all unchanged and proposed POUs, and additional ditch measurement locations (requested in question 125.e). The map should be created on an aerial photograph or topographic map with the following: section corners, township and range, and a north arrow.	☒ S	☐ F
125. For each proposed use conveyance ditch, answer the questions 125.a to 125.i. If there is more than one proposed use conveyance ditch, use an Additional Proposed Use Ditch Sheet for each additional ditch.		
a. What is the ditch name? Ferguson Ditch		☐ F
b. Is this ditch a historical conveyance ditch detailed in questions 121 to 122?	☐ Y ☒ N	☐ F
i. If yes, have any of the following details changed, to the best of your knowledge, from historical conditions: ditch length, distance water conveyed, ditch lining, or water rights conveyed by the ditch?	☐ Y ☐ N	☐ F
1. If yes, answer questions 125.c to 125.i using current data.		
2. If no, do not answer questions 125.c to 125.i for this ditch because the information remains unchanged. Move on to the next proposed use conveyance ditch, or if none remain, skip to question 127.		
c. List the water right(s) proposed for change that are going to be conveyed by the ditch. 76C 25338-00		☐ F
d. What is the distance water will be carried by the conveyance ditch? Only include segments between the POD and start of the POU; do not include segments within the POU. The Ferguson Ditch will be approximately 1,150 linear ft from the proposed second, primary POD to extents of the POU.	☐ A	☐ F
e. Provide at least one set of ditch measurements, which include width (FT), depth (FT), and slope (%). Discuss ditch characteristics with DNRC to determine the minimum number of ditch measurements. Include the location of each measurement, labeled with the 2-digit measurement ID number, used on the map submitted for question 124.	☐ S	☐ F

ID #	Width (FT)	Depth (FT)	Slope (%)	Date of Measurement
F1	Trapazoid: 3 bottom, 8 top	1.5	10.0	11/28/2023
F2	Trapazoid: 3 bottom, 6 top	1.5	5.5	11/28/2023

f. What is a reasonable Manning's n value? List the factors used for estimation. If you do not know this value, please work through estimation with the Department. Given the cobbles in (and rough condition of) the re-aligned channel, a Manning's n of 0.08 is appropriate.	☐ A	☐ F
g. What type of soils compose the proposed conveyance ditch? For lined ditches, write "lined" instead. The ditch bottom is lined with native cobbles/gravels. Channel side slopes and overbanks are covered with rocky soils mountain topsoil and woody, forest duff.	☐ A	☐ F
h. Are other water rights conveyed by the proposed conveyance ditch?	☐ Y ■ N	☐ F
i. If yes,		
1. What are the water right numbers?	☐ A	☐ F
2. What is the sum of the flow rates (GPM or CFS) for all water rights conveyed?	☐ A	☐ F
3. Provide a map with your best estimate of the current POUs for the other water rights conveyed by the proposed conveyance ditch. Include only POUs between the POD and your proposed POU. If you do not know this information, the Department can help you create the map. The map should be created on an aerial photograph or topographic map and show the following: section corners, township and range, and a north arrow.	☐ S	☐ F
i. Were any water right(s) proposed for change identified as having a carriage water requirement in question 122.h.i.1.a.i?	☐ Y ☐ N	☐ F
i. If yes, update your Proposed Use Ditch Map to label the ditch segments where a carriage water requirement exists for a water right proposed for change. Also, use your best estimate to label the POUs for all water rights included in the carriage water requirement. If you do not know this information, the Department can help you update the map.	☐ S	☐ F
126. If you are answering Project Specific Questions as they are referenced in Application Details, return to question 13 and if you are answering in consecutive order, go to question 127.		

Water Marketing

127. Does this project involve water marketing? If yes, answer the questions in this section (questions 128 to 134). If no, or if you answered these questions earlier in the preapplication meeting, this section is complete; skip to question 135.	☐ Y ▣ N	☐ F
128. Identify the flow rate (GPM or CFS) and volume of water (AF) that will be marketed. _____		☐ F
129. Will the marketed water return to the source?	☐ Y ☐ N	☐ F
a. If yes, explain how that determination was made. _____ _____ _____	☐ A	☐ F
130. For what purpose(s) will the marketed water be used? _____ _____	☐ A	☐ F
131. How will you control or limit access to the water? _____ _____	☐ A	☐ F
132. Do you have contracts for the entire volume and flow rate sought?	☐ Y ☐ N	☐ F
133. Provide a service area map. Create map on an aerial photograph or topographic map and shows the following: general service area boundary, section corners, township and range, and a north arrow.	☐ S	☐ F
134. If you are answering Project Specific Questions as they are referenced in Application Details, return to question 19 and if you are answering in consecutive order, go to question 135.		

Instream Flow Change

135. Does the project involve an instream flow change? If yes, answer the questions in this section (questions 136 to 145). If no, or if you answered these questions earlier in the preapplication meeting, this section is complete; skip to question 146.	☐ Y ▣ N	☐ F
136. Is the proposal to retire all the use from the historical purpose throughout the entire period of use?	☐ Y ☐ N	☐ F
a. If no, describe why not in detail. _____ _____ _____	☐ A	☐ F

137. What is the name of the source of water where streamflow will be maintained or enhanced? _____		☐ F
138. Provide specific information on the location (¼ ¼ ¼ section of start and end of reach) and length (FT) of the stream reach in which the streamflow is to be maintained or enhanced. _____	☐ A	☐ F
139. Does the protected reach begin at the existing point of diversion?	☐ Y ☐ N	☐ F
a. If no, does the proposed protected reach begin upstream of or downstream from the existing point of diversion? _____		☐ F
140. Does return flow go back to the source of supply? The Department provides an initial estimate of the sources where return flow historically accrued at the preapplication meeting.	☐ Y ☐ N	☐ F
141. Describe the way the streamflow is to be maintained or enhanced. _____ _____ _____	☐ A	☐ F
142. Provide initial details about a streamflow measuring plan, which include the points where measurements occur, the interval of measurement, and the methods and equipment used. A complete streamflow measuring plan will be required for the application. _____ _____ _____ _____ _____	☐ A	☐ F
143. Provide initial details about an operation plan, which include the proposed flow rate (GPM or CFS) to be protected up to the proposed volume (AF) and the period when protection is to occur. If there is a "trigger flow" associated with your operation plan, please explain. A complete operation plan, based on the Technical Analysis, will be required for the application. _____ _____ _____ _____ _____	☐ A	☐ F

144. Is the amount of water proposed for change in the application made available through creation of a "water saving method," as defined in ARM 36.12.101?	☐ Y ☐ N	☐ F
a. If yes, complete the Salvage Water section (questions 146 to 150).	☐ S	☐ F
145. If you are answering Project Specific Questions as they are referenced in Application Details, return to question 20 and if you are answering in consecutive order, go to question 146.		

Salvage Water

146. Does this project involve salvage water? Salvage water does not include destroying phreatophytes, removing vegetation, converting to a less consumptive crop, or converting to a partial irrigation schedule. If yes, answer the questions in this section (questions 147 to 150). If no, or if you answered these questions earlier in the preapplication meeting, this section is complete and you can skip to question 151.	☐ Y ▣ N	☐ F
147. What water saving method was implemented? This may include lining an unlined ditch or canal, converting unlined ditch or canal to pipeline, converting high profile or high-pressure sprinklers to low pressure, and other (explain). _____ _____	☐ A	☐ F
148. How much water was salvaged from creation of the water saving method? Include flow rate (GPM or CFS) and volume (AF). _____		☐ F
149. How did you determine the amount of water salvaged? _____ _____ _____ _____ _____ _____	☐ A	☐ F
150. If you are answering Project Specific Questions as they are referenced in Application Details, return to question 21 and if you are answering in consecutive order, go to question 151.		

Non-Mandatory Questions for Criteria Analysis

The following questions are not mandatory. They should be discussed in the Preapplication Meeting, but do not need to be filled out before the Preapplication Meeting Form is determined to be complete.

Adverse Effect

Questions, Narrative Responses, and Tables	Check-boxes
151. Once the historical use analysis is complete for the application, be ready to compare the historical use with the proposed use. Do you have evidence the proposed use exceeds the historical use for flow rate, consumed volume, or diverted volume?	☐ Y ▣ N
a. If yes, what is your plan to address this with the permitting process?	☐ A
152. Describe your plan to ensure that existing water rights will be satisfied during times of water shortage. All water rights and their use will comply with priority, as well as the values of the neighbors sharing the source and whether they are keen on sharing the burden of water shortages.	☐ A
153. Explain how you can control your diversion in response to call being made. The historical Ferguson Ck Channel is the default flow path. The proposed primary diversion structure will incorporate an easily operable gate that can be closed in response to a senior call. When closed, all water will continue down the historical Ferguson Ck channel where it will combine with McGinnis Ck. There are no appropriators on Ferguson Ck senior to the Applicants.	☐ A
154. Are you aware of any calls that have been made on the source of supply or depleted surface water source?	☐ Y ▣ N
a. If yes, explain.	☐ A
155. Does a water commissioner distribute water or oversee water distribution on your proposed source or depleted surface water source?	☐ Y ▣ N
156. Will the proposed use change the ability for you to make call?	☐ Y ▣ N

157. When was the last time water was appropriated and used beneficially? Fall 2024 If there has been a period of nonuse, explain below:	
a. Why the water right was not used.	☐ A
b. Why a resumption of use will not adversely affect other water users.	☐ A
c. Is the period of nonuse greater than 10 years?	☐ Y ■ N
d. Have water rights been authorized to use the source during the period of nonuse?	☐ Y ■ N
158. For point of diversion changes:	
a. Is the proposed point of diversion upstream or downstream of the historical point of diversion? Upstream	
b. Are there intervening water users between the historical and proposed point of diversion?	☐ Y ■ N
c. Does the proposed point of diversion allow for diverting water longer during times of shortage?	☐ Y ■ N
159. For place of use changes, will changes to the rate, location, volume, or timing of return flows adversely affect other appropriators?	☐ Y ☐ N

Adverse Effect: Evaluation of Impacts to Identified Water Rights for Return Flow Analysis

160. Respond to questions in this section if you elected in questions 50 or 88 to answer optional questions 161 to 163. If you did not elect to answer these questions or answered these questions earlier in the preapplication meeting, this section is complete; skip to question 165.	
161. For each surface water source receiving return flows, is gage data available?	☐ Y ☐ N
a. If yes, answer the following questions for the number of stream gages that are available.	
i. One stream gage is available	
1. What is the gage name?	
2. Who operates and maintains the gage?	

3. Is the stream gage upstream or downstream of the point(s) of diversion? _____	
4. Is there a limiting or controlling factor that would make the Drainage Area Method not practical? This includes dams that control the flow and streams with large gaining and/or losing reaches. If you have questions about this, please contact the Regional Hydro-Specialist or the Water Sciences Bureau.	☐ Y ☐ N
5. Is the period of record greater than or equal to 10 years?	☐ Y ☐ N
6. How frequently is stage data recorded? _____	
7. If data gaps were to occur, are they identified and left unfilled or estimated using interpolation, ice correction, or indirect discharge measurements methods?	☐ Y ☐ N
8. Was the rating curve established and maintained throughout the duration of the period of record using measurements taken near the reference gage and stage recorder according to USGS protocols?	☐ Y ☐ N
9. Were there requirements for maintaining a permanent gage datum and meeting specified accuracy limits?	☐ Y ☐ N
10. Does the gage data meet the Department's standard to be sufficient to calculate the median of the mean monthly flow rate and volume during the proposed months of diversion?	☐ Y ☐ N
a. If yes, skip to question 163.	
b. If no, answer question 161.b.	
ii. More than one stream gage is available	
1. List the gage names. _____	
2. Who operates and maintains the gages? _____	
3. Is one stream gage upstream and one downstream of point(s) of diversion?	☐ Y ☐ N
4. Do the stream gages have similar periods of record?	☐ Y ☐ N
5. Are the periods of record each greater than or equal to 10 years?	☐ Y ☐ N
6. How frequently is stage data recorded at each gage? _____	
7. For each gage, if data gaps were to occur, are they identified and left unfilled or estimated using interpolation, ice correction, or indirect discharge measurements methods?	☐ Y ☐ N

8. Were the rating curves established and maintained throughout the duration of the period of record using measurements taken near the reference gages and stage recorders according to USGS protocols?	☐ Y ☐ N
9. For each gage, were there requirements for maintaining a permanent gage datum and meeting specified accuracy limits?	☐ Y ☐ N
10. Does the gage data meet the Department's standard to be sufficient to calculate the median of the mean monthly flow rate and volume during the proposed months of diversion?	☐ Y ☐ N
a. If yes, skip to question 163.	
b. If no, answer question 161.b.	
b. If no gage data is available or if available gage data does not meet the Department's standard to be sufficient to calculate the median of the mean monthly flow rate and volume during the proposed months of diversion, is the source otherwise measured?	☐ Y ☐ N
i. If yes,	
1. Submit measurements to the Department.	☐ S
2. Who collected the measurements? _____	☐ A
3. With what method was the data collected? _____ _____	☐ A
4. What is the period of record? _____	
5. What is the frequency of measurement? _____	
6. Are there gaps in the data?	☐ Y ☐ N
a. If yes, what is the nature of the gaps and how are gaps handled to ensure data quality? _____ _____ _____ _____	☐ A
7. Is there a process for maintaining the data and meeting specified accuracy limits?	☐ Y ☐ N

a. If yes, explain. _____ _____ _____ _____	☐ A
8. Does available measurement data meet the Department's standard to be sufficient to calculate the median of the mean monthly flow rate and volume during the proposed months of diversion?	☐ Y ☐ N
a. If yes, skip to question 163.	
b. If no, answer question 162.	
162. For each surface water source receiving return flows, does the available measurement data, gage and/or otherwise measured, meet the Department's standard of including a minimum of high, moderate, and low flows to be sufficient to use for validation of a department-accepted estimation technique?	☐ Y ☐ N
a. If yes, describe the estimation technique. _____ _____ _____	☐ A
b. If no, will measurements be collected prior to submission of a completed Form No. 606P that meet the Department's standard of including a minimum of high, moderate, and low flows to be sufficient to use for validation of a department-accepted estimation technique?	☐ Y ☐ N
i. If yes,	
1. With what method will the data be collected? _____ _____ _____	☐ A
2. What will be the interval of measurement? _____	

3. Describe the proposed estimation technique.	☐ A
ii. If no, describe your plan supply measurements for return flow receiving sources.	☐ A
163. If you are conducting Technical Analysis, how will the Area of Potential Adverse Effect be defined for evaluating return flow impacts? If the Department is conducting Technical Analyses, write N/A. N/A	☐ A
164. If you went straight to this section when referenced, go back to question 51 for surface water changes and question 88 for groundwater changes. If you waited to answer in consecutive order and have completed all prior sections, move to question 165.	

Adverse Effect: Evaluation of Impacts to Identified Water Rights for Surface Water Depletion Analysis

165. Respond to questions in this section if you elected in question 79 to answer optional questions 166 to 168. If you did not elect to answer these questions or answered these questions earlier in the preapplication meeting, this section is complete; skip to question 170.	
166. For each hydraulically connected surface water source, is gage data available?	☐ Y ☐ N
a. If yes, answer the following questions for the number stream gages are available.	
i. One stream gage is available	
1. What is the gage name?	

2. Who operates and maintains the gage? _____	
3. Is the stream gage upstream or downstream of the start of the depletion? _____	
4. Is there a limiting or controlling factor that would make the Drainage Area Method not practical? This includes dams that control the flow and streams with large gaining and/or losing reaches. If you have questions about this, please contact the Regional Hydro-Specialist or the Water Sciences Bureau.	☐ Y ☐ N
5. Is the period of record greater than or equal to 10 years?	☐ Y ☐ N
6. How frequently is stage data recorded? _____	
7. If data gaps were to occur, are they identified and left unfilled or estimated using interpolation, ice correction, or indirect discharge measurements methods?	☐ Y ☐ N
8. Was the rating curve established and maintained throughout the duration of the period of record using measurements taken near the reference gage and stage recorder according to USGS protocols?	☐ Y ☐ N
9. Were there requirements for maintaining a permanent gage datum and meeting specified accuracy limits?	☐ Y ☐ N
10. Does the gage data meet the Department's standard to be sufficient to calculate the median of the mean monthly flow rate and volume during the proposed months of diversion?	☐ Y ☐ N
a. If yes, skip to question 168.	
b. If no, answer question 166.b.	
ii. More than one stream gage is available	
1. List the gage names. _____	
2. Who operates and maintains the gages? _____	
3. Is one stream gage upstream and one downstream of the start of the depletion?	☐ Y ☐ N
4. Do the stream gages have similar periods of record?	☐ Y ☐ N
5. Are the periods of record each greater than or equal to 10 years?	☐ Y ☐ N
6. How frequently is stage data recorded at each gage? _____	

7. For each gage, if data gaps were to occur, are they identified and left unfilled or estimated using interpolation, ice correction, or indirect discharge measurements methods?	☐ Y ☐ N
8. Were the rating curves established and maintained throughout the duration of the period of record using measurements taken near the reference gages and stage recorders according to USGS protocols?	☐ Y ☐ N
9. For each gage, were there requirements for maintaining a permanent gage datum and meeting specified accuracy limits?	☐ Y ☐ N
10. Does the gage data meet the Department's standard to be sufficient to calculate the median of the mean monthly flow rate and volume during the proposed months of diversion?	☐ Y ☐ N
a. If yes, skip to question 168.	
b. If no, answer question 166.b.	
b. If no gage data is available or if available gage data does not meet the Department's standard to be sufficient to calculate the median of the mean monthly flow rate and volume during the proposed months of diversion, is the source otherwise measured?	☐ Y ☐ N
i. If yes,	
1. Submit available measurements to the Department	☐ S
2. Who collected the measurements? _____	☐ A
3. With what method was the data collected? _____ _____	☐ A
4. What is the period of record? _____	
5. What is the frequency of measurement? _____	
6. Are there gaps in the data?	☐ Y ☐ N
a. If yes, what is the nature of the gaps and how are gaps handled to ensure data quality? _____ _____ _____ _____	☐ A
7. Is there a process for maintaining the data and meeting specified accuracy limits?	☐ Y ☐ N

a. If yes, explain. _____ _____ _____	☐ A
8. Does available measurement data meet the Department's standard to be sufficient to calculate the median of the mean monthly flow rate and volume during the proposed months of diversion?	☐ Y ☐ N
a. If yes, skip to question 168.	
b. If no, answer question 167.	
167. For each hydraulically connected surface water source, does the available measurement data, gage and/or otherwise measured, meet the Department's standard of including a minimum of high, moderate, and low flows to be sufficient to use for validation of a department-accepted estimation technique?	☐ Y ☐ N
a. If yes, describe the estimation technique. _____ _____ _____ _____	☐ A
b. If no,	
i. Will measurements be collected prior to submission of a completed Form No. 606P that meet the Department's standard of including a minimum of high, moderate, and low flows to be sufficient to use for validation of a department-accepted estimation technique?	☐ Y ☐ N
1. If yes,	
a. With what method will the data be collected? _____ _____ _____	☐ A
b. What will be the interval of measurement? _____	

c. Describe the proposed estimation technique.	☐ A
2. If no, describe your plan to comply with the measurement requirements for hydraulically connected surface water sources.	☐ A
168. If you are conducting Technical Analysis, how will the Area of Potential Adverse Effect be defined for evaluating changes to net depletions? If the Department is conducting Technical Analyses, write N/A.	☐ A
169. If you went straight to this section when referenced, go back to question 80. If you waited to answer in consecutive order and have completed all prior sections, move to question 170.	

