October 13, 2026

Coffee-Nefsy Limited Partnership
PO Box 22069
Billings, MT 59104

Subject: Correct and Completed Application to Change a Water Right No. 42C 30175930

Dear Applicant,

The Department of Natural Resources and Conservation (Department) has determined that your application is correct and complete pursuant to ARM 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 document and Technical Analysis Scientific Credibility Review within 120 days of the date of this letter per §85-2-307(2)(b), MCA. Please note that a correct and complete application does not mean that the Department finds the submitted technical analysis to be scientifically credible, only that all required technical analyses for the application have been received.

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.

If you have any questions or concerns about the application process, please contact me.

Sincerely,

Christine Schweigert
Hydrologist
Billings Regional Office
cschweigert@mt.gov
406-247-4419
1371 Rimtop Drive, Billings, MT 59105

CC: WGM Group – Julie Merritt

Outlook

[EXTERNAL] Deficiency Letter Response for 42C 30175930 Change Application

From Patrick Doyle <pdoyle@wgmgroup.com>
Date Thu 9/10/2026 2:47 PM
To Schweigert, Christine <CSchweigert@mt.gov>
Cc Julie Merritt <jmerritt@wgmgroup.com>; Cole Peebles <cpeebles@wgmgroup.com>; Colton Coffee <colton.coffee@stockmanbank.com>

2 attachments (2 MB)
04_Application Calculations.xlsx; 00_Deficiency Response Memorandum.pdf;

Good afternoon,

Please find attached the response to the Deficiency Letter for Change Application 42C 30175930 dated August 17, 2026. Included as a separate file is a requested excel file of calculations used in the application. If there is anything else you need, please let me know.

Thank you,

Patrick

Patrick Doyle
Water Rights Specialist & GIS Coordinator

M: 406-665-5727 O: 406-728-4611
1111 East Broadway
Missoula, Montana 59802
www.wgmgroup.com [wgmgroup.com]

WGMGROUP
Community Values. Inspired Futures.

MEMORANDUM

DATE: September 10, 2026

TO: Christine Schweigert, Hydrologist, DNRC

FROM: Julie Merritt, Water Resource Specialist, WGM Group
Patrick Doyle, Water Resource Specialist, WGM Group

CC: Colton Coffee, Coffee-Nefsy Limited Partnership

RE: Deficiency Letter for Change Application No. 42C 30175930

The following are responses to the elements identified in the Deficiency letter dated August 17, 2026, for Change Application 42C 30175930.

Question 44. Do you own all of the proposed places of use? ARM 36.12.1801

- *The box was checked "Yes"; however, Montana Department of Revenue records indicate that the portion of the proposed place of use located in the NENENE Sec. 15, T1 N, R44E, Rosebud County, is owned by Coffee Feeders LLC, PO Box 8085, Billings, MT, 59108-0850. Per Question 44.a., please explain and submit documentation showing Coffee-Nefsy LP either has possessory interest or written permission of the parties with possessory interest in, the proposed place of use in the NENENE Sec. 15, T1 N, R44E.*
- *The form was signed by Colton Coffee, without a title or documentation establishing their authority to sign the application on behalf of the Applicant. The Montana Secretary of State's Business Search lists William Coffee as the registered agent for Coffee-Nefsy Limited Partnership. Please provide documentation that establishes the authority of Colton Coffee to sign the application, per ARM 36.12.1802(2) and (3).*

Please see the attached documents that establish the authority of Colton Coffee to sign for Coffee-Nefsy Limited Partnership and written permission from Coffee Feeders LLC to include the NENENE of Section 15, 1N 44E in the place of use.

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

- *Your response to question 20.a. includes geocode 29-1052-11-4-04-01- 0000, which is the geocode for the parcel described as: Sec. 11, T1N, R44E, Government Lots 5, 6, 9, SESE. That parcel appears to be on the east side of the Tongue River, whereas the proposed place of use is specifically located on the west side of the Tongue River according to the legal land description provided in response to question 20.b.*
- *Please confirm that your proposed place of use is on the parcel described above and show the Department, on a map, which acres of the proposed place of use are located in Government Lots 5, 6, 9, or the SESE Sec. 11, T1 N, R44E, Rosebud County.*

The parcel with the geocode 29-1052-11-4-04-01-0000 was erroneously included due to the migration of the river channel. The place of use in Section 11 does not include any land on the east side of the Tongue River. The correct geocodes therefore are:

29-1052-23-2-02-01-0000
29-1052-14-2-01-01-0000
29-1052-11-3-01-01-1145
29-1052-10-1-01-01-1621
29-1052-15-1-01-01-1632

Please submit any Excel and/or executable files used in calculating historical and proposed diverted flow rates, volumes, and conveyance losses so that they can be reviewed along with the Technical Analysis and Technical Analysis Addendum once the application is deemed correct and complete.

The requested excel file is digitally included with this response.

Coffee Cattle Company

Authorization

On this first day of January 2025, **Coffee Cattle Company** (the "Company") authorizes, permits, and grants **Colton M. Coffee** ("Colton") as follows:

1. Is the Manager of the Company and a junior officer.
2. Authority to conduct banking business in the ordinary course. This specifically includes making payments, writing checks and using/distributing credit cards.
3. Managing all day-to-day business of the Company, which includes buying & selling cattle, supplies, contracting with vendors, establishing services, and the like.
4. Working with and signing for the Company with all governmental agencies such as the U.S. Government (specifically ASCS, Corp of Engineers, IRS, etc.), State of Montana (specifically DNRC, Fish, Wildlife & Parks, MDOR, Dept. of Livestock, Brand Offices, etc.) and counties & their various departments.
5. Managing all types of insurance and related contracts & claims.
6. Representing the Company in all types of agricultural and related programs, organizations, and certifications.
7. Directing the hiring, firing and supervision of all employees.
8. Company is the sole General Partner of a related entity, **Coffee Nefsy Limited Partnership** ("CNLP"). As such, Colton is also fully and broadly authorized to act on CNLP's behalf as set forth above.

Wm. Coffee

William Coffee, Vice President

Coffee Feeders, LLC . . . . . .
700 Main Street
Miles City, MT 59301-3122
(406) 234-4028

August 27, 2026

Christine Schweigert
Montana DNRC
1371 Rimtop Drive,
Billings, MT 59105

RE: Change Application No. 42C 30175930

Dear Ms. Schweigert,

Coffee Feeders understands Coffee Nefsy Limited Partnership's proposed pivot will swing over the very corner of NENENE Sec. 15, T1N, R44E. We welcome all the water we can on our land and specifically grant permission for Coffee Nefsy to irrigate that portion of our property with their pivot.

Please let me know if you have questions or if I can provide you with any further information.

Thank you!

Colton Coffee

Colton M. Coffee
Managing Member

Historic diverted volume: (Vol.historic consumptive Use/On-farm Efficiency) + Vol. Conveyance Loss

historic consumptive volume =

on-farm efficiency =

Conveyance Loss = seepage loss+ vegetation loss+ ditch evaporation

seepage loss = $\frac{\text{(wetted perimeter)(ditch length)(loss rate)(days)}}{43{,}560\ ft^2/acre}$

wetted perimeter =	applicant supplied based on width and depth of ditch
ditch length (ft) =	applicant supplied based on map
loss rate =	based on Fig 2 and dominant soil type from soil survey
days irrigated =	applicant supplied

vegetation loss = (% loss/mile)(flow)(days)(ditch length)(2 ft/cuft/s/d)

% loss/mi =	0.0075 (NEH Standard 1993)
est. flow rate =	applicant supplied
days irrigated =	applicant supplied
ditch length (mi) =	applicant supplied based on map

ditch evaporation = $\frac{\text{(surface area)(evaporation rate)}}{43{,}560\ ft^2/acre}$

surface area (sqft) =	applicant supplied (ditch width*ditch length)
evaporation rate =	3.2 ft

Historic diverted volume: (Vol.historic consumptive Use/On-farm Efficiency) + Vol. Conveyance Loss

historic consumptive volume =

on-farm efficiency =

Conveyance Loss = seepage loss+ vegetation loss+ ditch evaporation 127.62

seepage loss = $\frac{\text{(wetted perimeter)(ditch length)(loss rate)(days)}}{43{,}560\ ft^2/acre}$

wetted perimeter =	7.29
ditch length (ft) =	5100
loss rate =	0.6
days irrigated =	214
109.59	

vegetation loss = (% loss/mile)(flow)(days)(ditch length)(2 ft/cuft/s/d)

% loss/mi =	0.0075
est. flow rate =	5.37
days irrigated =	214
ditch length (mi) =	0.966
16.65	

ditch evaporation = $\frac{\text{(surface area)(evaporation rate)}}{43{,}560\ ft^2/acre}$

surface area (sqft) =	35806.08
evaporation rate =	1.675
1.38	

Historical Consumptive Volume

Historical	IWR Seaonal ET [in]	Management Factor [%]	Enter Value for Acres	Historical HCU (w/o IL) [AF]	UNIT Consumption (w/o IL) [AF/AC]	County/ Station
Graded Border Flood	23.83	47.70	61	57.78	0.95	Rosebud, Brandenberg
Contour Flood	23.83	47.70	139	131.67	0.95	Rosebud, Brandenberg
			200	**189.45**		

Historical Diverted Volume

Historical	Value for HCU	Enter Value For On-farm Efficiency	Vol Applied to the Field (HCU/Field Eff)	Irrecoverable Losses (IL)	Conveyance Loss	Total Hist Consumptive Volume (w/ IL)	UNIT Consumption Volume (w/ IL) [AF/AC]	Total Historical Diverted Volume HDV	UNIT Diversion Volume AF/AC
Graded Border Flood	57.78	65%	88.90	4.44	0.00	62.23	1.02	88.90	1.46
Contour Flood	131.67	55%	239.39	11.97	127.62	143.64	1.03	367.01	2.64

Proposed Consumptive Volume	IWR Seaonal ET [in]	Management Factor [%]	Enter Value for Acres	Proposed CU (w/o IL) [AF]	Enter Value For On-farm Efficiency	Vol Applied to the Field (HCU/Field Eff)	Irrecoverable Losses (IL)	Conveyance Loss	Total Prop Consumptive Volume (w/ IL)
Sprinkled Cntr Pivot	26.52	72.70	23	**36.95**	80%	46.19	4.62	0.00	41.57
Sprinkled Cntr Pivot unit	26.52	72.70	1	**1.61**	80%	2.01	0.20	0.00	1.81
Proposed Full POU	26.52	72.70	182	**292.41**	80%	365.52		0.00	292.41

HISTORICAL POU	
Description	
61.0	Acres of Graded Border Flood
139.0	Acres of Contour Flood
200.0	**Total Historical Acres**

PROPOSED POU	
23.00	Sprinkled Acres Added Outside of Historical POU
159.00	Proposed POU Overlap Acres
182.00	**Total Proposed Acres**

ACREAGE RETIREMENT for Proposed New Sprinkled POU	
6.00	Acres Graded Border Flood
35.00	Acres Contour Flood