Adequate Means of Diversion and Operation

170. Provide a diagram of how you will operate your system from the point of diversion to the place of use.	■ S
171. Describe specific information about the capacity of the diversionary structure(s). This may include, where applicable: pump curves and total dynamic head calculations, headgate design specifications, and dike or dam height and length. The diversion will consist of an in-line pre-cast conctete flow through structure, integrating flashboard check irons at its default outlet to Ferguson Creek and a slide gate for controlling an 18-inch dia. outlet pipe that discharges into the Ferguson Ditch (north).	☐ A
172. Is the diversion capable of providing the full amount requested through the period of diversion?	■ Y ☐ N

Pass-through capacity of the structure will be 15 cfs down the Ferguson Ck Channel.

173. Describe the size and configuration of infrastructure to convey water from point of diversion to place of use. This may include, where applicable: ditch capacity and/or pipeline size and configuration. Water diverted via the new second primary POD will be released via a short length of 18-inch Diameter PVC PIP pipe integral to the pre-cast concrete diversion structure wall.	☐ A
174. Describe any losses related to conveyance. Seepage - (WP)(I)(LR)(day)/43560 = (5.2)(1,150)(3)(160)/43560 = 65.9 AF; Veg - (0.0075)(1.5)(160)(2) = 3.6 AF Evap - (W)(L)(EvapRate)/43560 = (5)(1,150)[(5/30)*.99+1.47+2.21+4.89+4.55+(5/30)*3.07]/43560 = 1.8 AF --> Tot = 71.3 AF	☐ A
175. Is the conveyance infrastructure capable of providing the required flow and volume and any losses?	■ Y ☐ N
176. Does the proposed conveyance require easements?	■ Y ☐ N
a. If yes, explain. License/easements (as required) may be developed between the Applicants following an authorized change	☐ A
177. Describe any places of storage, including whether drainage devices will be installed, and provide preliminary designs, if available. Preliminary designs will be required at application submittal. N/A	☐ A
178. Describe specific information about how water is delivered within the place of use. This may include, where applicable, the range of flow rates needed for a pivot and output and configuration of sprinkler heads. Within the POU, water is delivered via pressurized mains, secondary diversions and lateral ditches, contour ditches, and overland flood.	☐ A
179. Is the water delivery system capable of providing the requested beneficial use?	■ Y ☐ N
180. Will your system be designed to discharge water from the project?	■ Y ☐ N
a. If yes, explain the way water will be discharged and the wastewater disposal method. Wastewater has historically returned to the McGinnis Creek Channel via gravity overland flow, constructed swales, and secondary ditch returns.	☐ A

181. Provide a plan of operations. The proposed new primary POD will not significantly change the historical methods/operations.	☐ A
182. Can the plan of operations deliver the flow rate and volume for the beneficial use being requested?	■ Y ☐ N
183. Do you have any plans to measure your diversion and use?	■ Y ☐ N
a. If yes, describe the plan and the type of measurements you will take. The flashboard opening of the new diversion structure will act as a simplified sharp crested weir and provide estimates of flows remaining in the historical Ferguson Channel downstream of the diversion. Flow in the Ferguson Ditch will be monitored utilizing a new flume or impeller flowmeter immediately downstream of the discharge into the ditch	☐ A
184. Is the means of diversion a well?	☐ Y ☐ N
a. If yes, are well log(s) available?	☐ Y ☐ N
i. If yes, submit well log(s) to DNRC	☐ S
ii. If no, who drilled the well? _____	

Beneficial Use

185. Why is the requested flow rate and volume the amount needed for the purpose? POD only change	☐ A
186. Does the Department have a standard for the purposes for which water is used? Department standards can be found in ARM 36.12.112.	■ Y ☐ N
a. If yes, does the proposed beneficial use fall within Department standards?	■ Y ☐ N
187. If no standard or if proposed beneficial use falls outside of Department standards, explain how the use is reasonable for the purpose.	☐ A
188. Will your proposed project be subject to DEQ requirements for a public water supply (PWS) system or Certificate of Subdivision Approval (COSA)?	☐ Y ■ N

a. If yes,	
i. Have you researched or consulted with DEQ regarding those requirements?	☐ Y ☐ N
189. Are you proposing to use surface water for in-house domestic use?	☐ Y ■ N
a. If yes, does a COSA exist for the proposed place of use?	☐ Y ☐ N
i. If yes, please submit the COSA.	☐ S
ii. If no, have you researched or consulted with DEQ regarding their requirements?	☐ Y ☐ N

Possessory Interest

190. Do you have possessory interest, or the permission of the party with possessory interest, of the proposed place of use? Proof of possessory interest or permission of the party with possessory interest is required at application submittal.	■ Y ☐ N
a. If no, explain. _____ _____ _____	☐ A

PREAPPLICATION MEETING AFFIDAVIT & CERTIFICATION

"We attest that the information on this form accurately describes the proposed project discussed during the preapplication meeting and that the items marked for follow-up will require the applicant to provide additional information before the form is deemed complete."

"Applicant acknowledges that any information provided by the Department during the preapplication is preliminary and subject to change."

"Applicant acknowledges that if the follow-up information provided to the Department substantially changes the proposed project, for example in a way that alters which sections of the form are applicable or which technical analyses are required, or who is to complete the technical analyses, the applicant will need to schedule a new preapplication meeting so that the department can identify any additional information necessary for completion of the technical analyses (ARM 36.12.1302(3)(c))."

Upon Department receipt of the completed form (within 180 days following the meeting), the Department reserves the first five days of the 45-day period in ARM 36.12.1302(4) or (5) to return the form to the applicant if:

1 – the completed form does not include all necessary follow-up information identified in the meeting, OR
2 – the completed form is not adequate for the Department to proceed with technical analyses, OR
3 – the applicant has elected to complete technical analyses and has not submitted each piece of technical analysis required, OR
4 – the applicant has substantially changed the details of the proposed project, such as in a way that alters which sections of the form are applicable, which technical analyses are required, or who is to complete the technical analyses.

If the Department returns the form to the Applicant within these five days due to reasons 1-3 above, the Applicant can use the balance of their 180-day period in ARM 36.12.1302(4) or (5) to gather the remaining follow-up information needed. If there is no time remaining in the 180-day period, the Applicant can submit a written request for a new preapplication meeting, pursuant to ARM 36.12.1302(2). Even if there is still time remaining, the Applicant can choose to schedule a new preapplication meeting. The Department shall transfer the $500 payment received to the new preapplication meeting, or refund the payment to the Applicant if the Applicant desires. If the Department returns the form to the Applicant within these five days due to reason (4) above, the Applicant must submit a written request for a new preapplication meeting, pursuant to ARM 36.12.1302(2). The Department shall transfer the $500 payment received to the new preapplication meeting, or refund the payment to the Applicant if the Applicant desires.

Randy Bock (Jan 31, 2025 08:55 MST) — Jan 31, 2025

Applicant Signature — Date

Shayne [illegible]son (Jan 31, 2025 10:31 MST) — Jan 31, 2025

Applicant Signature — Date

01/31/2025

Department Signature — Date

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Final Audit Report 2025-01-31

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By:	Lara Andre (landre@wgmgroup.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAARXb-qSCGD0oGogtVxFj0ceB8xoULgK89

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FOLLOW-UP PAGE

Applicant will provide all responses to questions marked for follow-up on a separate document entitled "Follow-up Responses" with the question number labeled. Answer questions in the same format as the form. For responses in the form of checkboxes, write "Y", "N", or "S". Constrain narrative responses to the specific question as is asked on the form; do not respond to multiple questions in one narrative. Label units in narrative responses and tables. Tables must have the exact headings found on the form. Questions that require items to be submitted to the Department may be marked "S" when the required item is attached to the Preapplication Meeting Form. Label all submitted items with the question number for which they were submitted. The Applicant may not alter the Preapplication Meeting Form signed at the Preapplication Meeting. Instead, the Applicant must use the Amended Responses procedure defined below. Do not include additional information for questions not marked for follow-up here; instead include any additional information pursuant to the process for amending responses defined below.

Responses to Follow-up Questions are included in the "Follow-up Responses Attachment."

Questions marked for follow-up	
- 5. add overlapping water rights to map	-
- 6. add overlapping water rights to map	-
- 8.a. just a note, the POD #1 means is "PUMP/HEADGATE W/DITCH OR	- PIPELINE" in the water right record (on the general abstract) Per T. Wilson 4/15/2025 Email.
- 28. add overlapping water rights to map	-
- 40.a.i.2.h.i.1. Expand explanation of how all five overlapping water rights	- were operated together to serve the place of use.
- 40.a.i.2.h.i.2. Volumes contributed in the table should be based on your ex	- planation in 40.a.i.2.h.i.1. of how the overlapping rights operated together.
- We decided after the meeting that we should have marked 40.a.i.2.h.i.1.	- and 40.a.i.2.h.i.2. as follow-up, so I have included them here. Please let me
- know if you would like to discuss further.	-
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AMENDED RESPONSES PAGE

The Applicant may not alter the Preapplication Meeting Form signed at the Preapplication Meeting or the Follow-up Page. If a response has changed to a question answered at the preapplication meeting, the Applicant can provide a new response in a separate document entitled "Amended Responses" with the question number labeled. Answer questions in the same format as the form. For responses in the form of checkboxes, write "Y", "N", or "S". Constrain narrative responses to the specific question as is asked on the form; do not respond to multiple questions in one narrative. Label units in narrative responses and tables. Tables must have the exact headings found on the form. Questions that require items to be submitted to the Department may be marked "S" when the required item is attached to the Preapplication Meeting Form. Label all submitted items with the question number for which they were submitted. The Applicant will mark all question numbers with an amended response in the table below and note for each question whether the response will replace the response given at the preapplication meeting or will provide additional information to consider in conjunction with the response given at the preapplication meeting. The Applicant will return the "Amended Responses" document with the "Follow-up Responses" document and the signed Preapplication Meeting Form.

Questions with amended responses Amended Responses to Pre-App Questions are included in the "Amended Responses Attachment."

8.a - Clerical modification. Update all responses for existing POD #1 legal description to agree with Reexamination updated location.

31 - Clerical modification. Update all responses for existing POD #1 legal description to agree with Reexamination updated location.

39.a.i - Change response to 'No' and select "N".

39a.i.1 - Select "S" and submit Form 606-HUA.

125.g - Add supplemental information to existing response.

174 - Delete response entirely and replace with attached response.

FOLLOW-UP PAGE AFFIDAVIT & CERTIFICATION

"I/we attest that this preapplication meeting form, follow-up page, and amended responses page accurately portray my proposed project. I am aware that my application for this project will not qualify for a discounted filing fee and expedited timelines if upon submittal of the application to the department, I change any element of the proposed application from the preapplication meeting form and follow-up materials (ARM 36.12.1302(6)(a))."

Shayne Jackson
Shayne Jackson (Jul 15, 2025 10:45 MDT)

Jul 15, 2025

Applicant Signature | Date

Randy Bock (Jul 15, 2025 16:26 MDT)

Jul 15, 2025

Applicant Signature | Date

"We confirm that the preapplication form and follow-up information are adequate for the Department to proceed with technical analyses in ARM 36.12.1303. If the applicant has elected to complete technical analyses, we confirm they have submitted each piece of technical analysis required based on the proposed project and the Department is able to proceed with the scientific credibility review (ARM 36.12.1303(8))."

08/01/2025

Department Signature | Date

Department Signature | Date

606P_Change_76C25338 - Follow-up_Amendment Responses

Final Audit Report 2025-07-15

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Randy Bock & Dori Bock AND

Form No. 606P/606-HUA *(Revised 02/2025)* **Applicant Name** Shayne A. Jackson (Jackson Propt)

APPLICATION TO CHANGE A WATER RIGHT

HISTORICAL WATER USE ADDENDUM

§ 85-2-402, MCA

Submit this addendum if you intend to deviate from Department of Natural Resources and Conservation (Department or DNRC) standard practice for evaluating historical use of a water right. Complete a separate addendum ***one time for each*** *water right proposed for change. You may answer* ***one time for all*** *water rights proposed for change that have the same purposes, place of use, supplemental water rights, points of diversion, period of use, conveyance, diverted volume parameters, and consumptive volume parameters. Use a separate addendum for each water right that has different historical use practices.*

Answer every question and applicable follow-up questions. Use the checkboxes to denote yes ("Y") or no ("N"). Questions that require items to be submitted to the Department have a submitted ("S") checkbox, which is checked when the required item is attached to the Historical Water Use Addendum. Label all submitted items with the question number for which they were submitted. Narrative responses that are larger than the space provided can be answered in an attachment. If an attachment is used, mark the see attachment ("A") checkbox on this form and label the attachment with the question number. If no attachment is needed, leave the see attachment ("A") checkbox blank. Constrain narrative responses to the specific question as is asked on the form; do not respond to multiple questions in one narrative. Label units in narrative responses.

Water Right Information

1. Which water right number(s) is being considered for this Historical Water Use Addendum? If the water use is a non-filed water project, write "N/A". 76C 25338 00	☐ A
2. What is the current purpose(s) of the water right(s) listed in question 1? Irrigation	☐ A
a. If the current purpose(s) includes irrigation, continue to question 3.	
b. If the current purpose(s) does not include irrigation, skip to question 11.	

Historical Use: Historical Consumed Volume

3. Do you propose to determine the historical consumed volume (HCV) (not including irrecoverable losses) by utilizing both DNRC calculations and standard values as described in DNRC standard practices and ARM 36.12.1902(16)?	☑ Y ☐ N
a. If yes, this section is complete. Skip to question 6.	
b. If no, continue to question 4.	

4. Do you propose to use the historical consumed volume calculation as described in ARM 36.12.1902(16)?	☐ Y ☐ N
a. If yes, continue to question 5.	
b. If no,	
i. Submit a narrative response describing the methodology proposed to quantify the historical consumed volume, and why this methodology is appropriate.	☐ S ☐
ii. After completing i., skip to question 6.	
5. Which weather station identified in column B of Table 1 in ARM 36.12.1902(16) is most representative of the historical place of use? _____	☐ A
a. Is the proposed weather station located outside of the county of the historical place of use?	☐ Y ☐ N
i. If yes, what factors make the proposed weather station appropriate for quantifying the historical consumed volume? _____ _____ _____ _____	☐ A
b. Do you propose to use the IWR Seasonal Evapotranspiration (IWR Seasonal ET) value associated with the weather station listed above, as described in columns D and E of Table 1 in ARM 36.12.1902(16)?	☐ Y ☐ N
i. If no,	
1. What value (inches) do you propose to use for the seasonal evapotranspiration of the historical place of use? _____	☐ A
2. Submit a narrative response describing why this value is appropriate for the seasonal evapotranspiration of the historical place of use.	☐ S
c. Do you propose to use the County Management Factor percentage associated with the aforementioned weather station, as described in columns F, G, or H of Table 1 in ARM 36.12.1902(16)?	☐ Y ☐ N
i. If no,	
1. What value do you propose to use for the County Management Factor of the historical place of use? _____	☐ A
2. Submit a narrative response describing why this value is appropriate for the County Management Factor of the historical place of use.	☐ S

Historical Use: Field Application Volume & Irrecoverable Losses

6. Do you propose to use DNRC standard practice and administrative rule to determine both the historical field application volume and irrecoverable loss volume?	☑ Y ☐ N
a. If yes, this section is complete. Skip to question 10.	
b. If no, continue to question 7.	
7. Do you propose to use the DNRC standard calculation for determining historical field application volume (FAV)? DNRC standard for calculating field application volume is: $$FAV = \frac{HCV_{not\ including\ IL}}{Irrigation\ Efficiency}$$	☐ Y ☐ N
a. If no,	
i. Submit a narrative response describing the methodology proposed to quantify the historical field application volume, and why this methodology is appropriate.	☐ S
ii. After completing i., skip to question 9.	
8. Do you propose to use DNRC standard practice for determining percent field efficiency based on the irrigation method type and subtype listed in your application? DNRC standard practice for determining field efficiency is based on the September 13, 2012, Department Memorandum: *Development of standardized methodologies to determine Historic Diverted Volume*.	☐ Y ☐ N
a. If no, what percent field efficiency do you propose to use for the historical place of use? _____	☐ A
b. Submit a narrative response describing the factors that influenced the percent efficiency of irrigation.	☐ S
9. Do you propose to use the DNRC standard percentage for irrecoverable losses based on irrigation type?	☐ Y ☐ N
a. If no, what percentage of field applied volume do you propose for irrecoverable losses? _____	☐ A
b. Submit a narrative response describing the factors that influenced the percentage of field applied volume proposed for irrecoverable losses.	☐ S

Historical Use: Historical Diverted Volume

10. Do you propose to use the historical diverted volume calculation as described in DNRC standard practices and ARM 36.12.1902(10)?	☐ Y ☑ N
a. If no,	
i. Submit a narrative response describing the methodology proposed to quantify the historical diverted volume, and why this methodology is appropriate.	☑ S
ii. After completing i., this form is complete.	
11. Did the historical means of conveyance from the point of diversion to the place of use experience conveyance losses?	☑ Y ☐ N
a. If no, this form is complete.	

In conjunction with the narrative response submittal for Question 10, see also the responses for Questions 11, 12, & 13, herein. The Submitted Narrative for 606P-HUA Question 10 is included in the Follow-up & Amended Responses Attachment with the Response for 606P Question 39.a.i.1.

12. Do you propose to use DNRC standard practice to calculate the volume of historical conveyance losses? DNRC standard practice for determining historical conveyance losses is based on the September 13, 2012, Department Memorandum: *Development of standardized methodologies to determine Historic Diverted Volume*.	☑ Y ☐ N
a. If no, submit a narrative response describing the methodology proposed to quantify the historical conveyance loss volume, and why this methodology is appropriate.	☐ S
13. Within the historical conveyance ditch, were there multiple water right users?	☐ Y ☑ N
a. If no, this form is complete. The Applicants share the undivided right 76C 25338. As such, ditches & natural carrier are considered single-user conveyances.	
b. If yes, do you propose to use DNRC standard practice for allocating historical conveyance losses across multi-user ditches? DNRC standard practice for allocating conveyance losses across multi-user ditches is based on the February 14, 2020, Technical Memorandum: *Distributing Conveyance Losses on Multiple User Ditches*.	☐ Y ☐ N
i. If yes, this form is complete.	
ii. If no, submit a narrative response describing the methodology proposed to allocate the historical conveyance loss volume across the users of the historical conveyance ditch, and why this methodology is appropriate.	☐ S

Change Application 76C 30165242

Form 606P: Follow-up & Amended Responses Attachment

Water Right No. 76C 25338-00

Mapping Updates – Addition of Overlapping Water Rights:

606P Questions 5, 6 & 28 (Also applies to Question 125) – Follow-Up Response

The enclosed Historical Use Map and the enclosed Proposed Use & Ditch Map have been updated to include the historical places of use for the overlapping water rights and the proposed places of use for overlapping water rights, respectively.

Refer also to the Follow-Up Response for Questions 40.a.i.2.h.i.1. & 40.a.i.2.h.i.2, which includes descriptions of the supplemental water rights and an explanation of the differing place of use (POU) boundaries.

POD Legal Description – Reexamination & Clerical Corrections:

606P Question 8.a – Amended Response

DNRC's Reexamination of the Fisher River Basin (76C) refined the historical Point of Diversion (POD) of Right 76C 25338 to the SESESE Sec 20 T26N R28W. Previously it was listed in the SWSESE of the same. All POD question responses in the Pre-Application Meeting Change Form beginning with the location of POD #1 (existing) in Question 8.a should be updated to match the Reexamination POD legal "SESESE, Section 20, T26N, R28W" listed on Version 3 of the Split Abstract. The Applicants agree with this reexamination modification to the historical POD legal description.

The Range (Rge) listed in the POD Table for the existing, historical POD #1 and the proposed POD #2 should be corrected to read "28W".

Historical Use Place of Use, Notes Correction:

606P Question 28 – Follow-Up Response

Remove the final sentence of the blue note directly above Question 28. Remove the blue note within the question statement box for Question 28. Check "Y". Uncheck "N".
Refer to the enclosed Historical Use Map (updated).

POD Reexamination Clerical Correction:

606P Question 31 – Amended Response

As previously explained, the historical POD #1 Location in Question 31 should be updated to match the Reexamination POD legal "SESESE, Section 20, T26N, R28W" listed on Versions 2 & 3 of the 76C 25338 Abstract.

Submittal of Historical Use Addendum, Form 606P-HUA (for Historical Diverted Volume Only):

606P Question 39.a.i – Amended Response

Change response to No and select "N".

606P Question 39.a.i.1 – Amended Response

Select "S" response.
The Applicants submit the attached Form 606P-HUA (complemented by the following supplemental narrative) and propose to amend the DNRC's standard Historical Diverted Volume (HDV) calculation methodology considered as part of this change according to the following rationale.

As stated in Form 606P, the place of use exists within Climatic Area 6. As there are no given standards for Climatic Area VI, The Applicants agree with the DNRC's practice of reverting to the closest standards available which are those of Climatic Area V, including a diversion period of April 25 - October 5.

The Applicants' proposed modified HDV calculation includes the standard diverted volume determined with ARM 36.12.1902 and proposes that the ARM calculation be supplemented with additional volume to account for historically diverted early season flows which have been utilized to saturate soil profiles in preparation for the growing season as well as historically diverted fall irrigation flows aimed at replenishing carryover moisture and sustaining nutrition and growth for fall grazing within the historical places of use. The Applicants assert that historical and current operational practices support the consideration of additional diversions and diverted volumes, which precede and ensue the IWR software's standard months of crop irrigation water demand (June 1 through August 31) for the place of use.

Net Irrigation Water Requirements for the Applicants' properties based on the Blaney Criddle (TR21) Method for the Libby 32 SSE Weather Station (MT 5020, 3,600 ft) as reproduced by DNRC's Standard Program Settings for the Irrigation Water Requirement (IWR) Program follow.

Table 39.a.A Amended Response
DNRC Standard IWR Net Irrigation Requirements
for McGinnis Meadows POU serviced.

Month	Total Monthly ET [inches][1]	Dry Year[2] Net Irrigation Requirement [inches][3]
January	0.00	0.00
February	0.00	0.00
March	0.00	0.00
April	0.00	0.00
May	0.97	0.00
June	4.61	2.99
July	5.65	4.85
August	4.89	3.22
September	0.13	0.00
October	0.00	0.00
November	0.00	0.00
December	0.00	0.00
Total	**16.25**	**11.06**

The subsequent tables summarize the historical consumptive volume (HCV) for the place of use, which was determined based on the standard procedures in ARM 36.12.1902.

[1] ET Evapotranspiration is adjusted upwards 10% per 1000 meters above sea level.
[2] In a Dry Year, growing season effective precipitation will be equaled, or exceeded, 8 out of 10 years (80% chance of occurrence).
[3] DNRC standard net irrigation requirements are adjusted for 1.0 inches carryover moisture used at the beginning of the season and 1.0 inches of carryover moisture used at the end of the growing season.

Table 39.a.B Amended Response
Summary of DNRC Standard Historical Consumptive Volume (HCV) (All Rights)
for POU Serviced

Historical Irrigation Types *Procedural Steps*	***200 Ac POU for Proposed Change Application – Right 76C 25338 and Supplemental Rights 76C 25339, 76C 25340, 76C 25341& 76C 25342***		
	Sprinkler Portion (12 Acres) [6% Total Acreage]	**Contour Flood Portion** (75 Acres) [38% Total Acreage]	**Wild Flood Portion** (113 Acres) [56% Total Acreage]
1. Identify the applicable weather station	**Libby 32 SSE (3,600 ft)**		
2. Use standard IWR Prog. inputs to find ET inches	**11.06**		
3. Identify the county management factor %	**47.1%**		
4. Multiply IWR estimate by the management factor.	**5.21 inches** (5.209 = 11.06 x .471)		
5. Multiply the total historical acres in POU by result found in #4 above to determine historical consumptive inches for those acres	**62.51 Acre-Inches** (62.511 = 5.209 x 12)	**390.68 Acre-Inches** (390.675 = 5.209 x 75)	**588.62 Acre-Inches** (588.617 = 5.209 x 113)
6. Divide result found in #5 by 12 in/ft to determine historical consumptive use volume (HCV) in AF	**5.21 Acre-Feet** (5.209 = 62.511 / 12)	**32.56 Acre-Feet** (32.556 = 390.675 / 12)	**49.05 Acre-Feet** (49.051 = 588.617 / 12)
Total Hist. Consumed Volume w/o Irre-coverable Losses (IL)	**86.82 Acre Feet** (86.82 = 5.21 + 32.56 +49.05)		

7. Identify On-Farm Efficiency	**70%**	**55%**	**25%**
8. Identify Irrecoverable Loss %	**10%**	**5%**	**5%**
9. Divide HCV by On-Farm Efficiency and multiply by IL percentage	**0.74 Acre-Feet** (0.744 = (5.209 / 0.70) x 0.1)	**2.96 Acre-Feet** (2.960 = (32.556 / 0.55) x 0.05)	**9.80 Acre-Feet** (9.801 = (49.051 / 0.25) x 0.05)
10. Add IL Volume to HCV	**5.95 Acre-Feet** (5.953 = 0.744 + 5.209)	**35.52 Acre-Feet** (35.516 = 2.960 + 32.556)	**58.85 Acre-Feet** (58.851 = 9.801+ 49.051)
Total Historical Consumptive Volume with IL	**100.32 Acre-Feet** (100.32 = 5.95 + 35.52 + 58.85)		

Based on the preceding calculation of HCV—and the 32.9% Duty Factor (DF) outlined in the *Duty of Water* narrative within the Follow-Up Response for Questions 40.a.i.2.h.i.1. & 40.a.i.2.h.i.2 herein—the following table demonstrates the DNRC standard historical diverted volume as calculated per ARM 36.12.1902 and as attributed to Ferguson Creek under Right 76C 25338.

Table 39.a.C Amended Response
Summary of DNRC Standard Historical Diverted Volume (HDV) Right 76C 25338 for POU serviced.

Historical Irrigation Types *Standard HDV procedure*	***200 Ac POU for Proposed Change Application Proposed HDV for Right 76C 25338 Only***		
	Sprinkler Portion (12 Acres) Piped – No Losses	**Contour Flood Portion** (75 Acres) [40% of Flood Acreage]	**Wild Flood Portion** (113 Acres) [60% of Flood Acreage]
1. Total Historic Consumptive Volume w/o IL As determined by 36.12.1902.	**5.21 Acre-Feet**	**32.56 Acre-Feet**	**49.05 Acre-Feet**
2. Right 76C 25338 portion of the $HCV_{25338.}$ Multiply Row 1 by DF (32.9%) Refer to Duty of Water. [4]	**1.71 Acre-Feet** (1.71 = 5.21 x 0.329)	**10.71 Acre-Feet** (10.71 = 32.56 x 0.329)	**16.14 Acre-Feet** (16.14 = 49.05 x 0.329)
3. Determine On-Farm Efficiency	**70%**	**55%**	**25%**
4. Determine Seepage Loss	0.00	6.26 Acre-Feet	6.05 Acre-Feet
5. Determine Vegetation Loss	0.00	1.19 Acre-Feet	0.90 Acre-Feet
6. Determine Ditch Evaporation	0.00	0.03 Acre-Feet	0.05 Acre-Feet
7. Determine Total Conveyance Loss	**0.00**	**7.48 Acre-Feet**	**7.00 Acre-Feet[5]**
8. Divide the HCV by the On-Farm Efficiency. Then add the total Conveyance Loss.	**2.44 Acre-Feet** (2.44 = 1.71 / .70 + 0)	**26.95 Acre-Feet** (26.95 = 10.71 / .55 + 7.48)	**71.56 Acre-Feet** (71.56= 16.14 / .25 + 7.00)
Subtotal Historical Diverted Volume per Standard in ARM 36.12.1902	**100.95 Acre-Feet** (100.95 = 2.44 + 26.95 + 71.56)		
Total Historical Diverted Volume Per 606P-HUA for Right 76C 25338-00	**274.20 Acre-Feet** $HDV_{Total} = HDV_{pre} + HDV_{ARM\ 36.12.1902} + HDV_{post}$[6] (274.20= 148.50 + 100.95 +24.75 AF)		

Even though historical diversions and applications typically started around the date of April 25, the calculations of the HDV in the preceding table are based upon the HCV, therefore losses in the conveyance system downstream of the confluence of Ferguson and McGinnis Creeks are determined only during the course of the 92 days of irrigation demand as determined by the DNRC's Standard IWR Program inputs. (June 1 to August 31).

[4] Based on the proposed *Duty of Water* discussion within the Follow-up Response for Questions 40.a.i.2.h.i.1. & 40.a.i.2.h.i.2, the Applicant asserts that a Duty Factor of 32.9% should be applied to the total historical consumptive volume attributable to Right 76C 25338 for the 200-Ac supplemental place of use.
[5] For conciseness, the calculations used to produce the historical conveyance loss components for Ferguson Creek Water Right 76C 25338 (in rows 4, 5 and 6) are included in the Supplementary Materials Attachment.
[6] Refer to the proposed modified HDV calculations following.

The Applicants affirm that historically, Ferguson Creek's early runoff flows have been diverted and beneficially applied to the POU for irrigation as soon as practicable beginning in April. The Applicants and their predecessors have typically made use of early season flows in conjunction with McGinnis Flows to sufficiently saturate soil profiles for the growing season, then later as supplemental fall irrigation aimed at replenishing carryover moisture and sustaining nutrition for fall and post-harvest grazing. The Applicants have sustained these historical diversion practices as being necessary for maximizing yields during the growing period and improving forage after the harvest.

For this proposed change, April 25th has been utilized as the initial historical diversion date, which coincides with DNRC's Area V standards and aligns roughly with typical operational practices. Based upon mean temperature data, the DNRC's Standard IWR Program inputs present May 24th as the start date for growth, with net irrigation demand estimated to commence on June 1st. However, based upon the noted historical beneficial diversion practices (and monthly mean flow estimates), the Applicants propose that 30 days of irrigation diversion at full flow rate (2.5 cfs) within the period between April 25 to June 1st be added to the standardized HDV value as calculated by ARM 36.12.1902 [Subtotaled Previously: 100.95 AF] for Ferguson Creek according to the following:

$$HDV_{pre} = (Maximum\ Flow\ Rate)(Conversion\ Factor)(No.\ Days\ Diverted)$$

$$HDV_{pre} = (2.5\ cfs)(1.98\ Ac\text{-}ft/day\ per\ cfs)(30\ days)$$

$$\mathbf{HDV_{pre} = 148.50\ Acre\text{-}feet.}$$

Similarly, based upon historical practices, the Applicants propose that 25 days of Ferugson Creek diversion (at the mean monthly flow rate of 0.5 cfs) be added to the HDV subtotal for the period between September 1 and the typical diversion end date of October 5. The proposed 25 day irrigation period allows for up to ten-days of non-diversion in order to cut and bale potential third-cutting hay following the end of the growth period.

$$HDV_{post} = (Mean\ Monthly\ Flow\ Rate)(Conversion\ Factor)(No.\ Days\ Diverted)$$

$$HDV_{post} = (0.5\ cfs)(1.98\ Ac\text{-}ft/day\ per\ cfs)(25\ days)$$

$$\mathbf{HDV_{post} = 27.75\ Acre\text{-}feet.}$$

Based on the historical and current beneficial application of these additional diverted volumes between April 25 and October 5, **the Applicant proposes that the total historical diverted volume of Ferguson Creek under Right 76C 25338 be accounted as 274.20 AF**, determined as follows.

$$HDV_{Total} = HDV_{pre} + HDV_{ARM\ 36.12.1902} + HDV_{post}$$

$$HDV_{Total} = 148.50 + 100.95 + 24.75\ AF$$

$$\mathbf{HDV_{Total\ 25338} = 274.20\ AF}$$

Refer also to the responses to 606P-HUA Questions 10, 11, 12 & 13 as well as the follow-up response to Questions 40.a.i.2.h.i.1. & 40.a.i.2.h.i.2.

Clarification –Supplemental Rights Operations, Contributions to Irrigation Water: Duty of Water

606P Questions 40.a.i.2.h.i.1. & 40.a.i.2.h.i.2 – Follow-Up Response:

Clarification and Summary of Supplemental Rights

The following table summarizes the supplemental water rights that share a portion of their POU with subject right 76C 25338. The POUs for the following five water rights were originally deemed congruent by the DNRC's claims reviewers. However, the ownership split creating right 76C 30165589 removed 22 acres, which were located outside of the Applicants' composite property boundary.

The Applicants note that the volume elements on the abstracts for the individual rights were modified by the DNRC's Reexamination of Fisher River Basin 76C. These examination modifications were made following submittal of the Applicant's Certification of the Pre-Application Meeting Form. The volume remarks for each of the rights listed in the table following now read: "The total volume of this water right shall not exceed the amount put to historical and beneficial use".

Table 40.a.i.2.h.i.A – Follow-up
Water Rights with Overlapping Places of Use

Water Right No.	Priority Date	Source	Flow Rate [cfs]	Acres
76C 25338 00	8/26/1903	Ferguson Creek	2.5	200
76C 25339 00	10/9/1931	McGinnis Creek	6.0	222[7]
76C 25340 00	10/11/1941	McGinnis Creek	3.0	222
76C 25341 00	4/18/1919	McGinnis Creek	6.0	222
76C 2534200	10/9/1931	McGinnis Creek	3.0	222

Basin Characteristics and Estimated Monthly Flows

The Ferguson Creek Basin is a comparatively small catchment with roughly 1.4 square miles of area (as measured on a flat projection). By contrast, the McGinnis Creek Basin covers roughly 17 square miles upstream of the existing historical POD #1, which is located at the confluence of the historical Ferguson Creek Channel with McGinnis Creek (in the SESESE of Sec. 20, Township 26N, Range 28W).

The McGinnis Creek Basin is mostly forested, including gradually sloping, grassy bottom meadows in the low-lying areas fringing the creek. Based upon USGS StreamStats analytics, 72% of the basin is estimated as coniferous forest cover. With a mean basin elevation of approximately 4,140 feet and a maximum elevation of 5,480 feet, the McGinnis sub-basin above the confluence flows from an appreciably larger and more diverse catchment than the Ferguson Basin. There are no active stream gaging sites on the McGinnis Channel within the project vicinity. Based upon a simplified basin regression analysis, the USGS StreamStats Web Applet has produced the following mean monthly flow estimates for McGinnis Creek (immediately upstream of the confluence point with Ferguson Creek).

[7] All McGinnis Creek supplemental rights: The supplemental POU under consideration for this application for water right change is 200 acres. Refer to the ownership split, which removed 22 of the original 222 acres from the POU of right 76C 25338 to create right 76C 30165589.

Table 40.a.i.2.h.i.B – Follow-up
Statistical Estimates
of McGinnis Creek Mean Monthly Flow
at POD #1 Confluence

Month	Statistical Mean Flow [cfs]
January	2.5
February	2.6
March	4.1
April	9.5
May	18.3
June[8]	15.3
July	6.5
August	3.7
September	2.8
October	2.7
November	2.8
December	2.6

The Ferguson Creek Basin is characterized as a mountainous grassland with shrubs and pine trees. USGS spatial analytics compute that roughly 44 percent of the basin is forest-covered. The basin's forested areas are comprised predominantly of developing growth with a few matured, tree stands. The Ferguson Basin has a mean basin elevation of approximately 4,372 feet and a maximum elevation of 5,060 feet. Due to its smaller expanse, steeper canyon slopes, and less mature tree canopy, the Ferguson Basin is distinguished by a heavier, contracted runoff period beginning earlier in April and May, followed by more limited flows in the summer and fall seasons. Summer and late season flows are typically sustained by shaded melt, spring flow, and runoff contributions within the Ferguson Canyon. The Ferguson Catchment is too small to meet the typical regression techniques employed by USGS StreamStats. As such, the following flow information for Ferguson Creek has been prepared based upon a technical engineering review, onsite measurements, site topography, basin statistics (via USGS SIR 2015-5019-G[9])[10], and the experiences and observations of the Applicants as water rights holders and diversion operators.

[8] Gray shading indicates the months where net irrigation demand is anticipated via the IWR Program and Standard DNRC Program Settings, which include a growth period of May 24 to September 1.
[9]Methods for Estimating Streamflow Characteristics at Ungaged Sites in Western Montana Based on Data through the Water Year 2009.
[10]Mean monthly streamflows for Fergusson Creek were estimated using USGS SIR 2015-5019 based upon basin area (A) and the approximate percentage of basin slopes steeper than 1:1 (SLP_{50}). Flows were adjusted and corroborated by the Applicants' operational knowledge and WGM Group's hydrological review. In the case of Ferguson Creek, the basin slope factor (SLP_{50}) was approximated at 10%. Although the drainage area of Ferguson Creek (1.4 Sq. Mi.) is less than the smallest basin analyzed within the SIR study data sample set (6.4 square miles), the flow table presented is presented as representative of Ferguson Creek Hydrology.

Table 40.a.i.2.h.i.C – Follow-up
Observational Estimates
of Ferguson Creek Mean Monthly Flow
at POD #1 Confluence

Month	Observational Mean Flow[1,2] [cfs]
January	0.3
February	0.4
March	1.1
April	2.7
May	2.5
June[11]	1.3
July	0.8
August	0.6
September	0.5
October	0.5
November	0.5
December	0.4

During the three months predicted by the Irrigation Water Requirement (IWR) Program to have net irrigation demand, the estimated monthly proportions of Ferguson Creek flow within the total composite mean flow, including McGinnis Creek near the confluence are 8%, 11.0%, and 14.0% for June, July, and August, respectively.

For ease of calculating historical conveyance losses, the proposed change application assumes an average Ferguson flow contribution of 11% to the combined total flows in the McGinnis Creek natural carrier, throughout June, July, and August.

Table 40.a.i.2.h.i.D – Follow-up
Assumed Average Flow Contributions to the McGinnis Channel at the POD #1 Confluence
for Ferguson Creek Conveyance Loss Estimation

Creek	Percentage of Flow
Ferguson	11%
McGinnis	89%

The preceding tables present mean monthly flow estimates based upon statistical predictions of hydrologic availability as well as operational observations of Ferguson Creek and McGinnis Creek. In reality, there exist several unrelated McGinnis Creek water rights with points of diversion located upstream of the Ferguson-McGinnis confluence. Diversions of McGinnis Water upstream of the confluence would reduce McGinnis Creek's contributions and increase the proportionate percentage of contributing historical Ferguson Flows in the natural carrier as compared to *Table 40.a.i.2.h.i.D*. Therefore, relative to Historical Diverted Volume (HDV) calculations/discussions presented herein, the representation of Ferguson Creek's average flow contributions—and therefore the conveyance losses

[11] Gray shading indicates the months where net irrigation demand is anticipated via the IWR Program and Standard DNRC Program Settings, which includes a growth period of May 24 to September 1.

estimated—may be less than actual. The Applicants consider this approach to be conservative from the standpoint of this proposed Change Application 76C 30165242 as the calculated HDV may be less than actual due to upstream diversions of McGinnis Flow contributions.