Proposed INCREASE in Consumed Volume

41.57



Proposed DECREASE in Consumed Volume

6.12

36.17

42.29

BALANCE POINT Proposed NET DECREASE in Consumed Volume

0.72



DITCH FLOW AND WETTED PERIMETER FOR USE IN CONVEYANCE LOSS CALCS (See Sheet 4)

d (Depth (ft))	P Wetted Perimeter	b Bottom Width	Top Flow Width	z:1 Side Slope	Slope	A Cross Sectional Area	R Hydraulic Radius	Manning's n	Flow (cfs)
0.20	3.26	2	3.2000	3	0.00137	0.52	0.159	0.025	0.34
0.24	3.52	2	3.4388	3	0.00137	0.65	0.185	0.025	0.47
0.28	3.77	2	3.6776	3	0.00137	0.79	0.211	0.025	0.62
0.32	4.02	2	3.9164	3	0.00137	0.94	0.235	0.025	0.79
0.36	4.27	2	4.1552	3	0.00137	1.11	0.259	0.025	0.99
0.40	4.52	2	4.3940	3	0.00137	1.28	0.282	0.025	1.21
0.44	4.78	2	4.6328	3	0.00137	1.46	0.305	0.025	1.46
0.48	5.03	2	4.8716	3	0.00137	1.64	0.327	0.025	1.72
0.52	5.28	2	5.1104	3	0.00137	1.84	0.349	0.025	2.02
0.56	5.53	2	5.3492	3	0.00137	2.05	0.371	0.025	2.34
0.60	5.78	2	5.5880	3	0.00137	2.27	0.392	0.025	2.69
0.64	6.03	2	5.8268	3	0.00137	2.50	0.414	0.025	3.06
0.68	6.29	2	6.0656	3	0.00137	2.73	0.435	0.025	3.46
0.72	6.54	2	6.3044	3	0.00137	2.98	0.456	0.025	3.89
0.76	6.79	2	6.5432	3	0.00137	3.23	0.476	0.025	4.36
0.80	7.04	2	6.7820	3	0.00137	3.50	0.497	0.025	4.85
0.84	7.29	2	7.0208	3	0.00137	3.77	0.518	0.025	5.37
0.98	8.22	2	7.8998	3	0.00137	4.87	0.592	0.025	7.58
1.20	9.59	2	9.2000	3	0.00137	6.72	0.701	0.025	11.71

Historical Consumptive Volume

Historical	IWR Seaonal ET [in]	Management Factor [%]	Enter Value for Acres	Historical HCU (w/o IL) [AF]	UNIT Consumption (w/o IL) [AF/AC]	County/ Station
Graded Border Flood	23.83	47.70	61	57.78	0.95	Rosebud, Brandenberg
Contour Flood	23.83	47.70	139	131.67	0.95	Rosebud, Brandenberg
			200	**189.45**		

Historical Diverted Volume

Historical	Value for HCU	Enter Value For On-farm Efficiency	Vol Applied to the Field (HCU/Field Eff)	Irrecoverable Losses (IL)	Conveyance Loss	Total Hist Consumptive Volume (w/ IL)	UNIT Consumption Volume (w/ IL) [AF/AC]	Total Historical Diverted Volume HDV	UNIT Diversion Volume AF/AC
Graded Border Flood	57.78	65%	88.90	4.44	0.00	62.23	1.02	88.90	1.46
Contour Flood	131.67	55%	239.39	11.97	127.62	143.64	1.03	367.01	2.64
						205.86		455.91	

DITCH FLOW AND WETTED PERIMETER FOR USE IN CONVEYANCE LOSS CALCS (See Sheet 4)

d (Depth (ft))	P Wetted Perimeter	b Bottom Width	Top Flow Width	z:1 Side Slope	Slope	A Cross Sectional Area	R Hydraulic Radius	Manning's n	Flow (cfs)
0.20	3.26	2	3.2000	3	0.00137	0.52	0.159	0.025	0.34
0.24	3.52	2	3.4388	3	0.00137	0.65	0.185	0.025	0.47
0.28	3.77	2	3.6776	3	0.00137	0.79	0.211	0.025	0.62
0.32	4.02	2	3.9164	3	0.00137	0.94	0.235	0.025	0.79
0.36	4.27	2	4.1552	3	0.00137	1.11	0.259	0.025	0.99
0.40	4.52	2	4.3940	3	0.00137	1.28	0.282	0.025	1.21
0.44	4.78	2	4.6328	3	0.00137	1.46	0.305	0.025	1.46
0.48	5.03	2	4.8716	3	0.00137	1.64	0.327	0.025	1.72
0.52	5.28	2	5.1104	3	0.00137	1.84	0.349	0.025	2.02
0.56	5.53	2	5.3492	3	0.00137	2.05	0.371	0.025	2.34
0.60	5.78	2	5.5880	3	0.00137	2.27	0.392	0.025	2.69
0.64	6.03	2	5.8268	3	0.00137	2.50	0.414	0.025	3.06
0.68	6.29	2	6.0656	3	0.00137	2.73	0.435	0.025	3.46
0.72	6.54	2	6.3044	3	0.00137	2.98	0.456	0.025	3.89
0.76	6.79	2	6.5432	3	0.00137	3.23	0.476	0.025	4.36
0.80	7.04	2	6.7820	3	0.00137	3.50	0.497	0.025	4.85
0.84	7.29	2	7.0208	3	0.00137	3.77	0.518	0.025	5.37
0.98	8.22	2	7.8998	3	0.00137	4.87	0.592	0.025	7.58
1.20	9.59	2	9.2000	3	0.00137	6.72	0.701	0.025	11.71

2763	Elevation at Ditch Start [ft]
2756	Elevation at Ditch End [ft]
5100	Length of Ditch [ft]
0.001373	Average Ditch Slope [ft/ft]

Abstract Amount

Max Capacity

Spreadsheet adjustment

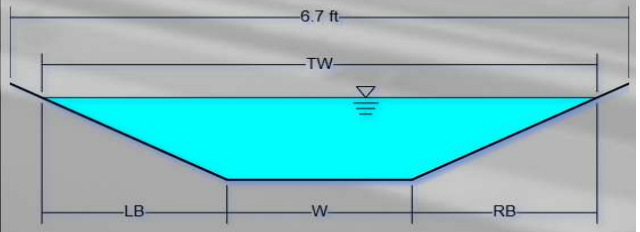
0.0398	Depth Increment [ft]

https://civiltoolbox.com/manningtrap/ Trapezoidal Channel Calculations checked by C. Peebles 4.9.2026

Solve For: Q (flow)

Channel Parameters (Input Values)

Bottom Width W=	2	ft
Left Bank Slope ($^{H}/_{V}$) =	2	:1
Right Bank Slope ($^{H}/_{V}$) =	2	:1
Depth of Flow in Channel d=	1	ft
Slope of Channel S_o ($^{V}/_{H}$)=	0.00134	$^{ft}/_{ft}$
Relative Channel Roughness n=	0.025	
Flow Q=	6.314	cfs



Output

Channel Discharge $Q = {}^{1.49}/_{n} A_w R_h^{2/3} S_o^{1/2}$

$= {}^{1.49}/_{0.025} (4)(0.618)^{2/3}(0.0013)^{1/2}$

= 6.314 cfs

Channel Flow Velocity $V = {}^{Q}/_{A_w} = {}^{6.314}/_{4}$

= 1.579 ft/s

Freeboard $Fb = {}^{1}/_{6}(d + {}^{V^2}/_{(2(g))})$

$= {}^{1}/_{6}(1 + {}^{1.579^2}/_{(2(32.174))}) = 0.173$ ft

Top Width TW = LB + RB + W

= 2 + 2 + 2 = 6 ft

Manning Equation Variables

Wetted Area of Flow

$A_w = (d)(LB)(½) + (d)(RB)(½) + (W)(d)$

$= (1)(2)(½) + (1)(2)(½) + (1)(2)$

$= 4$ ft^2

Channel Geometry Variables

Left Bank Width LB = (d)(Left Bank Slope)

= (1)(2) = 2 ft

Right Bank Width RB = (d)(Right Bank Slope)

= (1)(2) = 2 ft

Wetted Perimeter P_w= RBP + LBP + W
= 2.236 ft + 2.236 ft + 2 ft
= 6.472 ft

Hydraulic Radius $R_h = A_w / P_w = 4\ ft^2 / 6.472\ ft$
= 0.618ft

Right bank perimeter length
$RBP = \sqrt{(RB^2 + d^2)} = \sqrt{(2^2 + 1^2)} = 2.236ft$

Left bank perimeter length
$LBP = \sqrt{(LB^2 + d^2)} = \sqrt{(2^2 + 1^2)} = 2.236ft$

August 17, 2026

Coffee-Nefsy Limited Partnership
PO Box 22069
Billings, MT 59104

Subject: Deficiency letter for Change Application No. 42C 30175930

Dear Applicant,

The Department of Natural Resources and Conservation (DNRC or Department) has begun reviewing your application. This letter is to notify you of the deficiencies in your application, as required in ARM 36.12.1501(1) and §85-2-302(5)(b), MCA. An Applicant must provide substantial and credible information addressing the rules and statutes that are relative to your application. You must provide the information specified below for your application to be considered correct and complete. "Correct and complete" means all of the information provided is substantial and credible and provides all of the information as required by applicable rules and statutes. The application, as submitted, contains deficiencies in the following section(s):

- ❑ **Question 44. Do you own all of the proposed places of use? ARM 36.12.1801**
  - The box was checked "Yes"; however, Montana Department of Revenue records indicate that the portion of the proposed place of use located in the NENENE Sec. 15, T1N, R44E, Rosebud County, is owned by Coffee Feeders LLC, PO Box 8085, Billings, MT, 59108-0850. Per Question 44.a., please explain and submit documentation showing Coffee-Nefsy LP either has possessory interest or written permission of the parties with possessory interest in, the proposed place of use in the NENENE Sec. 15, T1N, R44E.
  - The form was signed by Colton Coffee, without a title or documentation establishing their authority to sign the application on behalf of the Applicant. The Montana Secretary of State's Business Search lists William Coffee as the registered agent for Coffee-Nefsy Limited

Partnership. Please provide documentation that establishes the authority of Colton Coffee to sign the application, per ARM 36.12.1802(2) and (3).

- ❑ While not a deficiency, the Department would like to confirm your response to Question 20.a.

- ❑ **Question 20.a. What are the geocodes for the proposed place of use?**
  - Your response to question 20.a. includes geocode 29-1052-11-4-04-01-0000, which is the geocode for the parcel described as: Sec. 11, T1N, R44E, Government Lots 5, 6, 9, SESE. That parcel appears to be on the east side of the Tongue River, whereas the proposed place of use is specifically located on the west side of the Tongue River according to the legal land description provided in response to question 20.b.
  - Please confirm that your proposed place of use is on the parcel described above and show the Department, on a map, which acres of the proposed place of use are located in Government Lots 5, 6, 9, or the SESE Sec. 11, T1N, R44E, Rosebud County.

- ❑ Please submit any Excel and/or executable files used in calculating historical and proposed diverted flow rates, volumes, and conveyance losses so that they can be reviewed along with the Technical Analysis and Technical Analysis Addendum once the application is deemed correct and complete.

As stated above, the information submitted to address the rules and statutes listed in this deficiency letter must be substantial credible information to be acceptable at the correct and complete determination. §§85-2-102 (9) and (26), MCA.

Please submit the information specified above to the Billings Regional Office by December 15, 2026. This is the only deficiency letter that will be sent. An application not corrected or completed within 120 days from the date of this letter is terminated per ARM 36.12.1501(2) and §85-2-302(6)(a), MCA

Sincerely,

Christine Schweigert
Hydrologist

Billings Regional Office
cschweigert@mt.gov
406-247-4419
1371 Rimtop Drive, Billings, MT 59105

CC: WGM Group – Julie Merritt

IMPORTANT NOTICE: This will be the final opportunity for you to provide the required information to the Department. If all of the requested information in this letter is not postmarked or submitted within 120 days of this letter, the application will be terminated within 30 days and the application fee will not be refunded.

WGMGROUP
Community Values Inspired Futures

wgm@wgmgroup.com
406.728.4611
www.wgmgroup.com

TRANSMITTAL

TO:	DATE:
Montana Department of Natural Resources & Conservation Water Resources Div. 1371 Rimtop Dr Billings, MT 59105-1978 **USPS**	7/1/2026
	PROJECT NAME: Coffee Water Rights
	PROJECT NO: 12-03-26.1

ITEM NO.	DESCRIPTION
1.	COFFEE-NEFSY LTD PARTNERSHIP Technical Analyses Report
2.	COFFEE-NEFSY LTD PARTNERSHIP Form 606 and attachments
3.	COFFEE-NEFSY LTD PARTNERSHIP Form 606-TAA and attachments

COMMENTS:

Please note that per Shannon Baumgardner's 6/12/2026 email, the $2500 filing fee WGM paid for the application that was submitted on 6/1/2026 would not be refunded if we were able to resubmit within a short time frame. Based on that discussion, we assume that no additional filing fee is required at this time. We are prepared to submit electronic copies of the shapefiles for the new, retired, and unchanged historical places of use, the Aera of Potential Impact as well as the historical ditch shapefiles associated. Please email me Patrick Doyle at pdoyle@wgmgroup.com with the preferred email address to send the shapefiles to.

Thank you,

Patrick

Patrick Doyle
Water Rights Technician & GIS Coordinator
WGM Group, Inc.

RECEIVED
JUL 06 2026
DNRC-WRD-BILLINGS

WGMGROUP
Community Values Inspired Futures

wgm@wgmgroup.com
406.728.4611
www.wgmgroup.com

MEMORANDUM

DATE: July 1, 2026

TO: Department of Natural Resources and Conservation (DNRC) Water Resources Division (WRD) Billings Regional Office (BRO)

FROM: WGM Group, Inc.

CC: Colton Coffee

RE: Technical Analyses for Application to Change Water Right 42C 27200 00

The following Technical Analyses have been prepared based on the guidance provided in the WRD's Technical Analysis Guide, dated February 2, 2025.

OVERVIEW OF PROPOSED CHANGE

The Applicant proposes to change water right number 42C 27200. This water right historically irrigated 200 acres of land adjacent to the Tongue River. The proposed change includes retaining the historical point of diversion (POD) and adding a second POD at a downstream location. The Applicant plans to replace the historical flood irrigation with pivots. The pivots will largely cover the same acreage that was historically flood irrigated with some reconfiguration of the acreage. The Applicant plans to retire 41 acres and add 23 new acres.

The means of diversion at the historical POD that is being maintained, POD H1/P1, uses a 25-horsepower motor close-coupled with a Cornell 4RB pump. The system is designed to supply irrigation water for the 62-acre pivot at a flow rate of 750 gpm at 109 feet total dynamic head (TDH) with an efficiency of approximately 83%. The maximum capacity of the H1/P1 pump system under ideal conditions is approximately 1,180 gpm but it will normally operate at a maximum of 788 gpm.

Proposed POD – POD P2 will use a 40-horsepower motor close-coupled with a Cornell 4RB pump. Proposed Diversion P2 is designed to supply irrigation water to two full-arc pivots. The larger center pivot sprinkler is designed to cover 101 acres of the proposed POU and the other pivot is planned to irrigate 19 acres of the proposed POU. The design flow rate for the larger pivot is 900 gpm and the design flow for the smaller pivot is 240 gpm. The system is optimized for supply of the 101-acre pivot with a TDH of 147 ft at a flow rate of 900 gpm (running) alone. The system is also cable of simultaneously supplying both P2 pivots at a design flow rate of 1,140 gpm at a TDH of 120 ft (with an approximate efficiency of 83%). The maximum capacity of the P2 pump system under ideal conditions is approximately 1,390 gpm but it will normally operate at a maximum of 1,197 gpm.

See **Figure 1** for a depiction of the proposed PODs and POU.

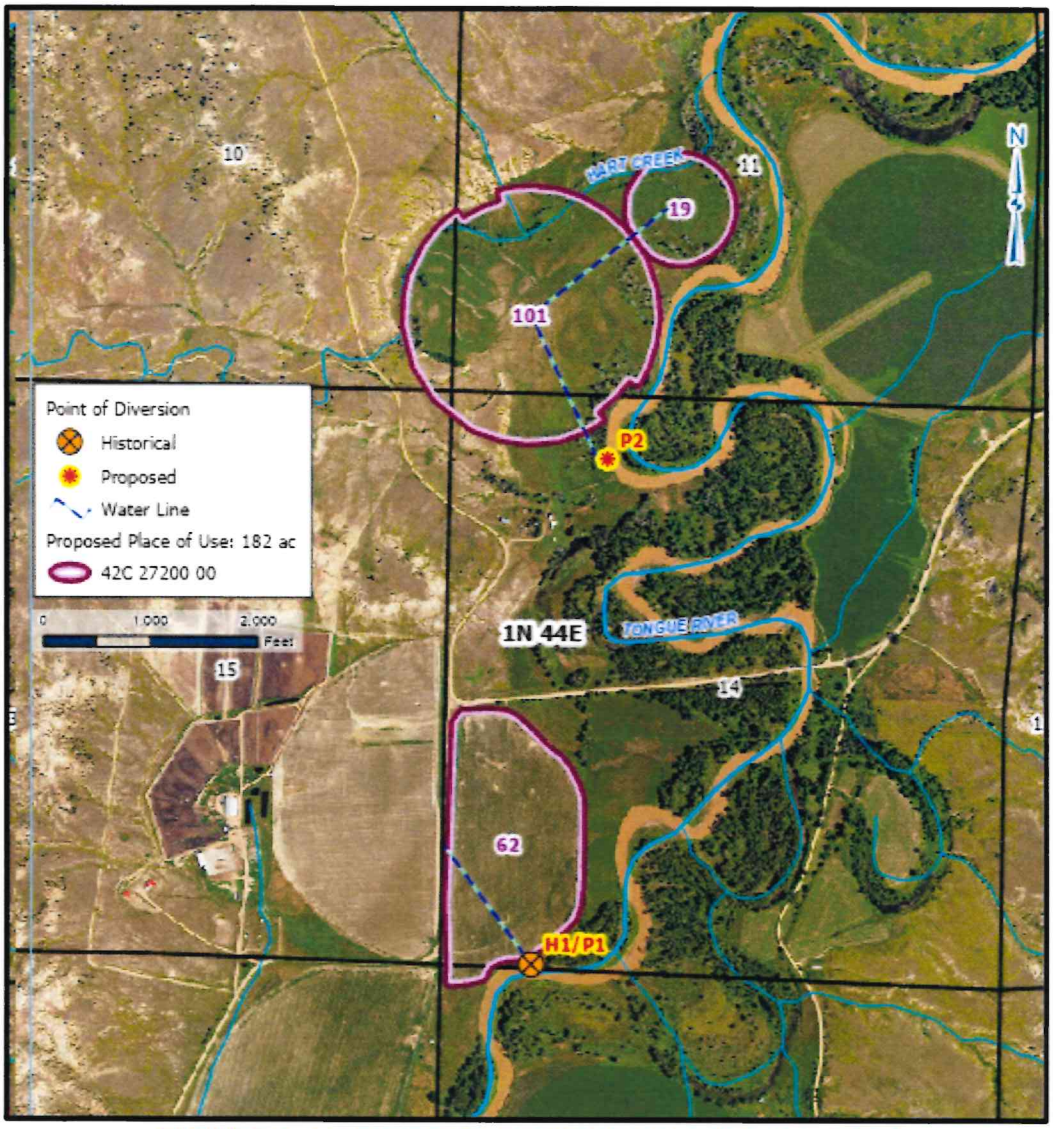


FIGURE 1. MAP OF THE PROPOSED PODS AND POU

HISTORICAL USE ANALYSIS

The Applicant proposes to change water right Statement of Claim 42C 27200 which has a priority date of June 19, 1944. The following historical use description is based on the use prior to July 1, 1973. Water right 42C 27200 was the subject of Water Court case no. 42C-67. The Master's Report and the Order Adopting the Master's Report are attached, see Form 606-TAA Attachment B3. The water right was modified by the Court and the current abstract reflects the Court's modifications. As will be demonstrated below, the proposed change will not exceed the historical diverted or consumed volume of water.

The claimed acres were not specifically identified on the Water Resource Survey however, historical aerial photos support the historical irrigation. The historical irrigation was verified by DNRC Water Resource Specialist, Misty Hauer, in her July 14, 2014, memo to the Water Court, see Attachment B3 Form 606-TAA and Map 12.b.i.2 Form 606-TAA Attachment B4. Water Resources Survey aerial photo

no. MA-29-29 dated 1944 shows approximately 187 acres irrigated. Per Ms. Hauer, the 187 acres she found fall within the acceptable range of acreage defined by the Water Right Claim Examination Rules claimant contact points.

It should be noted that the 1944 aerials were taken the same year as the priority date for this right and may not reflect the full extent of the irrigation that was ultimately perfected prior to 1973. The USDA aerial photo no. 278-185 dated 9/15/1978 supports that 200 acres were irrigated within the place of use decreed by the Water Court. The conveyance and field ditches are clearly evident on the 1978 photo, supporting the historical irrigation of the full 200 acres. See **Figure 3** below for a portion of the 1978 photo that covers the historical POU.