Diversion History

As mentioned, historical POD #1 is located concurrent with the confluence of the historical Ferguson Creek Channel with McGinnis Creek. At POD#1, Ferguson water comingles with McGinnis Creek Water. From there, the McGinnis Creek Channel is utilized as a natural carrier of Ferguson Diversions with several secondary diversion points located downstream. The ensuing "Duty of Water" discussion describes the ways in which the rights for co-mingled Ferguson and McGinnis flows have historically been operated together to serve the overlapping portions of their POUs.

A flashboard check/culvert structure across McGinnis Creek is located immediately downstream (roughly 220 feet) of historical POD #1. A pumping system was installed downstream of the confluence. The Koebel Ditches continued to be utilized as well. In the 1990s, the pumping network was upgraded to include the two pumps, which are described in Form 606P, Question No. 33.b. The pressure distribution network was also upgraded around the same time and portions (not all) of the Koebel Ditch system were retired subsequently.

The locations of several secondary PODs (2POD) for Feguson Creek Water (along the McGinnis Chanel as a natural carrier) are shown on the 'follow-up' *Historical Use Map*. The pump location is situated downstream of the confluence. The other depicted historical 2PODs distributed irrigation flows to various portions of the flooded POU via portions of the Koebel Ditch network, swales, contour ditches, natural topography, secondary/tertiary berms, and moveable checks and tarps. The gravity network remains in use. The two 2PODs shown nearest the Bock Property boundary spread water to the southern historical areas of contour and wild flood. Through each of these 2PODS, water is supplied to the POU via an approximate conveyance length of 2,350 feet measured from POD#1. The northern 2POD depicted is located an additional 2,200 feet downstream (roughly 4,550 feet measured from POD#1). It distributes water to the northern areas of the historically flooded POU.

Duty of Water – Typical Combined Flows Beneficially Utilized to Irrigate the POU

As noted, the 200-acre place of use has historically been irrigated by diversions of Ferguson Right 76C 25338 co-mingled with flows from the four supplemental McGinnis Creek water rights summarized in Table 40.a.i.2.h.i.A

With its relatively abrupt canyon slopes, steeper gradient, and less influential tree cover, the Ferguson Basin typically produces contracted runoff peaks beginning earlier in April and May (as compared to McGinnis Creek). Peak Ferguson Creek flows are often followed by lesser, sustained flow rates in the summer and fall seasons. As such, the rightholders have typically relied on the early season peaks of Ferguson Creek (along with McGinnis Creek base flows) to help saturate soil profiles leading into the growing season, then as combined flows for irrigation during the growing season. Finally, the composite Ferguson and McGinnis Creek Diversions have also been used as fall irrigation aimed at replenishing carryover moisture and sustaining nutrition for fall grazing within the historical places of use.

Duty of Water Table 40.a.i.2.h.i.E (following) is provided to demonstrate the approximate seasonal ratios as part of the typical composite water diversions from Ferguson Creek and McGinnis Creek for beneficial application on the 200.0 acre POU. The flow ratios within the presented diversion sub-periods can vary due to fluctuating annual cycles of water availability within each of the two sources.

Table 40.a.i.2.h.i.E represents the typical supplementary diversion approximation based on the historical irrigation practice of diverting all available Ferguson Water (up to 2.5 cfs) into the McGinnis Creek Channel and using the co-mingled flows to irrigate the place of use. Typical estimates of Ferguson Flows have been integrated based upon Table 40.a.i.2.h.i.C. However, because Ferguson Right 76C 25338 is the senior right, it has historically been used to its fullest availability during each of the diversion sub-periods and supplemented with the four McGinnis Rights in varying amounts throughout the seasonal diversion sub-periods. For this reason, the diverted duty of Ferguson Creek (under Right 76C 25338) is represented herein with typical diversion rates based on the estimated monthly mean flows as well as flows 'up to' the maximum 2.5 cfs (based upon availability). When flows are available, the McGinnis Creek always contributes at least 5.09 cfs to the composite flow during the irrigation season (within the shared POU).

As determined by ARM 36.12.1902, the historical consumptive volume (HCV) for the 200-acre place of use, including irrecoverable losses, is 100.32 Acre-Feet (AF). For simplicity, the *Duty of Water Table* (following) represents the total HCV as being evenly consumed during each of the three crop demand months (33.44 AF per). Refer to the Amended Response for 606P Question 39.a.i.1 for preliminary details used in the preparation of the HCV value.

Table 40.a.i.2.h.i.E – Follow-up
Duty of Water
For Composite Irrigation Flows for Supplemental Irrigation
By Diversion Sub-Period

Diversion Sub-Period	Duty of Ferguson Creek Right 76C 25338	Standardized Duty of McGinnis Creek[12]	Standardized Composite Irrigation Flow Rate
April 25 to May 31	33% Typical Up to 2.50 cfs **2.50 cfs Typical**	67% Typical Up to 7.59 cfs **5.09 cfs Typical**	7.59 cfs
June 1 to June 30 (first cutting) 33.44 AF	17% Typical Up to 2.50 cfs **1.30 cfs Typical**	83% Typical Min. 5.09, Up to 7.59 cfs **6.29 cfs Typical**	
July 1 to July 31 (second cutting) 33.44 AF	11% Typical Up to 2.50 cfs **0.80 cfs Typical**	89% Typical Min. 5.09, Up to 7.59 cfs **6.79 cfs Typical**	
Aug. 1 to Aug 31 33.44 AF	8% Typical Up to 2.50 cfs **0.60 cfs Typical**	92% Typical Min. 5.09, Up to 7.59 cfs **6.99 cfs Typical**	
Sept. 1 until Oct. 5 (third cutting/grazing)	7% Typical Up to 2.50 cfs **0.50 cfs Typical**	93% Typical Up to 7.59 cfs **7.09 cfs Typical**	

[12] The Standardized Duty is common to the group of supplementary McGinnis Rights as listed in Table 40.a.i.2.h.i.A and is applicable over the 200 supplemental acres only. The Standardized Duty Flow Rate is not intended to be assigned to any one McGinnis Right, or any particular combination of McGinnis Rights. The Standardized McGinnis Creek Duty(s) shown do not consider the 22 acres outside of 76C 25338's POU. Within the context of this Change Application, the Applicants make no assertions as to the sub-proportions of flow rates, HCV, or HDV pertaining to the four individual supplemental McGinnis Creek water rights.

Along with historical operational practices, the sub-period combinations of the total approximate combined flows presented within the *Duty of Water Table* are based (in part) on the DNRC standard examination flow rate guideline, which attributes 17 gpm as reasonable to irrigate one acre of alfalfa crop. Applying this claim examination guideline loosely to the 200 acres within the historically irrigated POU yields the following composite irrigation flow requirement for the supplemental place of use:

Standardized Composite Irrigation Flow Rate for POU = (17 gpm/acre)(200 acres)/(448 gpm per cfs)

Standardized Composite Irrigation Flow Rate for POU = 7.59 cfs

When the foregoing flows have been available, the entirety of Ferguson Creek (but not more than 2.5 cfs under Right 76C 25338) has been diverted for beneficial use. There are no more senior appropriators on this source or on McGinnis Creek. For the purposes of this analysis (and change application) the Applicants attribute the entirety of the maximum flow rate (2.5 cfs) to irrigating the 200-acre POU under right 76C 25338. This assertion is founded upon the Applicants' collective decades of operation and diversion of Ferguson Creek within their composite property boundary only.

During periods when Ferguson Creek has been available for diversion at the maximum flow rate (2.5 cfs) throughout the growing season, the following relationship describes Right 76C 25338's contribution to the POU's historically consumed volume:

Duty Factor = DF

DF_{25338} = *(Feguson Max. Flow Duty / Standardized Composite Irrigation Flow Rate)*

DF_{25338} = *(2.50 cfs/7.59 cfs)*

DF_{25338} = *32.9%*

Therefore, the Applicant asserts that up to 32.9% of the total historical consumptive volume, in the amount of 33.04 AF (including IL), is attributable to Right 76C 25338 for the 200-Ac supplemental place of use.

$HCV_{Max\ 25338}$ = (DF_{25338})(33.44 AF)(each of the 3 diversion sub-periods)

$HCV_{Max\ 25338}$ = (2.50 cfs/7.59 cfs)(33.44 AF)(each of the 3 diversion sub-periods)

$HCV_{Max\ 25338}$ = Up to 33.04 AF

During years when at least 2.5 cfs of Ferguson Creek has been available under Right 76C 25338 throughout the growing season, the following relationship describes McGinnis Creek's minimum contribution to the POU's historical consumed volume.

$HCV_{Min\ McGinnis}$ = (5.09 cfs/7.59 cfs)(33.44 AF)(each of the 3 diversion sub-periods)

$HCV_{Min\ McGinnis}$ = 67.28 AF

However, because the Ferguson Basin is not as robust a supply as McGinnis Creek, there have been drier periods when the 200-ac POU has been supplied by McGinnis Creek alone. In such times, the HCV of the McGinnis Creek under the four supplemental water rights is attributable to the maximum McGinnis Creek supply flow rate of 7.59 cfs. **Therefore, the Applicants propose that between 67.1% and 100.0 % of the total historical consumptive volume in an amount up to 100.32 AF can be attributed to the McGinnis Rights for the 200-Ac supplemental place of use**.

$$HCV_{Max\ McGinnis} = (7.59\ cfs/7.59\ cfs)(33.44\ AF)(\text{each of the 3 diversion sub-periods})$$

$$\boldsymbol{HCV_{Max\ McGinnis} = Up\ to\ 100.32\ AF}$$

Under the proposed change, the actual combined consumed volumes will not exceed the historical consumptive volume of 100.32 AF per year.

$$\boldsymbol{HCV_{McGinnis} + HCV_{25338} \leq 100.32\ AF}$$

Considerations for the Proposed Addition of the Second Primary Point of Diversion, POD#2

The proposed addition of the second primary POD in SWNESW Section 20, T26N, R28W will not alter or expand the historical place of use. The new diversion will better fit current site conditions and allow the Applicants to more efficiently manage water deliveries to portions of the POU. The Applicants' combined diversions between existing POD #1 and the proposed POD#2 will not exceed the historical maximum diverted flow rate or historical volume consumed under right 76C 25338.

As described in the "*Adequate Means of Diversion and Operation*" section of submitted Form 606P, the Applicant's proposed operational system will be updated following the addition of POD#2 to incorporate reliable measurement points, flumes, and/or propeller flowmeters. These measuring devices will provide transparency and allow the Applicants to monitor the combined diversions at POD#1 and POD#2. The combined diversion rates will not exceed a total of 2.5 cfs under Right 76C 25338.

The proposed addition of POD#2 will not alter the historically consumed volume of Ferguson Creek water under Right 76C 25338. The Applicants acknowledge that the proposed Ferguson Ditch downstream of POD#2 will create new conveyance losses. However, the corresponding reduction in Ferguson flows diverted at the POD# 1 confluence represents a decrease in the historical Ferguson conveyance losses within the natural carrier of McGinnis Creek. Any net change in conveyance losses as a result of the proposed change is argued to be non-significant as it will not adversely impact any of the Ferguson Creek or McGinnis Creek appropriators in the areas immediate to the proposed system and diversion modifications. Together, the Applicants own the property along McGinnis Creek for a distance of 1.2 miles downstream of existing POD#1 (and for a distance roughly 0.5 miles downstream of proposed POD#2's position relative to the McGinnis Channel). The proposed combination of POD#1 and POD#2 flows will be measured and monitored at locations proximate to the diversion points. Flows will be adjusted such they will not exceed a total of 2.5 cfs under Right 76C 25338. As discussed, due to the seniority of this Ferguson Right, there have been instances when the rightholders have diverted it at its full flowrate of 2.5 cfs throughout the entire period of diversion. Therefore, because combined diversions will not exceed 2.5 cfs, the proposed change application will not increase the overall historical diverted volume under the right, regardless of conveyance loss considerations.

Proposed Conveyance Ditch Properties:

606P Question 125.g. – Amended Response

Add the following additional information after the existing statements:

"The USDA's Web Soil Survey indicates that the proposed Ferguson Ditch will be constructed predominantly within the Andic Dystric Eutrochrept Soil Units. The established ditch bottom is likely to be populated by surfacial cobbles. However, within the hyporheic zone, soil materials are expected to be comprised of Silty Loams with Sand (CL-ML). Based on the anticipated sub-soil type and *Seepage Loss Figure 2-50* (see Change Application Manual), the seepage loss rate (LR) for soils underlying the proposed Ferguson Ditch is estimated at 0.6 ft^3/ft^2 per day.

$$LR = 0.6\ ft^3/ft^2\ per\ day$$

Description of Conveyance Losses in Proposed New Ferguson Ditch:

606P Question 174 – Amended Response

Replace the response entirely with the following:

The following calculations are performed according to ARM 36.12.1902(10) and detail the conveyance losses anticipated within the proposed Ferguson Ditch from the proposed POD#2 to the first proposed secondary diversion point on the proposed ditch. The ditch length (l) between these points is approximately 1,150 feet.

$$L = 1{,}150\ ft\ \ [0.218\ miles]$$

According to the DNRC's standard administrative procedures, the total Conveyance Loss (CL) is the sum of Seepage Loss (SL), Vegetative Loss (VL) and Ditch Evaporation (DE) in acre-feet.

$$CL = SL + VL + DE$$

The seepage loss term is defined as follows:

$$SL = (WP)(l)(LR)(D)/(43{,}560\ ft^2/acre)$$

For this determination, the Applicant anticipates an average diverted flow rate (FR) of 1.5 cfs through the proposed Ferguson Ditch, which is assumed to represent a flow depth of 1.0 feet within the ditch. The ditch bottom width will be approximately 3.0 feet. Assuming side slopes of approximately 1H:1V in a trapezoidal channel, the average diverted flow will occupy a top width (W) of 5.1 feet and a wetted perimeter (WP) of approximately 5.2 feet. The number of days (D) is set at 92 (June 1 to August 31) to align with the calculations for the historical consumptive volume. Diverted flows are assumed to arrive at the POU (and secondary diversions) in under a day's time following ditch saturation.

$$SL = (5.2\ ft)(1{,}150\ ft)(0.6\ ft^3/ft^2\ per\ day)(92\ days)/\ (43{,}560\ ft^2/acre)$$

$$\mathbf{SL = 7.58\ AF}$$

The vegetative loss in the proposed length of Ferguson Ditch is described following:

$$VL = (0.0075/mile^{13})(FR)(D)(l)(2^{14})$$

$$VL = (0.0075/mile)(1.5\ cfs)(92)(0.218\ miles)(2\ AF\ per\ cfs\text{-}days)$$

$$\mathbf{VL = 0.45\ AF}$$

The DNRC's Gridded Net Monthly Evaporation rates over the 92-day (June 1 to August 31) irrigation water requirement period were utilized to determine the project Evaporation Rate for these conveyance loss calculations.

$$ER = (ER_{Jun} + ER_{Jul} + ER_{Aug})/(12\ in/ft)$$

$$ER = (1.472\ in + 2.217\ in + 4.894\ in)/(12\ in/ft)$$

$$ER = 0.715\ ft$$

The ER is utilized to estimate evaporation of water off the flowing surface of the proposed Ferguson Ditch with the relationship following:

$$DE = (W)(l)(ER)$$

$$DE = (5.1\ ft)(1{,}150\ ft)(0.715\ ft)/(43{,}560\ ft^2/acre)$$

$$\mathbf{DE = 0.10\ AF}$$

The total conveyance loss for the proposed Ferguson Ditch is estimated at 8.13 AF:

$$CL_{Prop} = 7.58 + 0.45\ AF + 0.10\ AF$$

$$\mathbf{CL_{Prop} = 8.13\ AF}$$

However, as previously noted, it is important to consider that diverting an average of 1.5 cfs (of the maximum 2.5 cfs) into the proposed Ferguson Ditch will reduce the analogous seepage and vegetative loss components of the Ferguson diversion within the McGinnis natural carrier by approximately 60% of the historical value.

$$CL_{Hist\ Reduction} = (6.26 + 6.05 + 1.19 + 0.90\ AF)(60\%\ )$$

$$\mathbf{CL_{Hist\ Reduction} = 8.64\ AF}$$

Combined, the reduction in conveyance losses in the McGinnis Carrier anticipated as a result of proposed POD#2 diversions (averaged at 1.5 cfs) is approximated at 8.64 AF, which is greater than the new conveyance losses estimated for the proposed Ferguson Ditch due to the change application.

[13]Percent loss is defined by the 1993 NEH Standard of 0.75% loss/mile.
[14] Approximate conversion factor from flowrate (in cfs) over a day to ac-ft. Actual value is 1.98 AF per cfs-day.

Change Application 76C 30165242

Form 606P: Supplementary Materials Attachment

Water Right No. 76C 25338-00

Historical Volume Formulas

Historical Consumptive Volume without Irrecoverable Losses - 36.12.1902(16)

$$HCV(without\ IL)[AF] = \frac{County\ Seasonal\ ET\ [in] \times County\ Management\ Factor\ \times Historic\ POU\ [acre]}{12\ [\frac{in}{ft}]}$$

Historical Irrecoverable Losses - 36.12.1902(17)

a. $Historical\ Irrecoverable\ Losses = \frac{Volume_{historical\ consumptive\ use}}{On\ Farm\ Efficiency} \times (5\%\ or\ 10\%)$

b. If a historical place of use was irrigated by both flood and sprinkler irrigation, find the apportioned consumptive use and field application volume for each irrigation method on the historically irrigated acres and repeat the process for each resulting volume.

Historical Diverted Volume Calculations - 36.12.1902(10) (Note: These standard Calculations are proposed for Modification via Submitted 606P-HUA. Refer to the Follow-up & Amended Responses Attachment)

$$Historic\ Diverted\ Volume = \frac{Volume_{historical\ consumptive\ use}}{On\ Farm\ Efficiency} + Conveyance\ Losses;$$

b) Conveyance loss (when calculated by ARM 36.12.1902(10)) is the sum of Seepage Loss, Vegetative Loss, and Ditch Evaporation; where:

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

(1) Where ditch wetted perimeter is either calculated by the Department or provided by the applicant, ditch length is provided by the applicant, and ditch loss rate is based on soil type (from NRCS Web Soil Survey) and Figure 2-50 from NEH 1993 (see Equation Resources-Conveyance Losses in the Appendices).

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

(1) Where percent loss per mile is 0.75% (NEH standard, 1993), flow rate is the total historical flow rate in the conveyance works, days is the historical period of diversion, and ditch length is provided by the applicant.