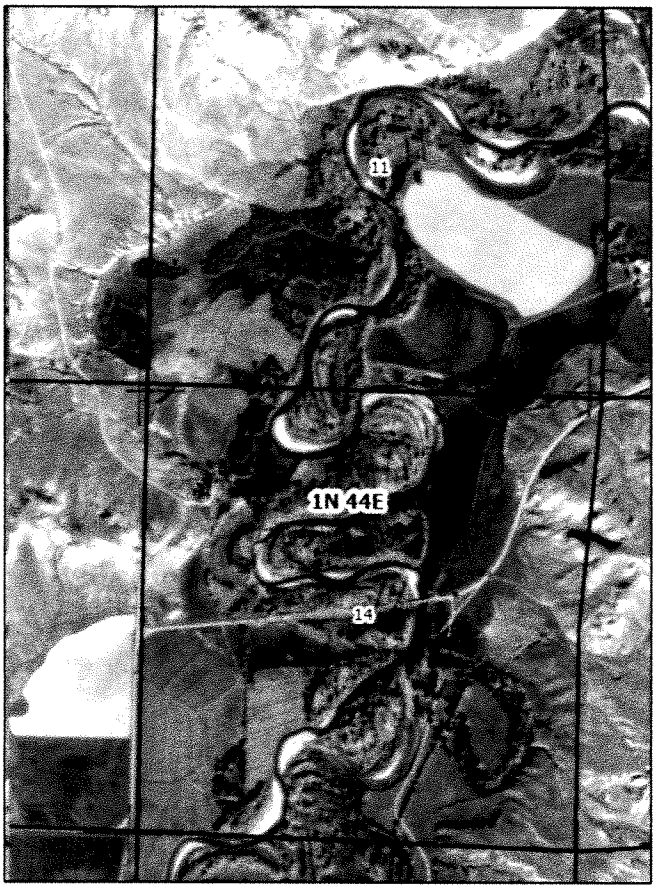


FIGURE 2. PORTION OF USDA 1978 AERIAL PHOTO 278-185

There is one water right that could be considered to overlap 42C 27200 and that is water right 42C 27201, a surface water right from a tributary to the Tongue River called Hart Creek. This tributary has a small drainage area and often provides little to no flow for most of the season, making water unavailable for diversion every year. Hart Creek flows are estimated to be available in feasibly divertible amounts for irrigation roughly every fifth year. Water from Hart Creek will continue to be utilized as it was historically used (when available) via water spreading to provide flood water to the historical place of use for 42C 27201. As the water spreading type will not be altered, the place of use under this right will not be affected.

Because the Tongue River water right has historically provided full-service irrigation to the entire POU in most years, it is appropriate to attribute the full historical consumed and diverted volumes to water right 42C 27200. The Hart Creek water right does not provide a reliable volume on a consistent basis so, for the purposes of this change application, the volume associated with 42C 27201 should not be considered as part of the overall historical volume associated with the POU of 42C 27200.

As noted above, the priority date for 42C 27200 is June 19, 1944. To the Applicant's knowledge, the water has been used every year though the present day on a portion of the historical POU. The historical POD is located in the SESWSW Sec 14, Twp 1N, Rge 44E. The historical period of diversion is 3/15 to 10/15 and falls within the DNRC standard for this purpose. The historical means of diversion is a pump. Historically, the fields within the POU were used to raise alfalfa and grass hay. Depending on the season, it was possible to get 2 or 3 cuttings. Water would have been shut off to the fields for about 15 days between growth periods to cut, cure and bale the hay.

Historically there was a large pump installed at the POD that pumped water from the river into a ditch. See **Figure 4** and **Figure 5** for photos of the location of the historical POD and the remnants of the historical means of diversion. The means of diversion included a vertical 18-in corrugated metal pipe installed immediately adjacent to the river. The old pump sat on a cutout in the top of the pipe.



Figure 3. Photo of historical POD taken by J Merritt 04/07/2022 looking downstream from the POD.



Figure 4. Photo of Historical POD taken by J Merritt 04/07/2022. Looking down into the vertically installed pipe.

The initial portion of the historical conveyance ditch is estimated to have been approximately 8 ft wide at the top, 2 ft wide at the bottom and 1.5 feet deep. A short distance below the initial point where water was discharged from the pump into the ditch, the ditch split and one branch headed due west to the graded border flood field and then split again into field ditches A and B. Please refer to attached Historical Use of Ditches Map – Form 606 TAA Question 91 for the historical diversion and ditch locations. The flow rate in the A/B branch of the ditch is estimated to have been 2.21 CFS. No conveyance losses were calculated for field ditches A and B because they are both completely within the POU.

The branch of the ditch labelled Ditch C on the Historical Use of Ditches Map is estimated to have been approximately 7 ft wide at the top, 2 ft wide at the bottom and 16 inches deep. Using these dimensions and assuming 6-in of freeboard, the capacity of Ditch C is estimated to have been 5.37 CFS. This is the maximum flow of the ditch with the water depth at approximately ¾ ft. See Form 606 TAA Attachment B5 for the ditch capacity calculations.

Following is the description of the historical POU. The maximum historically irrigated acreage was 200 Ac.

Acres	Qtr Sec	Sec	Twp	Rge	County
5	NESE	10	1N	44E	ROSEBUD
10	SESE	10	1N	44E	ROSEBUD
4	SENW	11	1N	44E	ROSEBUD
30	NESW	11	1N	44E	ROSEBUD
21	NWSW	11	1N	44E	ROSEBUD
10	SESW	11	1N	44E	ROSEBUD
38	SWSW	11	1N	44E	ROSEBUD
16	NWNW	14	1N	44E	ROSEBUD
30	NWSW	14	1N	44E	ROSEBUD
36	SWSW	14	1N	44E	ROSEBUD
200	Total				

HISTORICAL CONSUMED AND DIVERTED VOLUMES INCLUDING CALCULATION METHODS

The following set of equations were used to calculate the annual historical consumed and diverted volumes:

Historical Consumptive Use (Crop Consumption) in AF (HCU)
= (IWR Seasonal ET * County Management Factor (CMF) * Acres (Ac)) / 12

Applied Field Volume in AF (Vol Applied) = HCU/Field Efficiency

Irrecoverable Losses in AF (IL) = Vol Applied * 0.05 (for flood irrigation)

Conveyance Loss in AF = seepage loss+ vegetation loss+ ditch evaporation

Historical Consumed Volume (HCV) or Total Consumed Volume = HCU + IL

Historical Diverted Volume (HDV) = Vol Applied + Conveyance Loss

The historical place of use consists of 200 acres of flood irrigation. There were two subtypes of flood irrigation used, Graded Border Flood (GBF) and Contour Ditch Flood (CDF), that irrigated 61 acres and 139 acres of the POU, respectively. The southern field depicted on the attached Historical Use Map – Form 606 Question 17 is the GBF field and the northern field depicted on the same map is the CDF field. The conveyance ditch split a short distance from its beginning point.

In calculating the Historical Consumed and Diverted Volumes, the Applicant followed the procedures in ARM 36.12.1902 for Rosebud County at the geographically nearest Brandenberg Weather Station.

Because the two different subtypes of flood irrigation have different field efficiencies and the ditches that served the fields have different conveyance losses, the HCU, IL, and Conveyance Loss were calculated for each subtype. **Table 4** below summarizes information for each subtype and provides the combined totals.

TABLE 1. SUMMARY OF HISTORICAL VOLUMES

	Acres	IWR (in)	Mgmt. factor (%)	Field Efficiency (%)	Crop consumption (AF)	Applied field volume (AF)	IL (AF)	Total consumed volume (AF)	Non-consumed volume (AF)
Hist GBF	61.00	23.83	47.7	65	57.78	88.90	4.44	62.22	26.68
Hist CDF	139.00	23.83	47.7	55	131.67	239.39	11.97	143.64	95.75
Totals					**189.45**	**328.29**	**16.41**	**205.86**	**122.43**

Following is a breakdown of the individual calculations:

Graded Border Flood: 61 Ac
- 23.83 in IWR
- 65% efficiency, 0.5% to 1% slope
- 47.7% County Management Factor

HCU GBF = (23.83 in * 0.477 * 61 ac)/12 in = 57.78 AF
Vol Applied = 57.78 / 0.65 = 88.90 AF
IL (5% for flood irrigation) = (88.90 * 0.05) = 4.44 AF
HCV GBF = 57.78 + 4.44 = 62.22

Conveyance Loss = 0
Per the DNRC Billings Regional Office staff, no conveyance losses for Graded Border Flood as the ditches are completely within the POU.
HDV GBF = 88.90 + 0 = 88.90

Contour Ditch Flood: 139 Ac
- 23.83 in IWR
- 55% efficiency, 1.5% to 3.0%
- 47.7% County Management Factor

HCU = (23.83 in *0.477 * 139 ac) / 12 in = 131.67 AF
Vol Applied = 131.67 / 0.55 = 239.39 AF
IL (5% for flood irrigation) = 239.39 * 0.05 = 11.97 AF
HCV CDF = 131.67 + 11.97 = 143.64

Conveyance losses are calculated for Ditch C depicted on the attached Historical Use of Ditches Map – Form 606 TAA Question 91.

Conveyance Loss = seepage loss+ vegetation loss+ ditch evaporation = 127.62 AF

seepage loss = $\frac{\text{(wetted perimeter)(ditch length)(loss rate)(days)}}{43{,}560\ ft^2/acre}$

wetted perimeter =	7.29
ditch length (ft) =	5100
loss rate =	0.6
days irrigated =	214
	109.59

vegetation loss = (% loss/mile)(flow)(days)(ditch length)(2 ft/cuft/s/d)

% loss/mi =	0.0075
est. flow rate =	5.37
days irrigated =	214
ditch length (mi) =	0.966
	16.65

ditch evaporation = $\frac{\text{(surface area)(evaporation rate)}}{43{,}560\ ft^2/acre}$

surface area (sqft) =	35806.08
evaporation rate =	1.675
	1.38

Conveyance Loss = 123.57 + 16.65 + 1.38 = 141.60
HDV CDF = 239.39 + 127.62 = 367.01 AF

Total HCV = HCV GBF + HCV CDF = 62.22 + 143.64 = 205.86

Total HDV = HDV GBF + HDV CDF = 88.90 + 367.01 = 455.91 AF

The annual historical consumptive volume (HCV) includes Crop Consumption and Irrecoverable Losses. Per **Table 4** above, the Total HCV is 205.86 AF. The applicant followed ARM 36.12.1902 and the values from the Change Manual for determining/calculating;

- IWR Seasonal ET
- County Management Factor
- Crop Consumption
- Field Efficiency
- Conveyance Losses
- Irrecoverable Losses

Manning's equation with an n-value of 0.025 was used to calculate ditch capacity. This is an appropriate n-value based on guidelines (Chow, 1959) for a relatively uniform, earth-lined channel which was historically cleared of debris and its vegetation burned. The soils that are traversed by the ditch are best described as Havre loam, occasionally flooded.

ANALYSIS OF THE AREA OF POTENTIAL IMPACT

The project is located on the Tongue River approximately 89 river miles above its confluence with the Yellowstone River. The historical and proposed diversions and the place of use are all within the U.S. Geological Survey Watershed Boundary Dataset (WBD) HUC-12 sub-watershed No. 100901020701 (Hart Creek–Tongue River).

A reasonable Area of Potential Impact (AOPI) extends from the uppermost historical/proposed point of diversion (H1/P1) located in the SESWSW of Section 14, Township 1 North, Range 44 East, to the confluence of Dry Creek and the Tongue River in the SWSE of Section 30, Township 2 North, Range 45 East, all in Rosebud County, Montana. See **Figure 2** below. This area includes the historical and proposed PODs as well as the reach of the river where return flows historically accrued and where they would accrue under the proposed change.

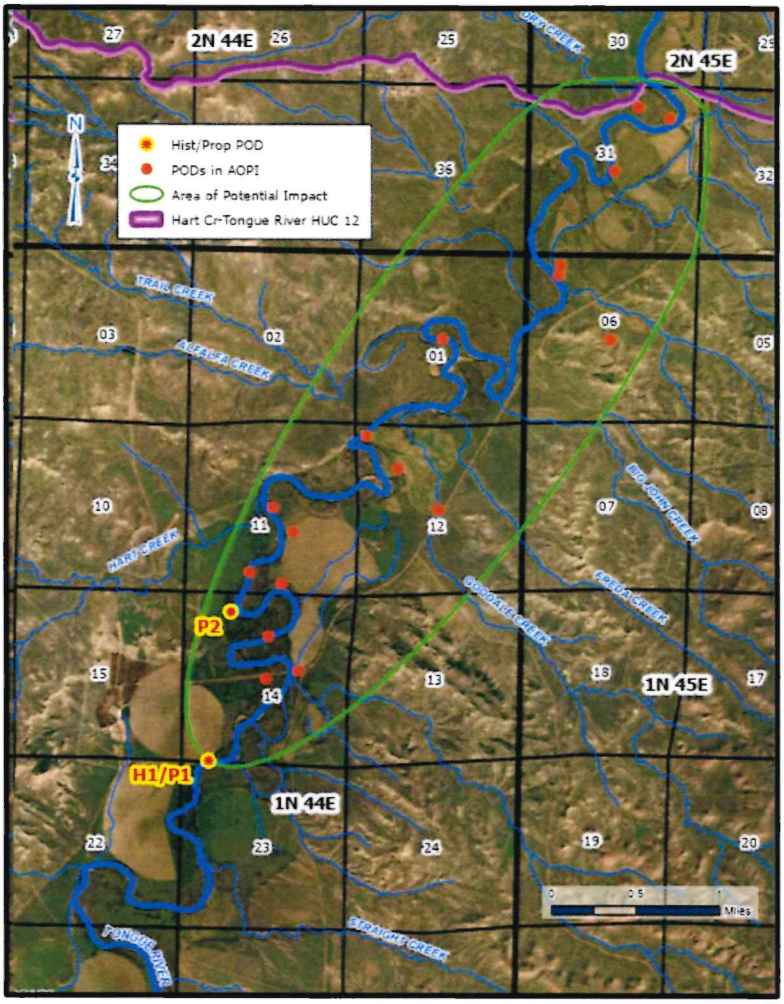


FIGURE 5. AREA OF POTENTIAL IMPACT MAP

It is reasonable to define the upstream limit of the Area of Potential Impact (AOPI) at POD H1/P1 because it is the uppermost historical and proposed point of diversion. Water is diverted directly from the Tongue River by pump at this location; therefore, the proposed change would not affect upstream river reaches or tributary inflows.

It is reasonable to define the downstream limit of the AOPI at the Dry Creek confluence which is the downstream boundary of the HUC-12 sub-watershed Hart Creek-Tongue River No. 100901020701. This HUC 12 contains both proposed points of diversion. The WBD is a nationally standardized, hierarchical system of hydrologic units that delineates incremental drainage areas based on topography, hydrologic connectivity, and common outlet points. Along major river systems, HUC-12 sub-watersheds generally represent the incremental drainage area contributing runoff to a defined reach of the mainstem and its associated tributaries, providing a logical, objective, and reproducible framework for evaluating hydrologic conditions.

Accordingly, the upstream diversion location (H1/P1) and the downstream boundary of HUC-12 sub-watershed No. 100901020701 provide a consistent and hydrologically meaningful basis for identifying water rights that could potentially be affected by the proposed change while excluding areas separated

by surface drainage divides that are unlikely to contribute flow to the affected reach of the Tongue River.

ANALYSIS OF IMPACTED SURFACE WATER SOURCES

The Tongue River is the only surface water source that could potentially be impacted by this application because the proposed diversions consist of pumps placed directly in the river. The Tongue River is a complex system involving a range of priority dates for pre-73 (historical) and post-73 (new appropriations) direct flow water rights, as well as pre-73 and post-73 stored water (e.g. from the Tongue River Reservoir) and instream flow water rights. When in priority, the Applicant will first rely on, and use, its historical direct flow right. If a call for direct flow water is made by other more senior right holders, the Applicant may choose to cease irrigation of the fields covered by this application OR, the Applicant may choose to use some of its Tongue River Water User's contract water (stored water released from the Tongue River Reservoir) to continue irrigation. Either way, the Applicant is able to comply with any legitimate calls for water by senior users.

The Applicant is the only user of both the existing and proposed PODs. There were never any other users of the historical ditch. In addition to the PODs that are the subject of this application, there are a total of nine (9) water rights with PODs in the AOPI. A list of these rights is provided in **Table 1** below. Five (5) of these rights belong to the applicant or entities that are controlled by the applicant. The other four (4) water rights in the AOPI include three (3) private irrigation Statements of Claim and one Water Reservation. The subject water right is senior to one of the irrigation rights, 42C 180310, and the Water Reservation and is junior to all other rights within the AOPI.

TABLE 2. WATER RIGHTS WITH PODS IN THE AOPI

WR Number	WR Type	Owners	Means of Diversion	Period of Diversion	Max Flow Rate	Purpose
42C 13105 00	Statement of Claim	Coffee Feeders LLC; Coffee-Nefsy Ltd Prtnrshp	Pump	03/15 to 11/19	7.86 CFS	Irrigation
42C 13103 00	Statement of Claim	Coffee Feeders LLC; Coffee-Nefsy Ltd Prtnrshp	Pump	03/15 to 11/19	7.44 CFS	Irrigation
42C 13102 00	Statement of Claim	Coffee Feeders LLC; Coffee-Nefsy Ltd Prtnrshp	Pump	03/15 to 11/19	24.44 CFS	Irrigation
42C 27234 00	Statement of Claim	Coffee-Nefsy Ltd Prtnrshp	Livestock Direct from Source	01/01 to 12/31	43.43 GPM	Stock
42C 13140 00	Statement of Claim	Coffee-Nefsy Ltd Prtnrshp	Livestock Direct from Source	01/01 to 12/31	41.32 GPM	Stock
42C 180312 00	Statement of Claim	DCT LLC	Pump	03/15 to 11/19	14.7 CFS	Irrigation
42C 180310 00	Statement of Claim	DCT LLC	Pump	04/01 to 11/15	3.67 CFS	Irrigation
42C 30017759	Water Reservation	Montana, State of Dept of Fish Wildlife & Parks	Instream	01/01 to 12/31	75 CFS	Fishery
42C 177248 00	Statement of Claim	Richard A Brewer	Pump	04/15 to 11/01	4.9 CFS	Irrigation

The proposed change will not expand the historical use. The flow rate required for the proposed use is less than the historical flow rate and will be split between the existing upstream POD and an added downstream POD. The historical flow rate is 7.58 CFS and the proposed maximum flow rate is 4.42 CFS. The proposed flow rate is based on the flows needed to operate the pumps and pivots described in the overview section above and in the attached Form 606 and Form 606-TAA.

Similarly, the historical diverted volume, 455.91 AF, is more than the proposed diverted volume 365.52 AF, resulting in an overall reduction of diverted volume. The historical and proposed consumed volumes are very similar with the proposed consumed volume being just slightly less that the historical consumed volume.

There are two reaches of the river to consider in the analysis of impacted surface water. The first is the approximately 2 river mile reach between the upstream historical/proposed POD and the new POD. Water rights with PODs in this reach include irrigation and stockwater rights owned by entities controlled by the Applicant and an instream flow Water Reservation owned by MT Fish, Wildlife & Parks (FWP). Under the change, the water demand created by water right 42C 27200 will be reduced in this reach for two reasons; first because the proposed overall flow rate and diverted volume will be less than the historical flow rate and diverted volume and second because a portion of the flow rate and volume for 42C 27200 would remain in the river between the historical/proposed POD and the new POD. Under the change, there would be no reduction in flow or volume available for other existing water rights in this reach.

The second reach of concern is the reach below the proposed new POD to the downstream boundary of the AOPI. Water rights with PODs in this reach are irrigation and stockwater rights owned by entities controlled by the Applicant, an instream flow Water Reservation owned by MT FWP, and irrigation rights owned by Richard A Brewer and DCT LLC. Because the proposed overall flow rate and diverted volume will be less than the historical flow rate and diverted volume, water demand in this reach would also be reduced under the proposed change application, insuring there will be no reduction in flow and volume available to other existing water rights.

Per the DNRC Change Manual;

> *"For irrigation changes, the Department does not account for a change in the method of irrigation (and thus on-farm efficiency values or timing of return flows) when considering the proposed consumptive volume on acres that fall within the historically irrigated footprint."* (pg 89)

Based on this policy and for the purposes of adverse effect analysis, it is appropriate to compare the consumed volume of the historically irrigated acres proposed for retirement to the consumed volume of the proposed new acres. The Applicant proposes to retire 41 historically irrigated acres and add 23 acres of new irrigation. There are 159 historically irrigated acres within the POU that will not be changed. When this comparison is made, it can be seen that there will be no increase in the consumptive use under this proposed change. Please refer to **Table 2** below.

TABLE 3. HISTORICAL AND PROPOSED CONSUMED VOLUME COMPARISON OF CHANGED AC

	Acres	IWR (in)	Mgmt. factor (%)	Field Efficiency (%)	Crop consumption (AF)	Applied field volume (AF)	IL (AF)	Total consumed volume (AF)	Non-consumed volume (AF)
Retired Ac GBF	6.00	23.83	47.7	65	5.68	8.74	0.44	6.12	2.62
Retired Ac CDF	35.00	23.83	47.7	55	33.15	60.28	3.01	36.16	24.11
Total Retired Ac	41.00				**38.83**	**69.02**	**3.45**	**42.28**	**26.73**
New Ac	23.00	26.52	72.7	80	**36.95**	**46.19**	**4.62**	**41.57**	**4.62**

The total proposed diverted volume for the proposed 182-ac POU is equivalent to the Applied Field Volume, 365.52 AF, since there will be no conveyance losses because water will be conveyed through a pipeline and not a ditch. Note that the proposed use field efficiency of 80% is based on the understanding that modern pivot irrigation nozzles are more efficient. They are designed to maximize water droplet size thus reducing wind-drift and evaporative losses. This is the basis for using 80% field efficiency instead of 70%.

The proposed diverted volume was calculated based on the values in ARM 36.12.1902, which are provided in **Table 3** below. In addition, the following formulas were applied:

Applied Field Volume in AF (Vol Applied) = Crop Consumption/Field Efficiency

Proposed Diverted Volume = Vol Applied + Conveyance losses

TABLE 4. PROPOSED WATER USE BASED ON ARM 36.12.1902

	Acres	IWR (in)	Mgmt. factor (%)	Field Efficiency (%)	Crop consumption (AF)	Applied Field Volume (AF)
Proposed Full POU	182.00	26.52	72.7	80	292.41	365.52

Proposed diverted volume = 365.52 AF.