(2) If there are turnouts on a ditch, multiple calculations may need to be made per the Multiple User Ditch Memo for different ditch segments (to accurately represent the changing flow rate and length within each segment)

iii) $\text{Ditch Evaporation} = \frac{\text{ditch width} \times \text{ditch length} \times \text{evaporation rate}}{43{,}560\ \text{ft}^2/\text{acre}}$

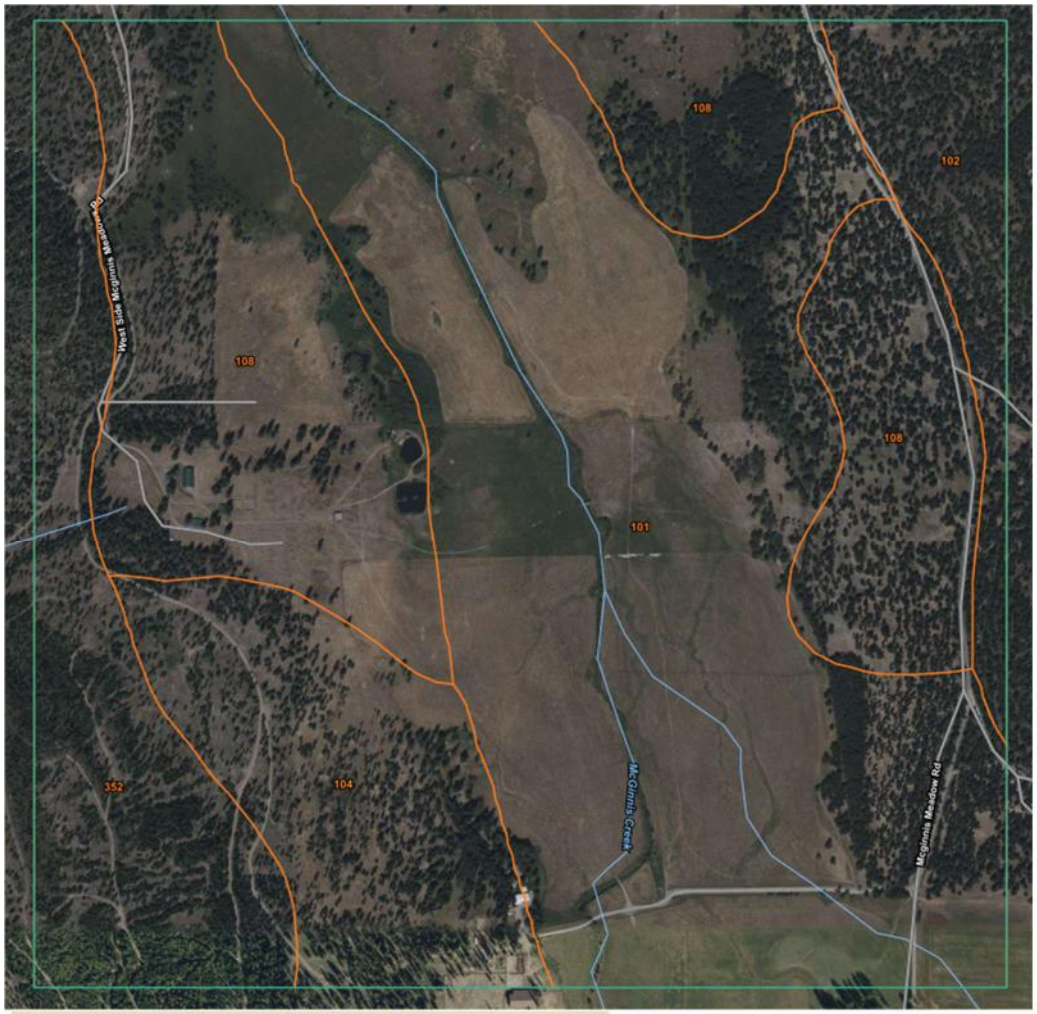
(1) Where ditch dimensions are provided by the applicant, and the evaporation rate is found using the Gridded Net Monthly Evap layer in Converge.

Change Application 76C 30165242

Form 606P: Supplementary Materials Attachment

Water Right No. 76C 25338-00

USDA WEB SOIL SURVEY DATA



Report — Map Unit Description

Kootenai National Forest Area, Montana-Idaho

101—Fluvents, flood plains

Map Unit Setting

National map unit symbol: nvch
Elevation: 1,800 to 4,200 feet
Mean annual precipitation: 20 to 35 inches
Mean annual air temperature: 39 to 45 degrees F
Frost-free period: 70 to 110 days
Farmland classification: Not prime farmland

Map Unit Composition

Fluvents and similar soils: 90 percent

Estimates are based on observations, descriptions, and tra mapunit.

Description of Fluvents

Setting

Landform: Flood plains
Parent material: Mixed alluvium

Typical profile

Oi - 0 to 2 inches: slightly decomposed plant material
A - 2 to 13 inches: gravelly silt loam
C1 - 13 to 23 inches: very gravelly sandy loam
C2 - 23 to 60 inches: sand

Engineering Properties–Kootenai National Fo

Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification	
					Unified	AASHTO
			In			
108—Andic Dystric Eutrochrepts, lacustrine terraces-Andic Dystrochrepts, glacial outwash terraces, complex						
Andic dystric eutrochrept	60	B	0-1	Slightly decomposed plant material	PT	—
			1-10	Silt loam	CL-ML, ML	A-4

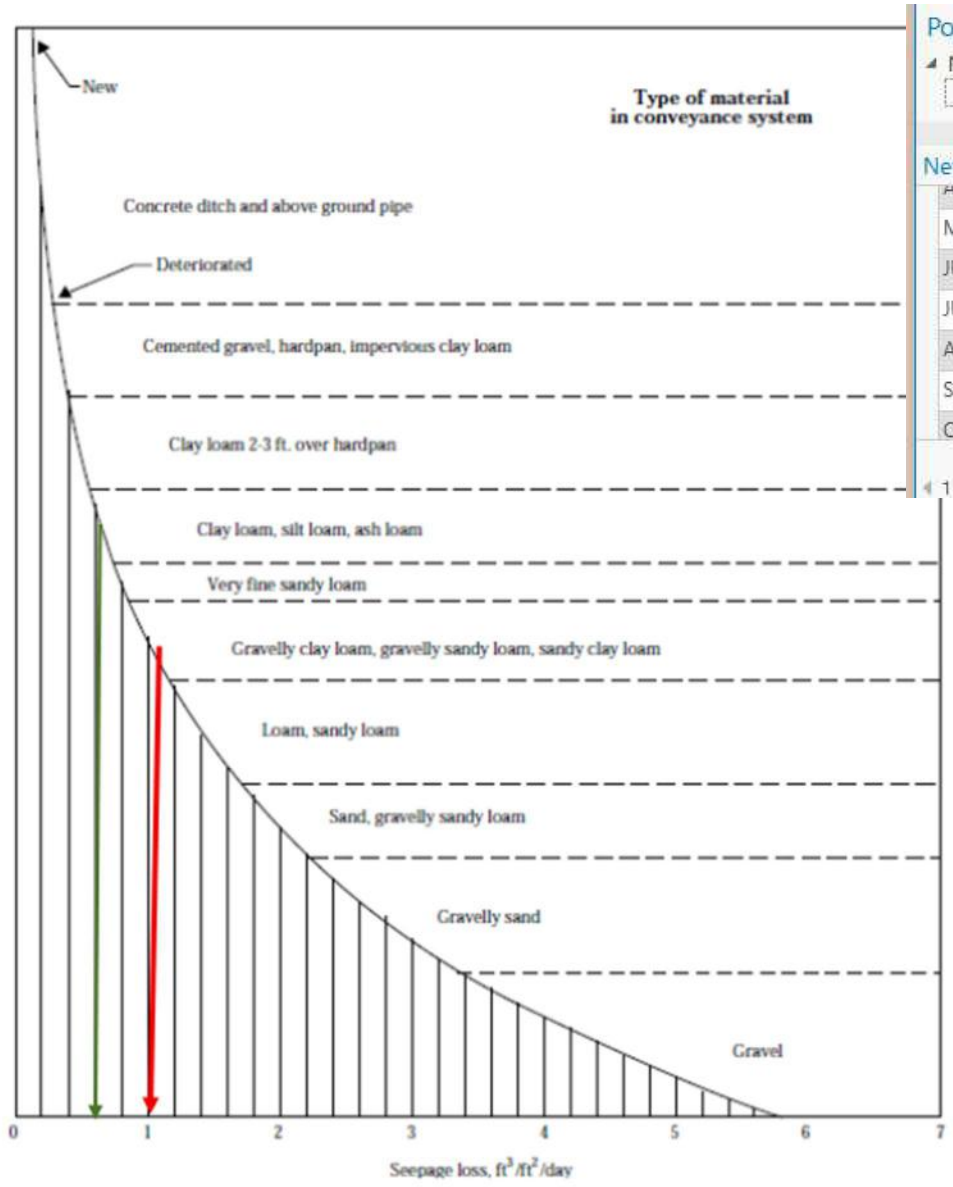
Change Application 76C 30165242

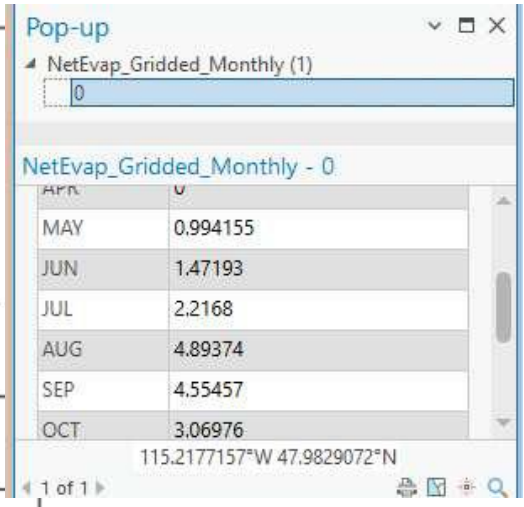
Form 606P: Supplementary Materials Attachment

Water Right No. 76C 25338-00

STANDARD LOSS AND EVAPORATION DATA

Figure 2-50 Method to estimate seepage losses from irrigation delivery systems (adapted from USDA 1985)





$LR_{McGinnis\ Carrier} = 1.0\ ft^3/ft^2$

$LR_{Ferguson\ Ditch} = 0.6\ ft^3/ft^2$

Change Application 76C 30165242

Form 606P: Supplementary Materials Attachment

Water Right No. 76C 25338-00

HISTORICAL CONVEYANCE LOSS EST. SUPPORTING HDV CALCULATIONS FOR FERGUSON CK

According to DNRC administrative procedures, the total Conveyance Loss (CL) is the sum of Seepage Loss (SL), Vegetative Loss (VL) and Ditch Evaporation (DE) in acre-feet.

$$CL = SL + VL + DE$$

Based on site observations of the McGinnis Creek Channel, assume the following:

- 10’ top width (W)
- 6’ bottom width
- 2’ flow depth
- Channel side slopes of roughly 1H:1V.
- Wetted Perimeter (WP): $11.65' = 2\sqrt{2'} + 6' + 2\sqrt{2'}$

$$SL = (WP)(I)(LR)(D)/(43{,}560\ ft^2/acre)$$

It is approximately 2,350 ft (I) along the McGinnis flowline from existing POD #1 to the main secondary PODs servicing the southern portion of the POU, which accounts for approximately:

- 58 acres contour
- 10 acres of wild flood.

$$SL_{(58+10)} = (11.65\ ft)(2{,}350\ ft)(1\ ft^3/ft^2)(92\ days)/(43{,}560\ ft^2/acre)$$

$$SL_{(58+10)\ Total} = 57.82\ AF$$

However, Ferguson Water on average, is estimated to account for only 11 percent of the historical water within McGinnis Creek as a natural carrier.

$$SL_{(58+10)\ Ferguson} = (SL_{(58+10)\ Total})(11\%\ Factorial)$$

$$SL_{(58+10)\ Ferguson} = (57.82\ AF)(11\%)$$

$$SL_{(58+10)\ Ferguson} = 6.36\ AF$$

Separating the proportions of the seepage loss by irrigation type as follows:

$$SL_{(58+10)\ Contour} = (58/68)\ (SL_{(58+10)\ Ferguson})$$

$$SL_{(58+10)\ Contour} = (58/68)(6.36\ AF)$$

$$\mathbf{SL_{(58+10)\ Contour} = 5.42\ AF}$$

Similarly:

$$\mathbf{SL_{(58+10)\ Wild} = 0.94\ AF.}$$

It is roughly an additional 2,200 ft (I) along the flowlines from existing POD #1 to the main secondary POD servicing the northern portion of the POU, which accounts for approximately:

- 17 acres contour
- 103 acres of wild flood.

$$SL_{(17+103)} = (11.65\ ft)(2{,}200\ ft)(1\ ft^3/ft^2)(92\ days)/(43{,}560\ ft^2/acre)$$

$$SL_{(17+103)\ Total} = 54.13\ AF$$

However, Ferguson Water is estimated to account for 11 percent of the historical water within McGinnis Creek as a natural carrier.

$$SL_{(17+103)\ Ferguson} = (SL_{(17+103)\ Total})(11\%\ Factorial)$$

$$SL_{(17+103)\ Ferguson} = (54.13\ AF)(11\%)$$

$$SL_{(17+103)\ Ferguson} = 5.95\ AF$$

Separating the proportions of the seepage loss by irrigation type as follows:

$$SL_{(17+103)\ Contour} = (17/120)\ (SL_{(17+103)\ Ferguson})$$

$$SL_{(17+103)\ Contour} = (17/120)(5.95\ AF)$$

$$\mathbf{SL_{(17+103)\ Contour} = 0.84\ AF}$$

Similarly:

$$\mathbf{SL_{(17+103)\ Wild} = 5.11\ AF.}$$

The total Seepage Loss in the McGinnis Carrier as a result of Ferguson Creek Diversions under Right 76C 25338 is as Follows.

$$SL_{Contour} = 5.42 + 0.84\ AF$$

$$\mathbf{SL_{Contour} = 6.26\ AF}$$

$$SL_{Wild} = 0.94 + 5.11\ AF$$

$$\mathbf{SL_{Wild} = 6.05\ AF}$$

Vegetative Loss (VL) is calculated with the wild and contour-flooded portions of the POU are serviced by up to 2.04 cfs of the maximum diversion rate of 2.50 cfs. The sprinkled portions of the historical POU being serviced by the balance of 0.46 cfs of Right 76C 25338.

The calculation for VL within the flooded areas is performed in two parts due to the multiple secondary diversions described within the *Follow-up and Amended Responses Document*.

The conveyances to the middle two 2PODs carry 2.04 cfs of flow to the southern flooded POU over approximate distances of 2,350 ft (0.445 miles). A portion of this flow (estimated at 1.30 cfs) continues northward within the natural carrier to service the northern POU.

$$VL = (0.0075/mile^{1})(FR)(D)(l)(2^{2})$$

$$VL_{South} = (0.0075/mile)(2.04\ cfs)(92)(0.445\ miles)(2\ AF\ per\ cfs\text{-}days)$$

$$\mathbf{VL_{South} = 1.25\ AF}$$

The southern POU's vegetative loss is split proportionally between 58 acres of contour flood and 10 Acres of wild flood.

$$\mathbf{VL_{S\ Contour} = 1.07\ AF}$$

$$\mathbf{VL_{S\ Wild} = 0.18\ AF}$$

The natural carrier to the northern 2POD carries 1.30 cfs of flow on to irrigate the northern portions of the flooded POU over an additional distance of 2,200 ft (0.445 miles).

$$VL_{North} = (0.0075/mile)(1.30\ cfs)(92)(0.417\ miles)(2\ AF\ per\ cfs\text{-}days)$$

$$\mathbf{VL_{North} = 0.84\ AF}$$

The northern POU VL is split proportionally between 17 acres of contour flood and 103 Acres of wild flood.

$$\mathbf{VL_{N\ Contour} = 0.12\ AF}$$

$$\mathbf{VL_{N\ Wild} = 0.72\ AF}$$

Summing the total VL for each wild and contour flooded areas results in the following.

$$VL_{Contour} = VL_{S\ Contour} + VL_{N\ Contour}$$

$$VL_{Contour} = 1.07 + 0.12$$

$$\mathbf{VL_{Contour} = 1.19\ AF}$$

$$VL_{Wild} = VL_{S\ Wild} + VL_{N\ Wild}$$

$$VL_{Wild} = 0.18 + 0.72$$

$$\mathbf{VL_{Wild} = 0.90\ AF}$$

The DNRC's Gridded Net Monthly Evaporation rates over the 92-day (June 1 to August 31) irrigation water requirement period were utilized to determine the project Evaporation Rate for these conveyance loss calculations.

$$ER = (ER_{Jun} + ER_{Jul} + ER_{Aug})/(12\ in/ft)$$

[1]Percent loss is defined by the 1993 NEH Standard of 0.75% loss/mile.
[2] Approximate conversion factor from flowrate (in cfs) over a day to ac-ft. Actual value is 1.98 AF per cfs-day.

ER = (1.472 in + 2.217 in + 4.894 in)/(12 in/ft)

ER = 0.715 ft

The ER is utilized to estimate evaporation of water off the flowing surface of the McGinnis Channel (Ditch Evaporation, DE) using the following relationship, factored by the mean estimated flow percentage of 11%:

*DE = (W)(l)(ER)*11%*

DE = (10.0 ft)(4550 ft)(0.715 ft)(11%)/(43,560 ft^2/acre)

DE = 0.08 AF

The "Ditch" Evaporation along the natural McGinnis Channel Carrier is then split between the irrigation types, with 75 total contour flooded acres and 113 wild flood acres inside the POU.

$DE_{Contour}$ = (75/188)(0.08 AF)

$DE_{Contour}$ = 0.03 AF

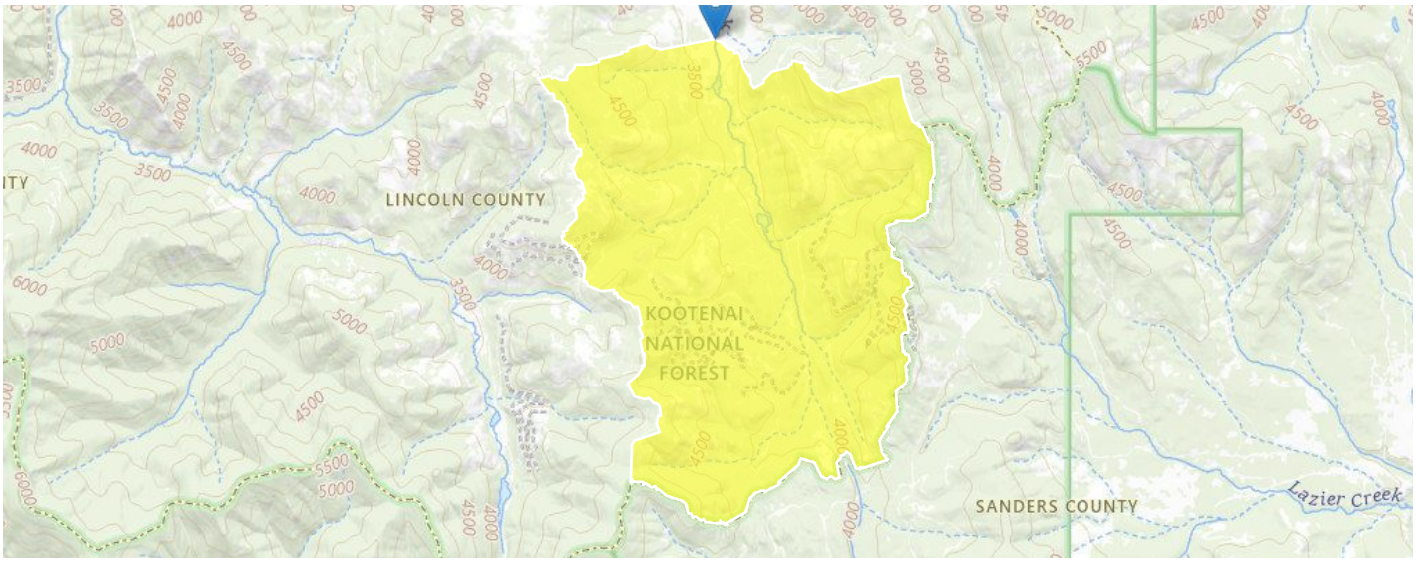
DE_{Wild} = (113/188)(0.08 AF)

DE_{Wild} = 0.05 AF

Form 606P: Supplementary Materials Attachment

McGinnis Creek Basin Characteristics at Confluence w/ Ferguson Ck

Region ID: MT
Workspace ID: MT20250428202502646000
Clicked Point (Latitude, Longitude): 47.98892, -115.22766
NHD Stream GNIS Name of Click Point: McGinnis Creek
Time: 2025-04-28 14:25:32 -0600



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
CHANWD_RS	Channel width determined from remotely sensed data sources, including aerial imagery	0	feet
CONTDA	Area that contributes flow to a point on a stream	17	square miles
DRNAREA	Area that drains to a point on a stream	17	square miles
EL5000	Percent of area above 5000 ft	4	percent
ELEV	Mean Basin Elevation	4137.9	feet
ELEVMAX	Maximum basin elevation	5478	feet
FOREST	Percentage of area covered by forest	72.4	percent
PRECIP	Mean Annual Precipitation	29.53	inches
SLOP30_30M	Percent area with slopes greater than 30 percent from 30-meter DEM.	40	percent
SLOP50_30M	Percent area with slopes greater than 50 percent from 30-meter DEM.	4.9	percent
WACTCH	Width of active channel	8	feet
WBANKFULL	Width of channel at bankfull	20	feet

General Disclaimers

Parameter values have been edited, computed flows may not apply.