RETURN FLOW ANALYSIS

Per Question 37.b.i.1 of the Form 606-TAA, no extended return flow analysis is needed because return flows enter back to the source upstream of or at the location of the next appropriator. The Applicant understands that a return flow analysis must assess whether the location and amount of return flow accretion will change as a result of the proposed change. Given the immediate proximity of the irrigated acreage to the river, it is reasonable to conclude that return flow water would have accrued to the Tongue River adjacent to and immediately downstream of the historically irrigated acreage.

The return flow analysis is based on the return flows related to the retired acres compared to the return flows related to the proposed new acres. Per DNRC policy noted above, this analysis does not include any reference to the change of irrigation method for the unchanged acres within the historical POU. These values are all included in **Table 2** above.

The return flows for the retired acres are 26.73 AF and for the proposed new acres are 4.62 AF. Under the change; the return flows will decrease by 22.11 AF however; this volume of water will remain in the river and will not be diverted making it available for the next downstream appropriator. Based on this understanding, there is no change to the amount of return flows available to the next appropriators. Additionally, there is no change in the location where the return flows accrete. The change in place of use involves only minor adjustments to the overall irrigated land, all of which remains in close proximity to the river. Return flows will continue to accrete to the Tongue River adjacent to and downstream of the historical POU.

APPLICATION TO CHANGE A WATER RIGHT

§ 85-2-302, MCA

Form No. 606 *(Revised 10/2025)*

For Department Use Only

RECEIVED

JUL 06 2026

DNRC-WRD-BILLINGS

Application # 30175930 Basin 42C

Priority Date 7/6/2026 Time 15:59 AM/PM

Rec'd By CS

Fee Rec'd $ 2500.00 Check # 83681

Deposit Receipt # BLS2629955

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.*

71444

Applicant Name COFFEE-NEFSY LTD PARTNERSHIP

Mailing Address PO BOX 22069 City BILLINGS State MT Zip 59104

Phone Numbers: Home _____ Work _____ Cell _____

Email Address _____

Applicant Name _____

Mailing Address _____ City _____ State _____ Zip _____

Phone Numbers: Home _____ Work _____ Cell _____

Email Address _____

Applicant Name _____

Mailing Address _____ City _____ State _____ Zip _____

Phone Numbers: Home _____ Work _____ Cell _____

Email Address _____

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

Contact/Representative is: ☐ Applicant ☑ Consultant ☐ Attorney ☐ Other

Contact/Representative Name JULIE MERRITT

Mailing Address 1111 E BROADWAY City MISSOULA State MT Zip 59802

Phone Numbers: Home _____ Work (406) 728-4611 Cell _____

Email Address jmerritt@wgmgroup.com pdoyle@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)).*

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. 1

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*	
42C 27200-00	7.58	☐	☑	4.42	☐	☑	2 Pumps
		☐	☐		☐	☐	
		☐	☐		☐	☐	
		☐	☐		☐	☐	
		☐	☐		☐	☐	

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

15. What is the source name? Tongue River

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

Water Right No.	42C 27200-00				
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/P1	se	sw	sw	14	1N	44E	ROSEBUD						unchanged
P2			nw	14	1N	44E	ROSEBUD					2	new

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 new proposed POD P2 and the historical POD H1/P1 will each use a pump on the Tongue River as a means of diversion.

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?

29-1052-11-4-04-01-0000	29-1052-11-3-01-01-1145
29-1052-23-2-02-01-0000	29-1052-10-1-01-01-1621
29-1052-14-2-01-01-0000	29-1052-15-1-01-01-1632

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
14			E2	SE	10	1N	44E	ROSEBUD
92.5	(West of	Tongue	River)	S2	11	1N	44E	ROSEBUD
13			N2	NW	14	1N	44E	ROSEBUD
60.5			W2	SW	14	1N	44E	ROSEBUD
0.5		NE	NE	NE	15	1N	44E	ROSEBUD
1.5	5	NW	NW	NW	23	1N	44E	ROSEBUD
182	***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?
Hart Creek is a small gully that only contributes water approximately once every 5 years. When the water is available, it has been captured via a dike across the channel and distributed to the field. There is no intent to change the place of use of 42C 27201-00. On most years, when Hart Creek is dry, the entire place of use is serviced only using right 42C 27200.

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*
42C 27201-00	05/01 to 05/15*	05/01 to 05/15*	N/A	☐	☐	2.5
				☐	☐	
				☐	☐	
				☐	☐	

*Water available for diversion approx. once every 5 years.

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.

The pumps can be shut-off in response to any legitimate call for water. See also the response for Question 25.

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

The Tongue River is a complex system involving a range of priority dates for pre-73 (historical) and post-73 (new appropriations) direct flow water rights, as well as pre-73 and post-73 stored water (e.g. from the Tongue River Reservoir). When in priority, the Applicant will first rely on, and use, its historical direct flow right. If a call for direct flow water is made by other more senior rightholders, the Applicant may choose to cease irrigation of the fields covered by this application OR, the Applicant may choose to use some of its Tongue River Water User's contract water (stored water released from the Tongue River Reservoir) to continue irrigation. Either way, the Applicant is able to comply with any legitimate calls for water by senior users.

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.

The proposed changes do not alter the Applicant's ability to make call as the added POD is downstream. The only water rights with intervening PODs between the historical POD and the new POD belong to the Applicant or related entities. Those rights are senior and will not be effected by the additional POD.

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.

A water commissioner is NOT appointed to the Tongue River for distribution of direct flow rights. The Tongue River Water Users Assn hires a dam tender to oversee distribution of the stored (contract) water from the Tongue River Reservoir.

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

Currently in use. To the applicant's knowledge, the water has been in continuous use for many years

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.

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 new proposed POD P2 is located approximately 2 river miles downstream of historical POD H1/P1. Both P2 and H1/P1 will be in use under the proposed Change Application.

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.

The water rights with intervening PODs all belong to the Applicant or entities controlled by the Applicant; 42C 13102, 13103, 13105, 13140

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.

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.

SEE ATTACHED SUPPLEMENT (A2)

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.

SEE ATTACHED SUPPLEMENT (A2)

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

35.a. If yes, explain.

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.

See also the responses for Questions 33 and 34 for information on pressurized, piped water conveyance to the three (3) proposed center pivot sprinklers. Design flow rates for each of the pivots in the proposed POU are listed below. Actual flow rates will fluctuate within +/- 5% of the design flow rates depending on river fluctuations, nozzle adjustments, and crop considerations.

62-ac half-arc pivot: 712 - 788 gpm;

101-ac full arc pivot + 19-ac full arc pivot: 1,083 - 1,197 gpm

See Attached Supplement (A2).

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

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.

Use: Irrigation. The proposed period of diversion, period of use, flow rates, and volume of water use all fall within the DNRC standards for the project location and the IWR Climate Area I (High Consumptive Use)

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.

N/A

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.

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)? 10

46. Describe why this amount of time is needed to complete this project.
Ten years of operation provides an adequate amount of time to install all three pivots and use the new system under various different seasonal conditions ensuring an accurate accounting of the water use can be made.

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 Colton Coffee

Applicant Signature Colton Coffee Colton Coffee (Jul 1, 2026 09:59:17 MDT) Date: Jul 1, 2026

Printed Name _____

Applicant Signature _____ Date: _____

Printed Name _____

Applicant Signature _____ Date: _____

Form 606 for Signature

Final Audit Report 2026-07-01

Created:	2026-07-01
By:	Lara Andre (landre@wgmgroup.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAA1QNIvewvSj9CooFlmP9eDwEdflhMCccJ

"Form 606 for Signature" History

Document created by Lara Andre (landre@wgmgroup.com)
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Document e-signed by Colton Coffee (colton.coffee@stockmanbank.com)
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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 _____

Applicant Signature _____ Date: _____

Printed Name _____

Applicant Signature _____ Date: _____

Printed Name _____

Applicant Signature _____ Date: _____

APPLICATION TO CHANGE WATER RIGHT 42C 27200-00
ATTACHED SUPPLEMENT (A2)

Form 606 – Question 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.

There are two points of diversion including one proposed new diversion, POD P2, and the unchanged historical pump site, POD H1/P1. Each POD will utilize a floating Riverscreen-style suction intake and pump set in the Tongue River and tethered in place. Each pump motor will be powered by electricity. The details and capacities of each POD are described following.

Historical Point of Diversion – POD H1/P1 uses a 25-horsepower motor close-coupled with a Cornell 4RB pump. The system is designed to supply irrigation water for the 62-acre pivot at a flow rate of 750 gpm at 109 feet total dynamic head (TDH) with an efficiency of approximately 83%. The maximum capacity of the H1/P1 pump system under ideal conditions is approximately 1,180 gpm but it will normally operate at a maximum of 788 gpm .

Proposed Point of Diversion – POD P2 will use a 40-horsepower motor close-coupled with a Cornell 4RB pump. Proposed Diversion P2 is designed to supply irrigation water to two full-arc pivots. The larger center pivot sprinkler is designed to cover 101 acres of the proposed POU and the other pivot is planned to irrigate 19 acres of the proposed POU. The design flow rate for the larger pivot is 900 gpm and the design flow for the smaller pivot is 240 gpm. The system is optimized for supply of the 101-acre pivot with a TDH of 147 ft at a flow rate of 900 gpm (running) alone. The system is also cable of simultaneously supplying both P2 pivots at a design flow rate of 1,140 gpm at a TDH of 120 ft (with an approximate efficiency of 83%). The maximum capacity of the P2 pump system under ideal conditions is approximately 1,390 gpm but it will normally operate at a maximum of 1,197 gpm.
Pump curves for each the H1/P1 and the P2 diversion are appended.

Form 606 – Question 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 conveyance from the Historical Point of Diversion, POD H1/P1 supplies water to the 62 acre half-arc center pivot sprinkler via approximately 1,310 ft of buried, 8-inch diameter, PIP PVC piping. The allowable capacity of the 8-inch piping at a maximum velocity of 5 ft/second is 775 gpm. The designed flow of the piping supply is matched with the pump design at 750 gpm +/- 5%.

The conveyance piping from Proposed Point of Diversion, POD P2 supplies water first to the center point of the larger, 101-acre pivot, then to the center point of the 19-acre pivot. Because the initial section of buried force main must carry the composite flows (totaling 1,140 gpm +/- 5%), the upstream 1,500 feet (approximate) of piping between POD P2 and the 101-acre pivot's center point consists of 10-inch diameter, PIP PVC piping. The total allowable capacity of the piping, targeting a maximum velocity of 5 ft/second is 1,220 gpm. A 6-inch diameter, PVC extension continues for a distance of approximately 2,000 feet from the first pivot point to the smaller pivot point (which covers 19 acres). The allowable capacity of the 6-inch piping extension (at a maximum velocity of 5 ft/second) is 450 gpm +/- 5%. The design flow rates of the 101-ac and 19-ac pivots are 900 gpm and 240 gpm, respectively. The combined design supply rate of both pivots is 1,140 gpm +/- 5%. For the P2 Diversion pivot installations, the conveyance capacities are limited by the pumping plant capacity. Both the 10-inch diameter and the 6-inch diameter pipes were sized to minimize frictional (head) losses to allow for simultaneous supply of both pivots by the P2's single-pump system. The maximum flow rate of the system supplied by POD P2 will be designed at 1,140 gpm +/- 5%.

APPLICATION TO CHANGE WATER RIGHT 42C 27200-00
ATTACHED SUPPLEMENT (A2)

The three pivots will irrigate a combined total of 182 acres [62-acres (H1/P1) + 101 acres (P2) + 19 (P2 acres)].

Form 606 – Question 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.

As described in the responses for Form 606 - Questions 33 and 34, the proposed water supply systems distribute water from PODs H1/P1 and P2 to an existing center pivot sprinkler and two proposed center pivots, respectively. Under the proposed application, water from PODs H1/P1 and P2 will be delivered via pressurized pipelines with virtually no conveyance losses.

As described in the responses for Questions 33 and 34, the designed pumped flow rate for the pivot supplied by H1/P1 will be 750 gpm. Depending on pressurization, backflows for spray cleaning of the intake screen, and sprinkler nozzling package adjustments, the actual flow rate supplied to the pivot is not expected to fluctuate by more than 5% of the design flow rate. Therefore, the range of flowrates supplied by H1/P1 to the 62-acre pivot is expected to vary between 712 gpm and 788 gpm (1.59 to 1.76 cfs).

As described in the responses for Questions 33 and 34, the designed pumped flow rate for the large, 101-acre pivot supplied by P2 will be 900 gpm. Depending on pressurization, backflows for spray cleaning of the intake screen, and sprinkler nozzling package adjustments, the actual flow rate supplied to the 101-acre pivot is not expected to fluctuate by more than 5% of the design flow rate. Therefore, the range of flowrates supplied by H1/P1 to the 101-acre pivot is expected to vary between 855 gpm and 945 gpm (1.91 to 2.11 cfs).

Likewise, the design pumped flow rate for the small 19.0-acre pivot supplied by P2 will be 240 gpm. The actual flow rate supplied to the 19-acre pivot is not expected to fluctuate by more than 5% of the design flow rate. For simultaneous supply of both pivots, the pump will operate at a design supply rate of 1,140 gpm (240+900 gpm). Therefore, the range of flow rates supplied by P2 simultaneously to the 101-acre and the 19-acre pivots is expected to vary between 1,083 gpm and 1,197 gpm (2.41 to 2.67 cfs).

With all three pivots operating simultaneously, the total diversion under the proposed change to Water Right 42C 27200-00 will reach a maximum of **4.42 cfs,** which includes the 5% allowance for flow rate variability. This rate represents the peak instantaneous, composite flow required at points of diversion H1/P1 and P2 to ensure the functional viability of the irrigation plan.

Form 606 - Question No. 33, Additional Information - POD H1/P1: Pump Design

Pump Data Sheet - Cornell

Company:
Name:
Date: 06/12/2025

CORNELL

Pump:

Size:	4RB	Dimensions:	
Type:	Clear Liquids	Suction:	6 in
Synch Speed:	1800 rpm	Discharge:	4 in
Dia:	12.1875 in		
Curve:	4RB18		

Fluid:

Name:	Water		
SG:	1	Vapor Pressure:	0.256 psi a
Density:	62.4 lb/ft³	Atm Pressure:	14.7 psi a
Viscosity:	1.1 cP		
Temperature:	60 °F	Margin Ratio:	1

Search Criteria:

Flow:	---	Near Miss:	---
Head:	---	Static Head:	0 ft

Pump Limits:

Temperature:	250 °F	Sphere Size:	0.84 in
Wkg Pressure:	175 psi g		

Motor:

Standard:	NEMA	Size:	50 hp
Enclosure:	TEFC	Speed:	1800 rpm
Frame:	326T		
Sizing Criteria:	Max Power on Design Curve		

Pump Selection Warnings:
None

--- Duty Point ---

Flow:	983 US gpm
Head:	135 ft
Eff:	86%
Power:	39.3 hp
NPSHr:	12.7 ft
Speed:	1775 rpm

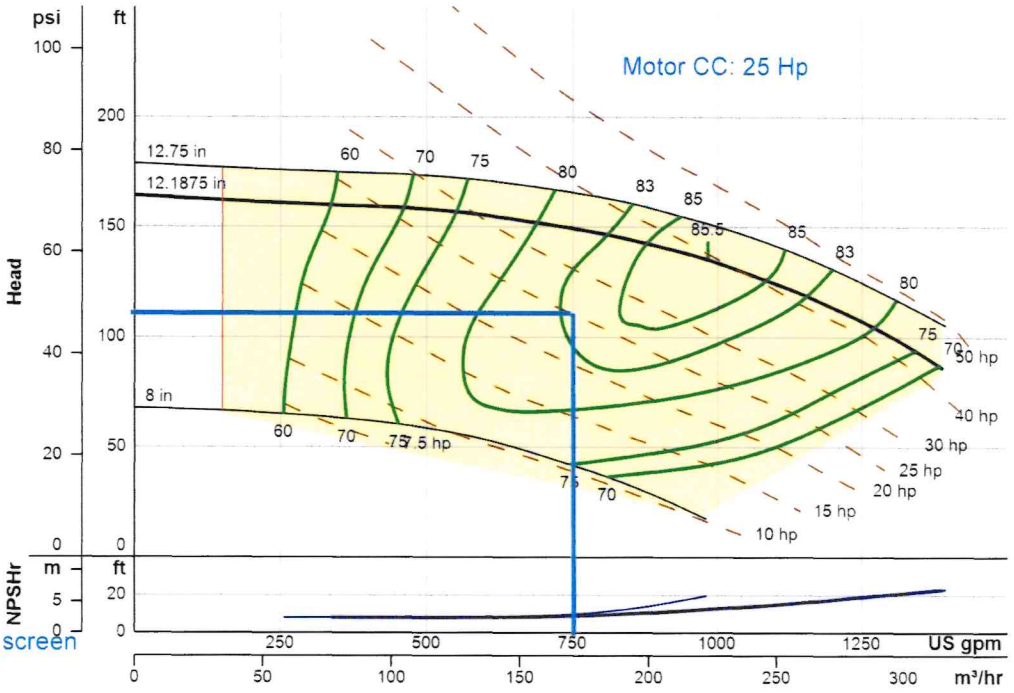
--- Design Curve ---

Shutoff Head:	164 ft
Shutoff dP:	71.2 psi
Min Flow:	150 US gpm

BEP: 85.5% @ 983 US gpm
NOL Power:
43.7 hp @ 1389 US gpm

--- Max Curve ---

Max Power:
49.1 hp @ 1393 US gpm



The Design Flow Rate for the
62 Ac pivot is
700 gpm plus 50 gpm of return
for the spray nozzles on the floating screen
Total Pump Rate is 750 gpm,
TDH = 109 ft.

Min flow line represents the absolute lowest flow pump can operate. For flow rates to the left of the first efficiency line on the curve, consult your Cornell Sales representative. Actual efficiency and HP may vary depending on mounting configuration. Refer to Catalog curve.

Performance Evaluation:

Flow	Speed	Head	Efficiency	Power	NPSHr
US gpm	rpm	ft	%	hp	ft
1333	1775	94.6	74	42.7	21.5
1111	1775	123	84	41	15.3
889	1775	142	85	37.4	10.9
667	1775	153	79	32.4	8.42
444	1775	159	69	25.9	8

Selected from catalog: Cornell.60, Vers 3.15.0

Form 606 - Question No. 33, Additional Information - Proposed POD P2: Preliminary Pump Design

Pump Data Sheet - Cornell

Company:
Name:
Date: 06/12/2025

Note: This pump curve is optimized for the larger of the proposed pivots (101 ac) running alone. The dashed lines indicate pressure (TDH = 120 feet) and composite flows when the pivots will be operated together (Appox 1,140 gpm total including 50 gpm of back spray to clear the floating screen drum). Pressure main piping is sized to adequately accommodate frictional losses for operation of both pivots together.

Pump:

Size:	4RB	Dimensions:	
Type:	Clear Liquids	Suction:	6 in
Synch Speed:	1800 rpm	Discharge:	4 in
Dia:	12.1875 in		
Curve:	4RB18		

Fluid:

Name:	Water		
SG:	1	Vapor Pressure:	0.256 psi a
Density:	62.4 lb/ft³	Atm Pressure:	14.7 psi a
Viscosity:	1.1 cP		
Temperature:	60 °F	Margin Ratio:	1

Search Criteria:

Flow:	---	Near Miss:	---
Head:	---	Static Head:	0 ft

Pump Limits:

Temperature:	250 °F	Sphere Size:	0.84 in
Wkg Pressure:	175 psi g		

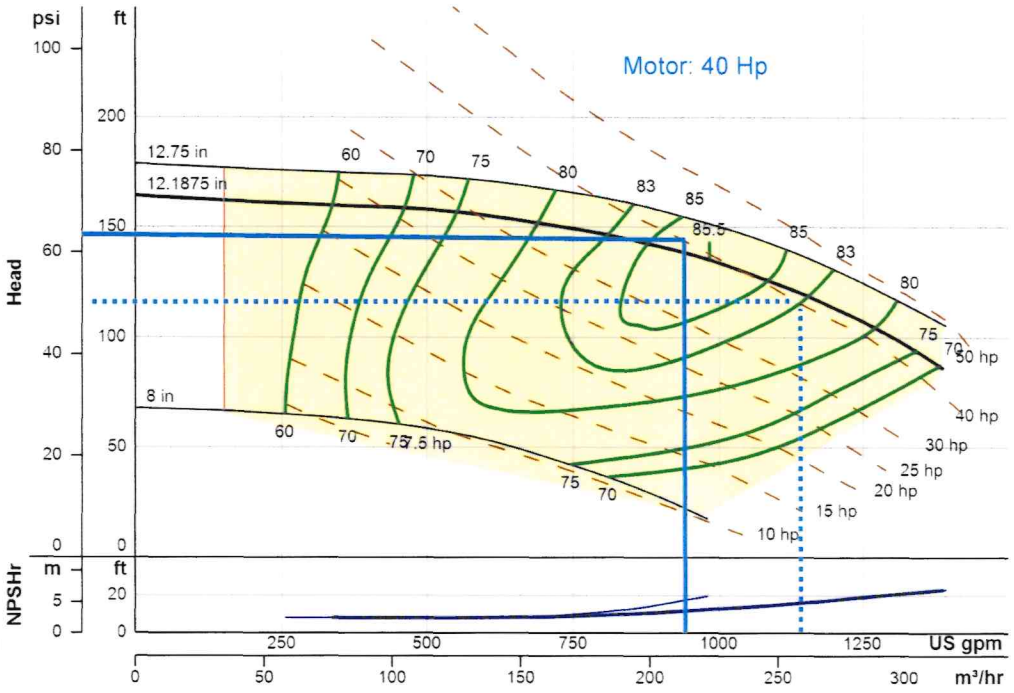
Motor:

Standard:	NEMA	Size:	50 hp
Enclosure:	TEFC	Speed:	1800 rpm
Frame:	326T		
Sizing Criteria:	Max Power on Design Curve		

Pump Selection Warnings:

None

--- Duty Point ---	
Flow:	983 US gpm
Head:	135 ft
Eff:	86%
Power:	39.3 hp
NPSHr:	12.7 ft
Speed:	1775 rpm
--- Design Curve ---	
Shutoff Head:	164 ft
Shutoff dP:	71.2 psi
Min Flow:	150 US gpm
BEP: 85.5% @ 983 US gpm	
NOL Power:	
43.7 hp @ 1389 US gpm	
--- Max Curve ---	
Max Power:	
49.1 hp @ 1393 US gpm	



The Design Flow Rate for the 101 Ac proposed pivot is 850 gpm + 50 gpm return for the spray nozzles on the floating screen Total Pump Rate is 900 gpm, TDH = 147 ft.