Peak-Flow Statistics

Peak-Flow Statistics Parameters [W Region BasinC 2015 5019F]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
CONTDA	Contributing Drainage Area	17	square miles	0.6	2470
FOREST	Percent Forest	72.4	percent	20.4	99.1
PRECIP	Mean Annual Precipitation	29.53	inches	14.6	62.1

Peak-Flow Statistics Parameters [W Region Active Channel SIR 2020 5142]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
WACTCH	Width Of Active Channel	8	feet	3	213

Peak-Flow Statistics Parameters [W Region Bankfull SIR 2020 5142]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
WBANKFULL	Width Of Bankfull Channel	20	feet	5	246

Peak-Flow Statistics Parameters [W Region Aerial Photo SIR 2020 5142]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
CHANWD_RS	Channel_Width_remotely_sensed	0	feet	2.3	203.8

Peak-Flow Statistics Flow Report [W Region BasinC 2015 5019F]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	PIL	PIU	ASEp
66.7-percent AEP flood	71.2	ft^3/s	29	175	59.4
50-percent AEP flood	92.5	ft^3/s	38.9	220	56.5
42.9-percent AEP flood	103	ft^3/s	43.7	243	55.7
20-percent AEP flood	154	ft^3/s	67.6	351	53.4
10-percent AEP flood	208	ft^3/s	92.1	470	52.8
4-percent AEP flood	270	ft^3/s	119	611	53.2
2-percent AEP flood	323	ft^3/s	140	745	54.2
1-percent AEP flood	379	ft^3/s	161	891	56
0.5-percent AEP flood	437	ft^3/s	181	1060	58
0.2-percent AEP flood	508	ft^3/s	202	1280	61.4

Peak-Flow Statistics Flow Report [W Region Active Channel SIR 2020 5142]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	PIL	PIU	ASEp
Active chan width 66.7 percent AEP flood	23.4	ft^3/s	10.3	53.1	68.5
Active Channel Width 50-percent AEP flood	31.7	ft^3/s	14.5	69.4	65.2
Active chan width 42.9 percent AEP flood	35.3	ft^3/s	16.3	76.6	64.2
Active Channel Width 20-percent AEP flood	55.9	ft^3/s	26.5	118	61.1
Active Channel Width 10-percent AEP flood	75	ft^3/s	35.1	160	60.8
Active Channel Width 4-percent AEP flood	103	ft^3/s	46.7	227	62.2
Active Channel Width 2-percent AEP flood	126	ft^3/s	55.4	286	63.4

Statistic	Value	Unit	PIL	PIU	ASEp
Active Channel Width 1-percent AEP flood	150	ft^3/s	63	357	66.1
Active Channel Width 0.5-percent AEP flood	173	ft^3/s	70	427	68.3
Active Channel Width 0.2-percent AEP flood	209	ft^3/s	79.1	552	72.4

Peak-Flow Statistics Flow Report [W Region Bankfull SIR 2020 5142]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	PIL	PIU	ASEp
Bankfull width 66.7 percent AEP flood	70.1	ft^3/s	28.1	175	82.9
Bankfull Width 50-percent AEP flood	91.2	ft^3/s	38.6	215	78
Bankfull width 42.9 percent AEP flood	104	ft^3/s	45.2	239	75.8
Bankfull Width 20-percent AEP flood	154	ft^3/s	68.8	345	71.9
Bankfull Width 10-percent AEP flood	206	ft^3/s	92.7	458	70.1
Bankfull Width 4-percent AEP flood	273	ft^3/s	120	619	70.1
Bankfull Width 2-percent AEP flood	320	ft^3/s	138	740	71.1
Bankfull Width 1-percent AEP flood	379	ft^3/s	158	909	72.8
Bankfull Width 0.5-percent AEP flood	430	ft^3/s	170	1090	75.5
Bankfull Width 0.2-percent AEP flood	511	ft^3/s	193	1350	78.7

Peak-Flow Statistics Disclaimers [W Region Aerial Photo SIR 2020 5142]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Peak-Flow Statistics Flow Report [W Region Aerial Photo SIR 2020 5142]

Statistic	Value	Unit
Rem sens chan width 66.7 percent AEP fld	0	ft^3/s
Rem_sens_chan_width_50_percent_AEP_flood	0	ft^3/s
Rem sens chan width 42.9 percent AEP fld	0	ft^3/s
Rem_sens_chan_width_20_percent_AEP_flood	0	ft^3/s
Rem_sens_chan_width_10_percent_AEP_flood	0	ft^3/s
Rem_sens_chan_width_4_percent_AEP_flood	0	ft^3/s
Rem_sens_chan_width_2_percent_AEP_flood	0	ft^3/s
Rem_sens_chan_width_1_percent_AEP_flood	0	ft^3/s
Rem_sens_chan_width_0_5_pct_AEP_flood	0	ft^3/s
Rem_sens_chan_width_0_2_pct_AEP_flood	0	ft^3/s

Peak-Flow Statistics Flow Report [Area-Averaged]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	PIL	PIU	ASEp
66.7-percent AEP flood	71.2	ft^3/s	29	175	59.4
50-percent AEP flood	92.5	ft^3/s	38.9	220	56.5
42.9-percent AEP flood	103	ft^3/s	43.7	243	55.7
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10-percent AEP flood	208	ft^3/s	92.1	470	52.8
4-percent AEP flood	270	ft^3/s	119	611	53.2
2-percent AEP flood	323	ft^3/s	140	745	54.2

Statistic	Value	Unit	PIL	PIU	ASEp
1-percent AEP flood	379	ft^3/s	161	891	56
0.5-percent AEP flood	437	ft^3/s	181	1060	58
0.2-percent AEP flood	508	ft^3/s	202	1280	61.4
Active chan width 66.7 percent AEP flood	23.4	ft^3/s	10.3	53.1	68.5
Active Channel Width 50-percent AEP flood	31.7	ft^3/s	14.5	69.4	65.2
Active chan width 42.9 percent AEP flood	35.3	ft^3/s	16.3	76.6	64.2
Active Channel Width 20-percent AEP flood	55.9	ft^3/s	26.5	118	61.1
Active Channel Width 10-percent AEP flood	75	ft^3/s	35.1	160	60.8
Active Channel Width 4-percent AEP flood	103	ft^3/s	46.7	227	62.2
Active Channel Width 2-percent AEP flood	126	ft^3/s	55.4	286	63.4
Active Channel Width 1-percent AEP flood	150	ft^3/s	63	357	66.1
Active Channel Width 0.5-percent AEP flood	173	ft^3/s	70	427	68.3
Active Channel Width 0.2-percent AEP flood	209	ft^3/s	79.1	552	72.4
Bankfull width 66.7 percent AEP flood	70.1	ft^3/s	28.1	175	82.9
Bankfull Width 50-percent AEP flood	91.2	ft^3/s	38.6	215	78
Bankfull width 42.9 percent AEP flood	104	ft^3/s	45.2	239	75.8
Bankfull Width 20-percent AEP flood	154	ft^3/s	68.8	345	71.9
Bankfull Width 10-percent AEP flood	206	ft^3/s	92.7	458	70.1
Bankfull Width 4-percent AEP flood	273	ft^3/s	120	619	70.1
Bankfull Width 2-percent AEP flood	320	ft^3/s	138	740	71.1
Bankfull Width 1-percent AEP flood	379	ft^3/s	158	909	72.8
Bankfull Width 0.5-percent AEP flood	430	ft^3/s	170	1090	75.5
Bankfull Width 0.2-percent AEP flood	511	ft^3/s	193	1350	78.7
Rem sens chan width 66.7 percent AEP fld	0	ft^3/s			
Rem_sens_chan_width_50_percent_AEP_flood	0	ft^3/s			
Rem sens chan width 42.9 percent AEP fld	0	ft^3/s			
Rem_sens_chan_width_20_percent_AEP_flood	0	ft^3/s			
Rem_sens_chan_width_10_percent_AEP_flood	0	ft^3/s			
Rem_sens_chan_width_4_percent_AEP_flood	0	ft^3/s			
Rem_sens_chan_width_2_percent_AEP_flood	0	ft^3/s			
Rem_sens_chan_width_1_percent_AEP_flood	0	ft^3/s			
Rem_sens_chan_width_0_5_pct_AEP_flood	0	ft^3/s			
Rem_sens_chan_width_0_2_pct_AEP_flood	0	ft^3/s			

Peak-Flow Statistics Citations

Sando, Roy, Sando, S.K., McCarthy, P.M., and Dutton, D.M.,2016, Methods for estimating peak-flow frequencies at ungaged sites in Montana based on data through water year 2011: U.S. Geological Survey Scientific Investigations Report 2015–5019–F, 30 p. (https://doi.org/10.3133/sir20155019)

Chase, K.J., Sando, R., Armstrong, D.W., and McCarthy, P., 2021, Regional regression equations based on channel-width characteristics to estimate peak-flow frequencies at ungaged sites in Montana using peak-flow frequency data through water year 2011 (ver. 1.1, September 2021): U.S. Geological Survey Scientific Investigations Report 2020–5142, 49 p. (https://doi.org/10.3133/sir20205142)

Low-Flow Statistics

Low-Flow Statistics Parameters [W Region LowFlow GLS 2015 5019G]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
CONTDA	Contributing Drainage Area	17	square miles	6.4	2520
SLOP50_30M	Slopes_gt_50pct_from_30m_DEM	4.9	percent	1.87	67.5

Low-Flow Statistics Flow Report [W Region LowFlow GLS 2015 5019G]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	PIL	PIU	ASEp
7 Day 10 Year Low Flow	1.07	ft^3/s	0.354	3.24	68.5

Low-Flow Statistics Citations

McCarthy, P.M., Sando, Roy, Sando, S.K., and Dutton, D.M.,2016, Methods for estimating streamflow characteristics at ungaged sites in western Montana based on data through water year 2009: U.S. Geological Survey Scientific Investigations Report 2015–5019–G, 19 p. (https://doi.org/10.3133/sir20155019)

Annual Flow Statistics

Annual Flow Statistics Parameters [W Region Annual MeanDur 2015 5019G]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
CONTDA	Contributing Drainage Area	17	square miles	6.4	2520
SLOP50_30M	Slopes_gt_50pct_from_30m_DEM	4.9	percent	1.87	67.5

Annual Flow Statistics Flow Report [W Region Annual MeanDur 2015 5019G]

Statistic	Value	Unit
Median Annual Flow	4.26	ft^3/s
Mean Annual Flow	6.81	ft^3/s

Annual Flow Statistics Citations

McCarthy, P.M., Sando, Roy, Sando, S.K., and Dutton, D.M.,2016, Methods for estimating streamflow characteristics at ungaged sites in western Montana based on data through water year 2009: U.S. Geological Survey Scientific Investigations Report 2015–5019–G, 19 p. (https://doi.org/10.3133/sir20155019)

Monthly Flow Statistics

Monthly Flow Statistics Parameters [W Region Season3 MeanDur 2015 5019G]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
CONTDA	Contributing Drainage Area	17	square miles	6.4	2520
SLOP50_30M	Slopes_gt_50pct_from_30m_DEM	4.9	percent	1.87	67.5

Monthly Flow Statistics Parameters [W Region Season1 MeanDur 2015 5019G]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
CONTDA	Contributing Drainage Area	17	square miles	6.4	2520
SLOP50_30M	Slopes_gt_50pct_from_30m_DEM	4.9	percent	1.87	67.5

Monthly Flow Statistics Parameters [W Region Season2 MeanDur 2015 5019G]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
CONTDA	Contributing Drainage Area	17	square miles	6.4	2520
SLOP50_30M	Slopes_gt_50pct_from_30m_DEM	4.9	percent	1.87	67.5

Monthly Flow Statistics Flow Report [W Region Season3 MeanDur 2015 5019G]

Statistic	Value	Unit
November Mean Flow	2.84	ft^3/s
December Mean Flow	2.59	ft^3/s
January Mean Flow	2.51	ft^3/s
February Mean Flow	2.63	ft^3/s

Monthly Flow Statistics Flow Report [W Region Season1 MeanDur 2015 5019G]

Statistic	Value	Unit
March Mean Flow	4.08	ft^3/s
April Mean Flow	9.49	ft^3/s
May Mean Flow	18.3	ft^3/s
June Mean Flow	15.3	ft^3/s

Monthly Flow Statistics Flow Report [W Region Season2 MeanDur 2015 5019G]

Statistic	Value	Unit
July Mean Flow	6.58	ft^3/s
August Mean Flow	3.67	ft^3/s
September Mean Flow	2.78	ft^3/s
October Mean Flow	2.7	ft^3/s

Monthly Flow Statistics Flow Report [Area-Averaged]

Statistic	Value	Unit
November Mean Flow	2.84	ft^3/s
December Mean Flow	2.59	ft^3/s
January Mean Flow	2.51	ft^3/s
February Mean Flow	2.63	ft^3/s
March Mean Flow	4.08	ft^3/s
April Mean Flow	9.49	ft^3/s
May Mean Flow	18.3	ft^3/s
June Mean Flow	15.3	ft^3/s
July Mean Flow	6.58	ft^3/s
August Mean Flow	3.67	ft^3/s
September Mean Flow	2.78	ft^3/s
October Mean Flow	2.7	ft^3/s

Monthly Flow Statistics Citations

McCarthy, P.M., Sando, Roy, Sando, S.K., and Dutton, D.M.,2016, Methods for estimating streamflow characteristics at ungaged sites in western Montana based on data through water year 2009: U.S. Geological Survey Scientific Investigations Report 2015–5019–G, 19 p. (https://doi.org/10.3133/sir20155019)

Seasonal Flow Statistics

Seasonal Flow Statistics Parameters [W Region LowFlow GLS 2015 5019G]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
CONTDA	Contributing Drainage Area	17	square miles	6.4	2520
SLOP50_30M	Slopes_gt_50pct_from_30m_DEM	4.9	percent	1.87	67.5

Seasonal Flow Statistics Flow Report [W Region LowFlow GLS 2015 5019G]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	PIL	PIU	ASEp
Jul_to_Oct_14_Day_5_Yr_Low_Flow	1.86	ft^3/s	0.602	5.75	71.5

Seasonal Flow Statistics Citations

McCarthy, P.M., Sando, Roy, Sando, S.K., and Dutton, D.M.,2016, Methods for estimating streamflow characteristics at ungaged sites in western Montana based on data through water year 2009: U.S. Geological Survey Scientific Investigations Report 2015–5019–G, 19 p. (https://doi.org/10.3133/sir20155019)

Maximum Probable Flood Statistics

Maximum Probable Flood Statistics Parameters [Crippen Bue Region 13]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	17	square miles	0.1	10000

Maximum Probable Flood Statistics Flow Report [Crippen Bue Region 13]

Statistic	Value	Unit
Maximum Flood Crippen Bue Regional	39700	ft^3/s

Maximum Probable Flood Statistics Citations

Crippen, J.R. and Bue, Conrad D.1977, Maximum Floodflows in the Conterminous United States, Geological Survey Water-Supply Paper 1887, 52p. (https://pubs.usgs.gov/wsp/1887/report.pdf)

Bankfull Statistics

Bankfull Statistics Parameters [Rocky Mountain System D Bieger 2015]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	17	square miles	0.15444	9730.1061

Bankfull Statistics Parameters [Northern Rocky Mountains P Bieger 2015]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	17	square miles	0.138996	7259.957991

Bankfull Statistics Parameters [USA Bieger 2015]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	17	square miles	0.07722	59927.7393

Bankfull Statistics Flow Report [Rocky Mountain System D Bieger 2015]

Statistic	Value	Unit
Bieger_D_channel_width	21.1	ft
Bieger_D_channel_depth	1.77	ft
Bieger_D_channel_cross_sectional_area	29.1	ft^2

Bankfull Statistics Flow Report [Northern Rocky Mountains P Bieger 2015]

Statistic	Value	Unit
Bieger_P_channel_width	20.8	ft
Bieger_P_channel_depth	1.87	ft
Bieger_P_channel_cross_sectional_area	30.1	ft^2

Bankfull Statistics Flow Report [USA Bieger 2015]

Statistic	Value	Unit
Bieger_USA_channel_width	33.6	ft
Bieger_USA_channel_depth	2.2	ft
Bieger_USA_channel_cross_sectional_area	78.9	ft^2

Bankfull Statistics Flow Report [Area-Averaged]

Statistic	Value	Unit
Bieger_D_channel_width	21.1	ft
Bieger_D_channel_depth	1.77	ft
Bieger_D_channel_cross_sectional_area	29.1	ft^2
Bieger_P_channel_width	20.8	ft
Bieger_P_channel_depth	1.87	ft
Bieger_P_channel_cross_sectional_area	30.1	ft^2
Bieger_USA_channel_width	33.6	ft
Bieger_USA_channel_depth	2.2	ft
Bieger_USA_channel_cross_sectional_area	78.9	ft^2

Bankfull Statistics Citations

Bieger, Katrin; Rathjens, Hendrik; Allen, Peter M.; and Arnold, Jeffrey G.,2015, Development and Evaluation of Bankfull Hydraulic Geometry Relationships for the Physiographic Regions of the United States, Publications from USDA-ARS / UNL Faculty, 17p. (https://digitalcommons.unl.edu/usdaarsfacpub/1515?utm_source=digitalcommons.unl.edu%2Fusdaarsfacpub%2F1515&utm_medium=PDF&utm_campaign=PDFCoverPages)

NHD Features of Delineated Basin

NHD Streams Intersecting Basin Delineation Boundary

This functionality attempts to find the stream name at the delineation point. The name of the nearest intersecting National Hydrography Dataset (NHD) stream is selected by default to appear in the report above. NHD streams do not correspond to the StreamStats stream grid and may not be accurate. If you would like a different stream to appear in the above section, please make a selection below.

GNIS ID	GNIS Name	Distance from Clicked Point (ft)	Feature Type	Selected Stream Name
00787055	McGinnis Creek	46.78	Perennial	✔ McGinnis Creek

Watershed Boundary Dataset (WBD) HUC 8 Intersecting Basin Delineation Boundary

This functionality attempts to find the intersecting HUC 8 of the delineated watershed. HUC boundaries do not correspond to the StreamStats data and may not be accurate.

HUC 8	Name
17010213	Lower Clark Fork
17010102	Fisher

NHD Hydrologic Features Citations

U.S. Geological Survey, 2022, USGS TNM - National Hydrography Dataset, accessed July 21, 2022 at URL https://hydro.nationalmap.gov/arcgis/rest/services/nhd/MapServer/6. (https://hydro.nationalmap.gov/arcgis/rest/services/nhd/MapServer/6) U.S. Geological Survey, 2022, USGS TNM - National Hydrography Dataset, accessed July 21, 2022 at URL https://hydro.nationalmap.gov/arcgis/rest/services/wbd/MapServer/4. (https://hydro.nationalmap.gov/arcgis/rest/services/wbd/MapServer/4)

Channel-width Methods Weighting

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared

W_Region

Statistic	Value	Unit	PIL	PIU	SEP
PK0_2AEP	444	ft^3/s	191	1030	0.223
PK0_5AEP	342	ft^3/s	156	748	0.208
PK10AEP	148	ft^3/s	78.1	282	0.17
PK1AEP	318	ft^3/s	151	667	0.196
PK20AEP	105	ft^3/s	55.7	197	0.168
PK2AEP	254	ft^3/s	126	514	0.186
PK42_9AEP	70.3	ft^3/s	36.7	135	0.172
PK4AEP	205	ft^3/s	105	402	0.178
PK50AEP	60.6	ft^3/s	31.2	117	0.175
PK66_7AEP	43.7	ft^3/s	21.8	87.6	0.184

Channel-width Methods Weighting Citations

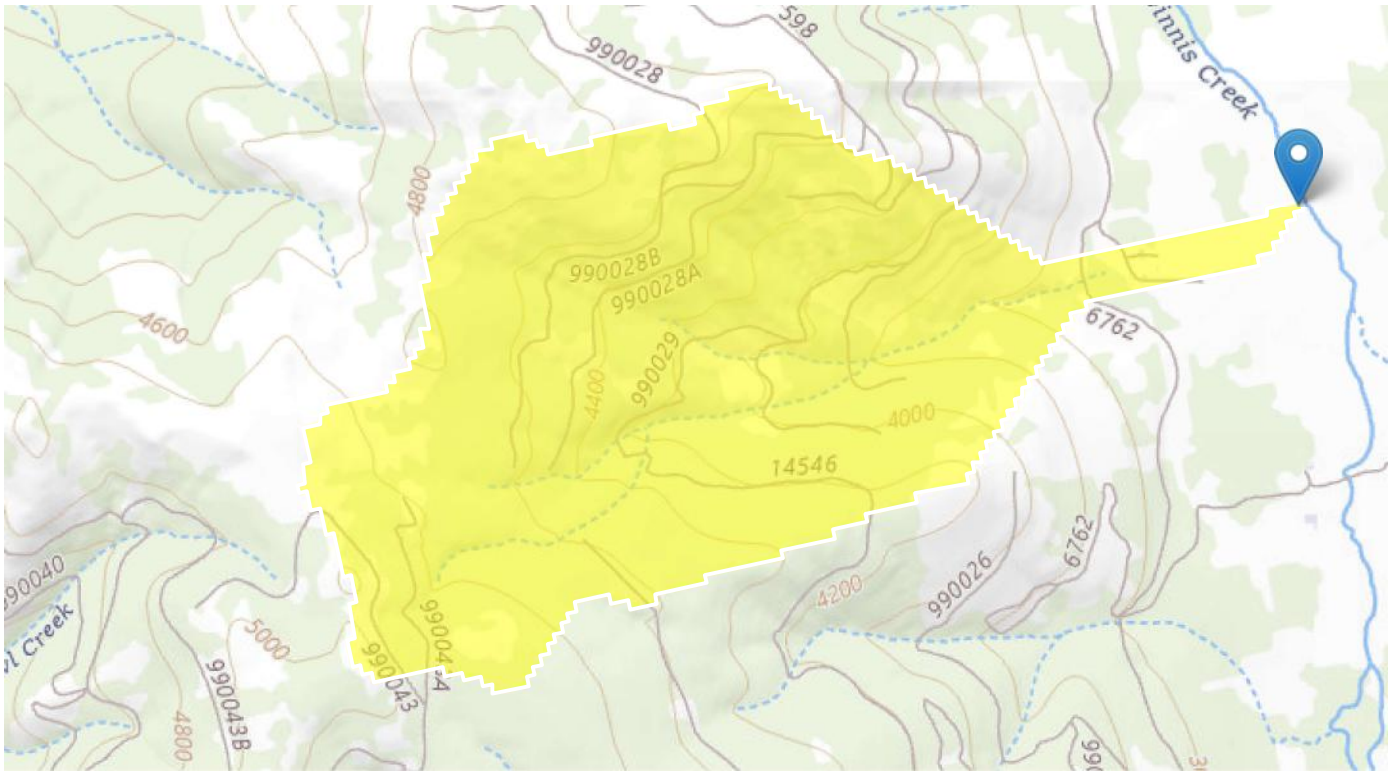
Chase, K.J., Sando, R., Armstrong, D.W., and McCarthy, P., 2021, Regional regression equations based on channel-width characteristics to estimate peak-flow frequencies at ungaged sites in Montana using peak-flow frequency data through water year 2011 (ver. 1.1, September 2021): U.S. Geological Survey Scientific Investigations Report 2020-5142, 49 p. (https://pubs.er.usgs.gov/publication/sir20205142)

Application Version: 4.28.1
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

Form 606P: Supplementary Materials Attachment

Ferguson Creek Basin

Region ID: MT
Workspace ID: MT20250624213635458000
Clicked Point (Latitude, Longitude): 47.99673, -115.23002
Time: 2025-06-24 15:37:07 -0600



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLDEM30M	Mean basin slope computed from 30 m DEM	25.3	percent
CHANWD_RS	Channel width determined from remotely sensed data sources, including aerial imagery	3.0	feet
CONTDA	Area that contributes flow to a point on a stream	1.4	square miles
DRNAREA	Area that drains to a point on a stream	1.4	square miles
EL5000	Percent of area above 5000 ft	0	percent
ELEV	Mean Basin Elevation	4372.1	feet

Parameter Code	Parameter Description	Value	Unit
ELEVMAX	Maximum basin elevation	5056	feet
ET0306MOD	Spring (March-June) mean monthly evapotranspiration (2001-2011), MODIS	1.8	inches
ET0710MOD	Summer (July-October) mean monthly evapotranspiration (2001-2011), MODIS	1.76	inches
FOREST	Percentage of area covered by forest	44.1	percent
MINBELEV	Minimum basin elevation	3428	feet
PRECIP	Mean Annual Precipitation	30.62	inches
SLOP50_30M	Percent area with slopes greater than 50 percent from 30-meter DEM.	10	percent
TEMP	Mean Annual Temperature	39.81	degrees F
WACTCH	Width of active channel	3.0	feet
WBANKFULL	Width of channel at bankfull	5	feet

Customized Regression Based Upon Site Observations, Operational Knowledge & Technical Review.

User determined basin characteristics for ungaged site, and confidence level for prediction interval				Range of values for which equations are applicable
Contributing drainage area of unaged site, A_u	=	1.4	square miles	6.4–2516
Mean annual precipitation for ungaged basin, P	=	30.62	inches	NA
Percentage of contributing basin with slopes greater than 50 percent, SLP_{50}	=	10	percent	1.869–67.474
Confidence level, CL	=	90	percent, where 90 is commonly used.	

Estimates of streamflow characteristics for West hydrologic region, using regional regression equations (table 1–3)

Streamflow characteristic (table 1)	Q_u, in ft^3/s (equation 2)	Basin characteristics used for regression equation (table 1–3)	Prediction intervals for the 90-percent confidence level (equation 6) PI_L, in ft^3/s	PI_U, in ft^3/s	High leverage test[1]
Q_{AL7Q10}	0.15	*A, SLP50*	0.0	0.5	False.
Q_{S214Q5}	0.30	*A, SLP50*	0.1	1.0	False.
$Q_{A0.2}$	1.40	*A, SLP50*	0.5	3.6	True.
$Q_{A0.5}$	0.64	*A, SLP50*	0.3	1.4	True.
$Q_{A0.8}$	0.31	*A, SLP50*	0.1	0.7	True.
Q_{AMEAN}	1.06	*A, SLP50*	0.5	2.4	True.
$Q_{JAN0.2}$	0.39	*A, SLP50*	0.2	0.9	True.
$Q_{JAN0.5}$	0.27	*A, SLP50*	0.1	0.7	True.
$Q_{JAN0.8}$	0.17	*A, SLP50*	0.1	0.5	True.
$Q_{JANMEAN}$	0.33 0.3	*A, SLP50*	0.1	0.8	True.
$Q_{FEB0.2}$	0.41	*A, SLP50*	0.2	1.0	True.
$Q_{FEB0.5}$	0.25	*A, SLP50*	0.1	0.6	True.
$Q_{FEB0.8}$	0.15	*A, SLP50*	0.0	0.5	True.
$Q_{FEBMEAN}$	0.32 0.4	*A, SLP50*	0.1	0.8	True.
$Q_{MAR0.2}$	0.56	*A, SLP50*	0.2	1.6	True.
$Q_{MAR0.5}$	0.35	*A, SLP50*	0.1	0.8	True.
$Q_{MAR0.8}$	0.21	*A, SLP50*	0.1	0.5	True.
$Q_{MARMEAN}$	0.45 1.1	*A, SLP50*	0.2	1.2	True.
$Q_{APR0.2}$	1.66	*A, SLP50*	0.4	6.2	True.
$Q_{APR0.5}$	0.74	*A, SLP50*	0.2	2.5	True.
$Q_{APR0.8}$	0.44	*A, SLP50*	0.2	1.3	True.
$Q_{APRMEAN}$	1.14 2.7	*A, SLP50*	0.3	3.9	True.
$Q_{MAY0.2}$	4.04	*A, SLP50*	1.3	12.5	True.
$Q_{MAY0.5}$	1.99	*A, SLP50*	0.6	6.6	True.
$Q_{MAY0.8}$	1.08	*A, SLP50*	0.3	3.9	True.
$Q_{MAYMEAN}$	2.70 2.5	*A, SLP50*	0.9	8.5	True.
$Q_{JUN0.2}$	3.87	*A, SLP50*	1.5	10.1	True.
$Q_{JUN0.5}$	2.03	*A, SLP50*	0.7	5.8	True.
$Q_{JUN0.8}$	1.22	*A, SLP50*	0.4	3.8	True.
$Q_{JUNMEAN}$	2.65 1.3	*A, SLP50*	1.0	7.0	True.
$Q_{JUL0.2}$	1.63	*A, SLP50*	0.6	4.6	True.
$Q_{JUL0.5}$	1.09	*A, SLP50*	0.4	3.1	True.
$Q_{JUL0.8}$	0.73	*A, SLP50*	0.2	2.2	True.
$Q_{JULMEAN}$	1.28 0.8	*A, SLP50*	0.5	3.4	True.
$Q_{AUG0.2}$	0.88	*A, SLP50*	0.3	2.4	True.
$Q_{AUG0.5}$	0.63	*A, SLP50*	0.2	1.8	True.
$Q_{AUG0.8}$	0.38	*A, SLP50*	0.1	1.4	True.

Peak of monthly flow means shifted based upon Applicants' operational experience

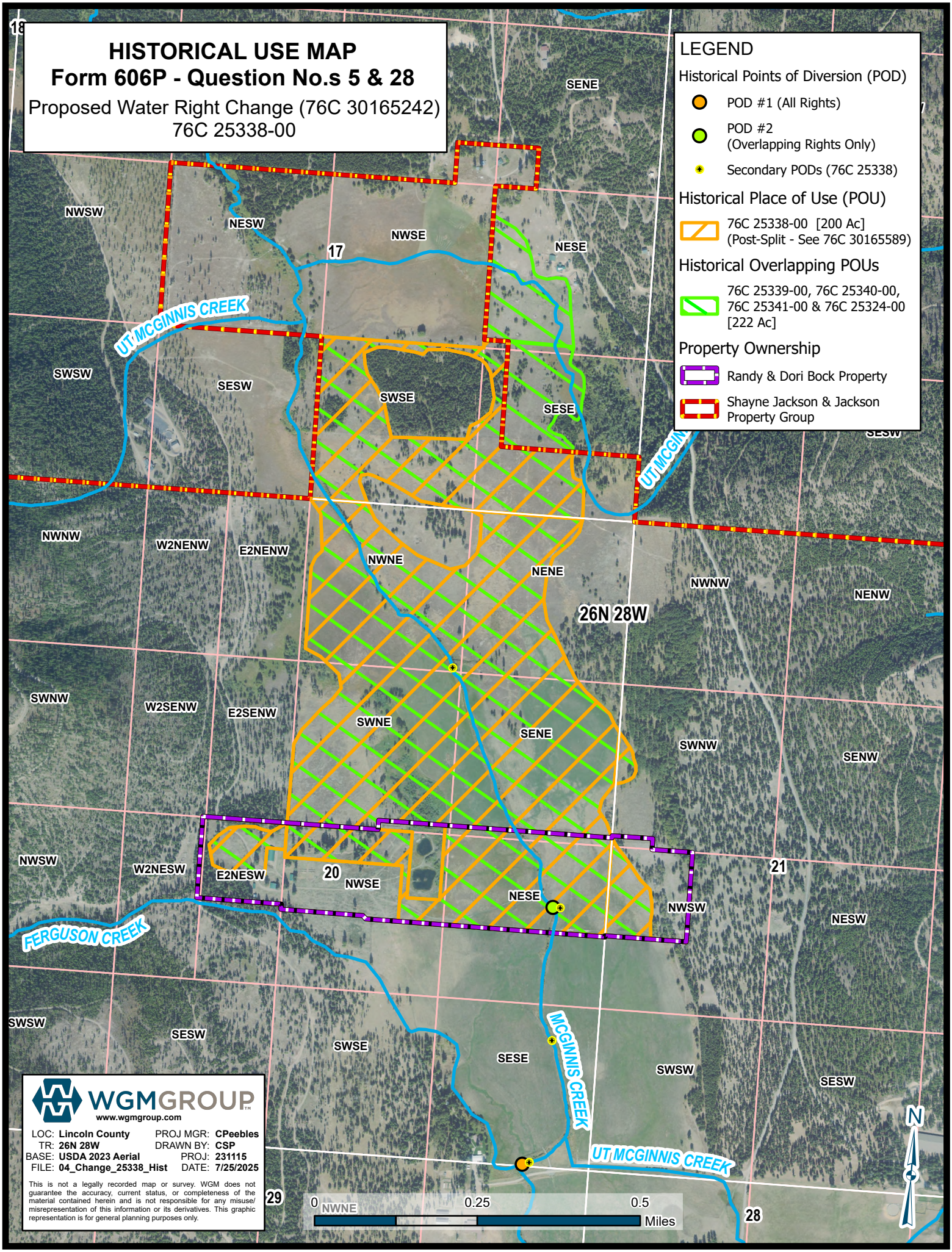
User determined basin characteristics for ungaged site, and confidence level for prediction interval				Range of values for which equations are applicable
Contributing drainage area of unaged site, A_u	=	1.4	square miles	6.4–2516
Mean annual precipitation for ungaged basin, P	=	30.62	inches	NA
Percentage of contributing basin with slopes greater than 50 percent, SLP_{50}	=	10	percent	1.869–67.474
Confidence level, CL	=	90	percent, where 90 is commonly used.	

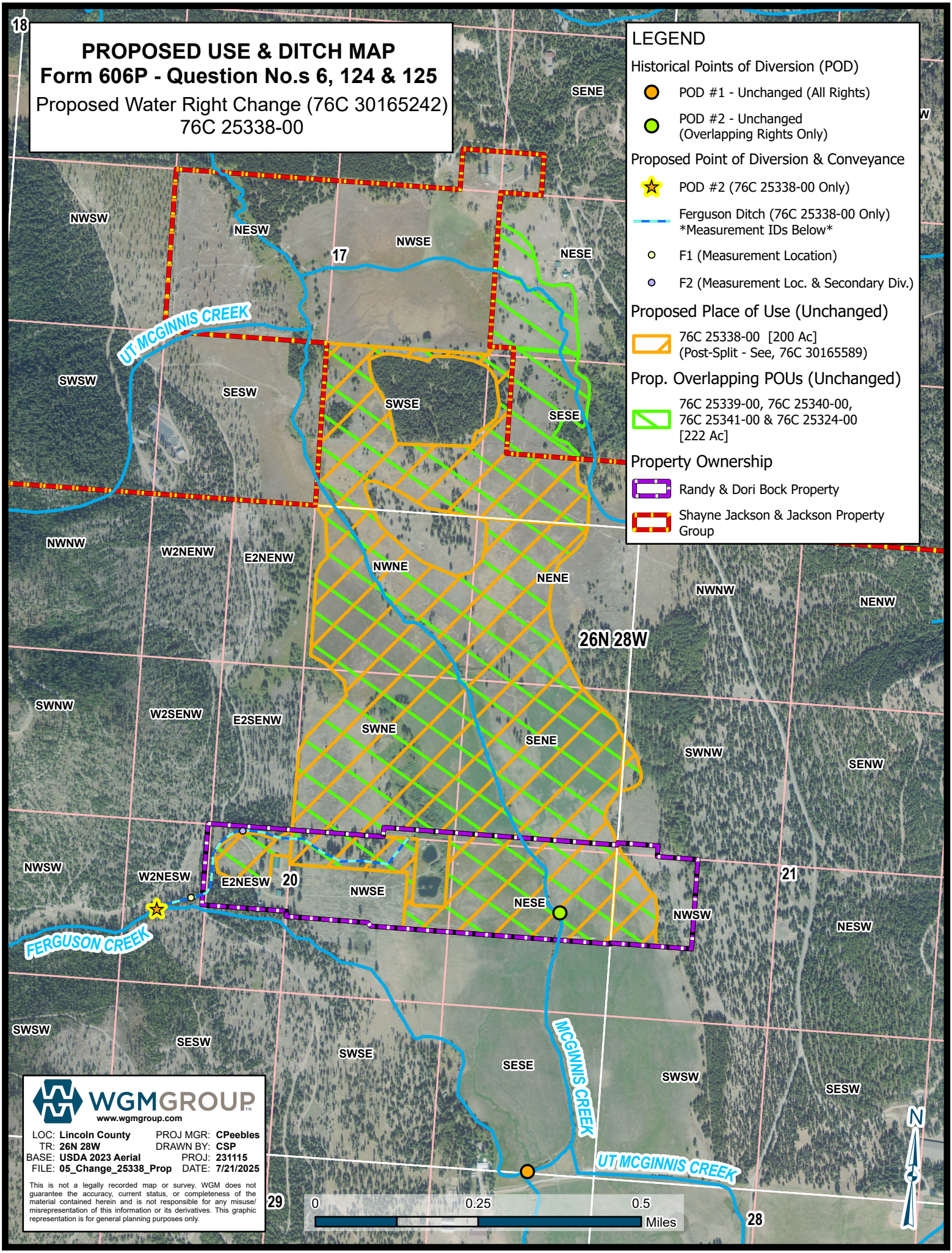
Estimates of streamflow characteristics for West hydrologic region, using regional regression equations (table 1–3)

Streamflow characteristic (table 1)	Q_u, in ft^3/s (equation 2)	Basin characteristics used for regression equation (table 1–3)	Prediction intervals for the 90-percent confidence level (equation 6) PI_L, in ft^3/s	PI_U, in ft^3/s	High leverage test[1]
$Q_{AUGMEAN}$	0.68 0.6	*A, SLP50*	0.2	1.9	True.
$Q_{SEP0.2}$	0.59	*A, SLP50*	0.2	1.5	True.
$Q_{SEP0.5}$	0.41	*A, SLP50*	0.1	1.2	True.
$Q_{SEP0.8}$	0.25	*A, SLP50*	0.1	1.1	True.
$Q_{SEPMEAN}$	0.46 0.5	*A, SLP50*	0.2	1.2	True.
$Q_{OCT0.2}$	0.60	*A, SLP50*	0.3	1.4	True.
$Q_{OCT0.5}$	0.39	*A, SLP50*	0.2	0.9	True.
$Q_{OCT0.8}$	0.24	*A, SLP50*	0.1	0.8	True.
$Q_{OCTMEAN}$	0.44 0.5	*A, SLP50*	0.2	1.0	True.
$Q_{NOV0.2}$	0.52	*A, SLP50*	0.2	1.3	True.
$Q_{NOV0.5}$	0.36	*A, SLP50*	0.2	0.8	True.
$Q_{NOV0.8}$	0.24	*A, SLP50*	0.1	0.7	True.
$Q_{NOVMEAN}$	0.43 0.5	*A, SLP50*	0.2	1.0	True.
$Q_{DEC0.2}$	0.47	*A, SLP50*	0.2	1.2	True.
$Q_{DEC0.5}$	0.31	*A, SLP50*	0.1	0.8	True.
$Q_{DEC0.8}$	0.19	*A, SLP50*	0.1	0.6	True.
$Q_{DECMEAN}$	0.38 0.4	*A, SLP50*	0.1	1.0	True.

[1]Leverage (h_0) is computed for the at-site estimate using equations 8 and 9. If h_0 greater than $3p/n$ is true, then the explanatory variables used for the site are considered to be far from the center of the joint distribution and may result in a potentially unreliable estimate.

Peak of monthly flow means shifted based upon Applicants' operational experience


HISTORICAL USE MAP
Form 606P - Question No.s 5 & 28
Proposed Water Right Change (76C 30165242)
76C 25338-00
LEGEND
Historical Points of Diversion (POD)
POD #1 (All Rights)
POD #2
(Overlapping Rights Only)
Secondary PODs (76C 25338)
Historical Place of Use (POU)
76C 25338-00 [200 Ac]
(Post-Split - See 76C 30165589)
Historical Overlapping POUs
76C 25339-00, 76C 25340-00,
76C 25341-00 & 76C 25324-00
[222 Ac]
Property Ownership
Randy & Dori Bock Property
Shayne Jackson & Jackson
Property Group
SENE
NWSW
NESW
NWSE
NESE
17
UT MCGINNIS CREEK
SWSW
SESW
SWSE
SESE
NWNW
W2NENW
E2NENW
NWNE
NENE
NWNW
NENW
26N 28W
SWNW
W2SENW
E2SENW
SWNE
SENE
SWNW
SENW
NWSW
W2NESW
E2NESW
20
NWSE
NESE
NWSW
21
NESW
FERGUSON CREEK
SWSW
SESW
SWSE
SESE
SWSW
SESW
MCGINNIS CREEK
UT MCGINNIS CREEK
29
28
0
0.25
0.5
Miles
N
WGMGROUP
www.wgmgroup.com
LOC: Lincoln County
TR: 26N 28W
BASE: USDA 2023 Aerial
FILE: 04_Change_25338_Hist
PROJ MGR: CPeebles
DRAWN BY: CSP
PROJ: 231115
DATE: 7/25/2025
This is not a legally recorded map or survey. WGM does not guarantee the accuracy, current status, or completeness of the material contained herein and is not responsible for any misuse/misrepresentation of this information or its derivatives. This graphic representation is for general planning purposes only.


PROPOSED USE & DITCH MAP
Form 606P - Question No.s 6, 124 & 125
Proposed Water Right Change (76C 30165242)
76C 25338-00
LEGEND
Historical Points of Diversion (POD)
POD #1 - Unchanged (All Rights)
POD #2 - Unchanged (Overlapping Rights Only)
Proposed Point of Diversion & Conveyance
POD #2 (76C 25338-00 Only)
Ferguson Ditch (76C 25338-00 Only) *Measurement IDs Below*
F1 (Measurement Location)
F2 (Measurement Loc. & Secondary Div.)
Proposed Place of Use (Unchanged)
76C 25338-00 [200 Ac] (Post-Split - See, 76C 30165589)
Prop. Overlapping POUs (Unchanged)
76C 25339-00, 76C 25340-00, 76C 25341-00 & 76C 25324-00 [222 Ac]
Property Ownership
Randy & Dori Bock Property
Shayne Jackson & Jackson Property Group
18
17
20
21
29
28
26N 28W
SENE
NWSW
NESW
NWSE
NESE
SWSW
SESW
SWSE
SESE
NWNW
W2NENW
E2NENW
NWNE
NENE
NENW
SWNW
W2SENW
E2SENW
SWNE
SENE
SENW
NWSW
W2NESW
E2NESW
NWSE
NESE
NESW
SWSW
SESW
SWSE
SESE
SWSW
SESW
UT MCGINNIS CREEK
FERGUSON CREEK
MCGINNIS CREEK
UT MCGINNIS CREEK
0
0.25
0.5
Miles
N
WGMGROUP
www.wgmgroup.com
LOC: Lincoln County
TR: 26N 28W
BASE: USDA 2023 Aerial
FILE: 05_Change_25338_Prop
PROJ MGR: CPeebles
DRAWN BY: CSP
PROJ: 231115
DATE: 7/21/2025
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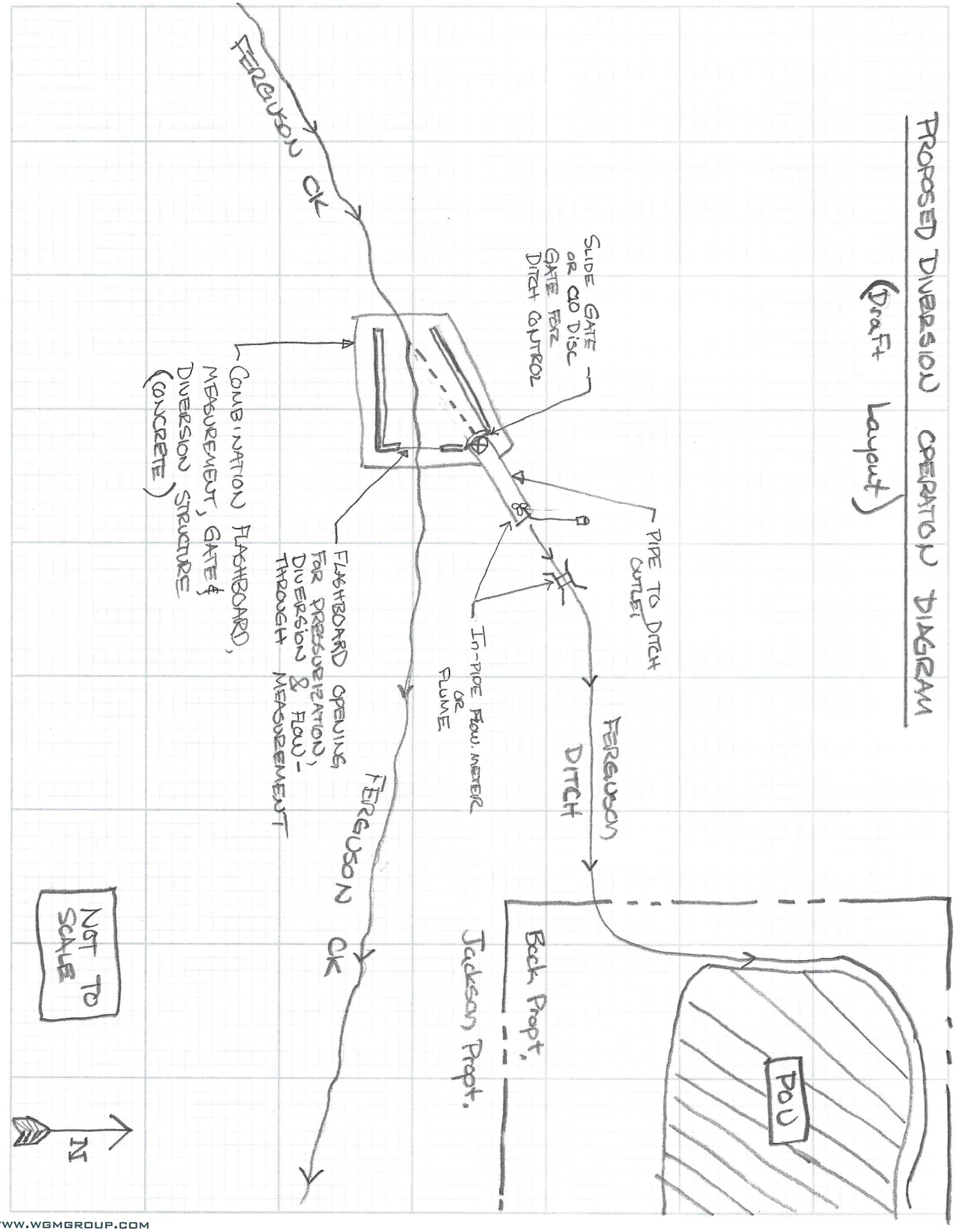
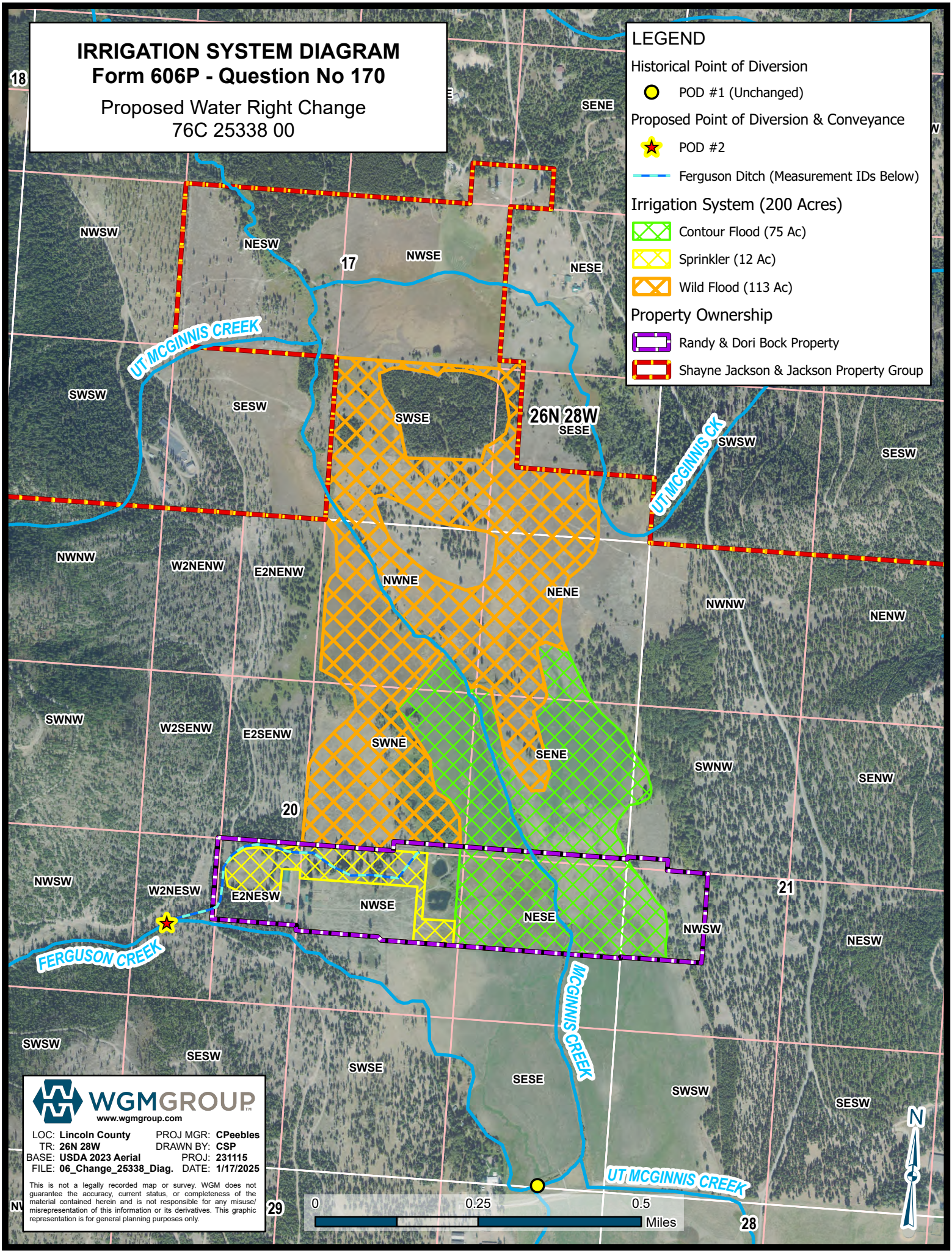
WGMGROUP
Community Values. Inspired Futures.

DATE: 1/15/2025
PROJECT ID: 231115 (76C 25338) FORM 606P
SHEET #: 1 OF: 1
TYPE OF COMPUTATION: QUESTION No 170
CALCULATED BY: CSP CHECKED BY: /




IRRIGATION SYSTEM DIAGRAM
Form 606P - Question No 170
Proposed Water Right Change
76C 25338 00
LEGEND
Historical Point of Diversion
POD #1 (Unchanged)
Proposed Point of Diversion & Conveyance
POD #2
Ferguson Ditch (Measurement IDs Below)
Irrigation System (200 Acres)
Contour Flood (75 Ac)
Sprinkler (12 Ac)
Wild Flood (113 Ac)
Property Ownership
Randy & Dori Bock Property
Shayne Jackson & Jackson Property Group
UT MCGINNIS CREEK
UT MCGINNIS CK
FERGUSON CREEK
MCGINNIS CREEK
26N 28W
18
17
20
21
29
28
NWSW
NESW
NWSE
NESE
SWSW
SESW
SWSE
SESE
NWNW
W2NENW
E2NENW
NWNE
NENE
NENW
SWNW
W2SENW
E2SENW
SWNE
SENE
SENW
NWSW
W2NESW
E2NESW
NWSE
NESE
NWSW
NESW
SWSW
SESW
SWSE
SESE
SWSW
SESW
0
0.25
0.5
Miles
N
WGMGROUP
www.wgmgroup.com
LOC: Lincoln County
TR: 26N 28W
BASE: USDA 2023 Aerial
FILE: 06_Change_25338_Diag.
PROJ MGR: CPeebles
DRAWN BY: CSP
PROJ: 231115
DATE: 1/17/2025
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REQUEST FOR PREAPPLICATION MEETING

ARM 36.12.1302(2)

(Revised 01/2024)

For Department Use Only

Date Received _____

Received By _____

Scheduled Meeting Date _____

Instructions

Use this optional form to submit a written request for a preapplication meeting, as required in ARM 36.12.1302(2) for applicants electing to complete a preapplication meeting with the department prior to submitting an application for a beneficial water use permit or change in appropriation right pursuant to §85-2-302, MCA. Use additional sheets as necessary.

Submit this form to the appropriate regional office; see contact information on the last page of this form.

---

1. Applicant Name Shayne A Jackson (Jackson Property Group, LLC); and Randy Bock & Dori Bock

Mailing Address 6220 McGinnis Meadows Road (PO Box 497, North Bend, WA 98045)

City Libby State MT Zip 59923

Bock Address: 2315 Parkinson Ln & 3307 Parkinson Ln Libby, MT 59923

Jackson Phone (425) 308-2675 Bock Phone (406) 405-1057

Email: sj@mmgranch.net Bock: randybock1954@gmail.com

2. Representative Name (if other than Applicant) Cole Peebles - WGM Group, Inc.

Representative is Consultant ☒ Representative is Attorney ☐ Representative is Other ☐

Mailing Address 1111 East Broadway St

City Missoula State MT Zip 59802

Home Phone 406-728-4611 Other Phone 406-289-0531

Email: cpeebles@wgmgroup.com

3. Are you requesting a preapplication meeting for a permit or change application?

☐ Permit ☒ Change

4. Identify the following elements of the proposed permit or change in appropriation.

a) The flow rate and volume of water required:

Flow Rate 2.5 ☐ GPM ☒ CFS Volume 976.80 Acre-Feet

b) The point of diversion:

New Primary POD

Point of Diversion #2 SW 1/4 NE 1/4 SW 1/4 Section 20, Township 26 ☒ N ☐ S, Range 28 ☐ E ☒ W

County Lincoln

Lot/Tract _____ Block _____ Subdivision Name _____

Original Primary POD

Point of Diversion #1 SW 1/4 SE 1/4 SE 1/4 Section 20, Township 26 ☒ N ☐ S, Range 28 ☐ E ☒ W

County Lincoln

Lot/Tract _____ Block _____ Subdivision Name _____

c) The place of use:

40 Acres -- Lot -- Block -- 1/4 S 1/2 SE 1/4 Sec 17, Twp 26 ☒ N ☐ S, Rge 28 ☐ E ☒ W

120 Acres -- Lot -- Block -- 1/4 -- 1/4 NE 1/4 Sec 20, Twp 26 ☒ N ☐ S, Rge 28 ☐ E ☒ W

4 Acres -- Lot -- Block NE 1/4 NE 1/4 SW 1/4 Sec 20, Twp 26 ☒ N ☐ S, Rge 28 ☐ E ☒ W

30 Acres -- Lot -- Block -- 1/4 N 1/2 SE 1/4 Sec 20, Twp 26 ☒ N ☐ S, Rge 28 ☐ E ☒ W

1 Acres -- Lot -- Block -- 1/4 SW 1/4 NW 1/4 Sec 21, Twp 26 ■ N ☐ S, Rge 28 ☐ E ■ W

5 Acres -- Lot -- Block W2 NW 1/4 SW 1/4 Sec 21, Twp 26N, Rge 28W

d) The source of water: Ferguson Creek

e) The proposed purpose: Irrigation

f) For a change in appropriation right, the water right(s) proposed for change:

Type of water right Statement of Claim Basin 76C Water Right # 25338-00

Type of water right _____ Basin _____ Water Right # _____

Type of water right _____ Basin _____ Water Right # _____

g) For a change in appropriation right, an explanation of historical use of the right(s) proposed for change:

This Preapplication Meeting Request is being submitted in preparation for a Form 606, Application to Change a Water Right. Applicants intend to file a change application immediately following a proposed Form 641 Ownership Update for Divided Interest. The Ownership Split is being filed retroactively. An explanation of conveyance will be included within the Form 641 attachments.

Water Right 76C 25338-00 is based upon the Ferguson Appropriation and was claimed for irrigation of portions of the McGinnis Meadows Valley within Sections 17, 20 & 21 of Township 26N, Range 28W. The proposed change application would add a second, primary point of diversion to improve water control and promote diversion access.

Applicants (also known as "Sellers") wish to add the proposed new primary point of diversion to their parent right immediately AFTER the concurrent Ownership Split is completed.

h) Any proposed place of storage, if applicable (only if storage capacity is greater than 0.1 acre-feet):

#1 Capacity: Surface Acres _____ x Max Depth (feet) _____ x (.4 for dams/.5 for pits) = _____Acre-Feet

Location: ____1/4 ____1/4 ____1/4 Section ___, Township 26 ☐ N ☐ S, Range ___ ☐ E ☐ W

#2 Capacity: Surface Acres _____ x Max Depth (feet) _____ x (.4 for dams/.5 for pits) = _____Acre-Feet

Location: ____1/4 ____1/4 ____1/4 Section ___, Township ___ ☐ N ☐ S, Range ___ ☐ E ☐ W

#3 Capacity: Surface Acres _____ x Max Depth (feet) _____ x (.4 for dams/.5 for pits) = _____Acre-Feet

Location: ____1/4 ____1/4 ____1/4 Section ___, Township ___ ☐ N ☐ S, Range ___ ☐ E ☐ W

i) For applications proposing a new well or wells, the well depth(s) and location:

New Well #1 ____1/4 ____1/4 ____1/4 Section ____, Township _____ ☐ N ☐ S, Range _____ ☐ E ☐ W

County _____

Lot/Tract _____ Block_____ Subdivision Name_____

Estimated Well Depth _____ Feet

New Well #2 ____1/4 ____1/4 ____1/4 Section ____, Township _____ ☐ N ☐ S, Range _____ ☐ E ☐ W

County _____

Lot/Tract _____ Block_____ Subdivision Name_____

Estimated Well Depth _____ Feet