Min flow line represents the absolute lowest flow pump can operate. For flow rates to the left of the first efficiency line on the curve, consult your Cornell Sales representative. Actual efficiency and HP may vary depending on mounting configuration. Refer to Catalog curve.

The Design Flow Rate for the 19 Ac proposed pivot is an additional 240 gpm, TDH = 120 ft.

Performance Evaluation:

Flow	Speed	Head	Efficiency	Power	NPSHr
US gpm	rpm	ft	%	hp	ft
1333	1775	94.6	74	42.7	21.5
1111	1775	123	84	41	15.3
889	1775	142	85	37.4	10.9
667	1775	153	79	32.4	8.42
444	1775	159	69	25.9	8

Selected from catalog: Cornell.60, Vers 3.15.0

MONTANA SAGE GROUSE
HABITAT CONSERVATION PROGRAM

GREG GIANFORTE, GOVERNOR
STATE OF MONTANA
1539 ELEVENTH AVENUE
PHONE: (406) 444-0554
FAX: (406) 444-6721
PO BOX 201601
HELENA, MONTANA 59620-1601

Project No. 7005
Governor's Executive Orders 12-2015 and 21-2015
Peabody Pivot - Coffee Cattle Co.

Cole Peebles
WGM Group
4072 Tongue River Road
Miles City, MT 59301

April 24, 2025

Dear Mr. Peebles,

The Montana Sage Grouse Habitat Conservation Program received a request for consultation and review of your project or proposed activity on April 23, 2025. Based on the information provided, this Project is located within General Habitat for sage grouse. The Bureau of Land Management (BLM) classifies this area as a General Habitat Management Area (GHMA).

Executive Orders 12-2015 and 21-2015 set forth Montana's Sage Grouse Conservation Strategy. Montana's goal is to maintain viable sage grouse populations and conserve habitat so that Montana maintains flexibility to manage our own lands, our wildlife, and our economy and ensure that a listing under the federal Endangered Species Act is not warranted in the future.

The Program has completed its review, including:

Project Description:

Project Type: Agriculture – Water
Project Disturbance: 103.86 Acre Pivot; 0.29-Mile-Long Buried Pipeline; 0.53 Mile Buried Power Line
Construction Timeframe: May 5, 2025 to August 1, 2025; Temporary (<1 Year)
Operations Timeframe: August 1, 2025; Permanent (>25 Years)

Project Location:

Legal: Township 1 North, Range 44 East, Sections 10, 11, 14, 15
County: Rosebud
Ownership: Private

Project Description and Executive Orders 12-2015 and 21-2015 Consistency:

The Peabody Pivot - Coffee Cattle Co. Project proposes to install a new pivot irrigation system in a designated General Habitat for sage grouse.

Coffee Cattle Co. proposes to install a new pivot irrigation system approximately 18.22 miles southeast of Colstrip, Montana in Rosebud County. See Figure 1 (Peabody Pivot – Coffee Cattle Co. Project and Lek Location Map). This pivot irrigation system will replace the flood irrigation system the existing cropland currently uses.

To implement the Project, the eventual contractor will use a backhoe to install and bury both the 0.53-mile-long power line and 0.29-mile-long water pressure main starting at the Tongue River to the east. The Tongue River will serve as the water source for this new irrigation system. Minor tree and shrub removal as well as grading and excavation work will occur where necessary to ensure the pivot has the ability to function properly. The land under this proposed pivot is currently flood-irrigated and sagebrush is not present in the area. Therefore, no removal or sagebrush or conversion of sagebrush to irrigated land will occur as part of this Project. No reclamation is anticipated for this Project.

Based on the information you provided; your Project is not within two miles of an active sage grouse lek in General Habitat. See Figure 1 (Peabody Pivot – Coffee Cattle Co. Project and Lek Location Map).

Discussion:

Exempt activities are identified in Executive Order 12-2015 (EO) as described in Attachment F. The activity described for the Peabody Pivot - Coffee Cattle Co. Project (irrigation without conversion of sagebrush) is exempt from stipulations per Executive Order 12-2015. Your proposed Project may need to obtain additional permits or authorizations from other Montana state agencies or possibly federal agencies. They are very likely to request a copy of this consultation letter, so please retain it for your records.

Program Recommendations:

The following stipulations are taken from Montana Executive Order 12-2015. These stipulations are designed to maintain existing levels of suitable sage grouse habitat by managing uses and activities in sage grouse habitat to ensure the maintenance of sage grouse abundance and distribution in Montana. Development should be designed and managed to maintain populations and sage grouse habitats.

- Weed management is required within General Habitat for sage grouse. Reclamation of disturbed areas must include control of noxious weeds and invasive plant species, including cheatgrass (*Bromus tectorum*) and Japanese brome (*Bromus japonicas*).

Your activities are consistent with the Montana Sage Grouse Conservation Strategy. Your proposed project or activity may need to obtain additional permits or authorization from other Montana state agencies or possibly federal agencies. They are very likely to request a copy of this consultation letter, so please retain it for your records.

If the location or boundaries of your proposed project or activity change in the future, or if new activities are proposed within one of the designated sage grouse habitat areas, please visit https://sagegrouse.mt.gov/ and submit the new information.

Thanks for your interest in sage grouse and your commitment to taking the steps necessary to ensure Montana's Sage Grouse Conservation Strategy is successful.

Sincerely,

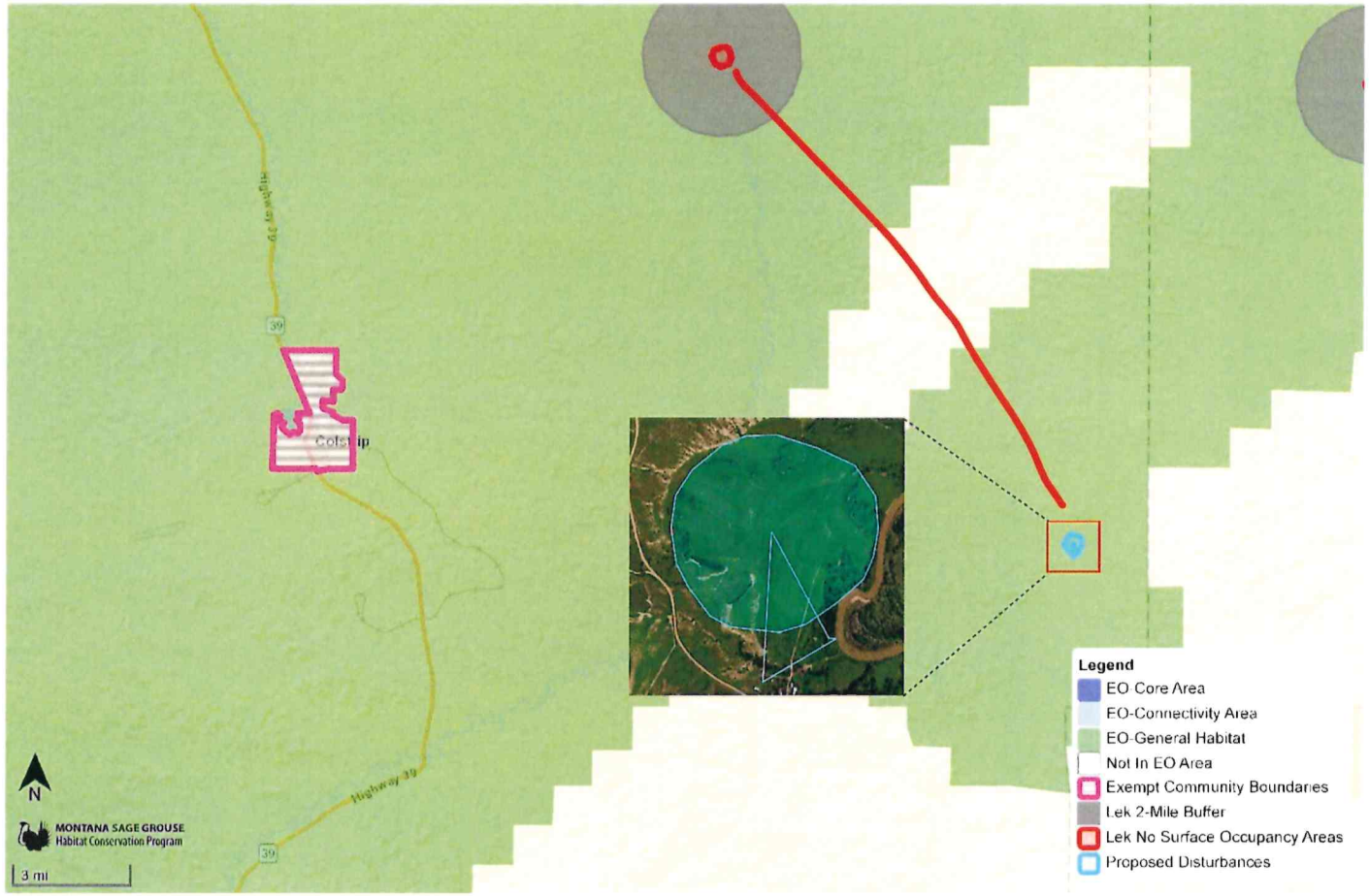
Therese Hartman
Montana Sage Grouse Habitat Conservation Program Manager

Attachments:

1. Figure 1. Peabody Pivot – Coffee Cattle Co. Project and Lek Location Map

Figure 1

7005_Peabody Pivot - Coffee Cattle Co. Project and Lek Location



Hosted by the Montana Department of Natural Resources and Conservation
Director's Office: (406) 444-2074

Photo Credit: Richard Prodgers

This project is in Review (Due Diligence). You cannot edit the project at this time.

MITIGATION

Mitigation obligations have not yet been finalized for this project

BASICS

Project ID:

7005

Name:

Peabody Pivot - Coffee Cattle Co.

Project Type:

Agriculture - Water

Description:

The landowner will be converting the historically gravity flood-irrigated Peabody Field to sprinkler irrigation utilizing a new pump on the Tongue River, a new buried pressure-supply main, and a new center pivot. Several areas under the proposed pivot swing will require tree/brush removal. Minor grading and excavation work will be performed in the southern pivot quadrant to allow pivot tower travel over currently uneven terrain. All work will be performed on owned, private land. The completed project will be dependent on a Water Right Change Application for the new, pumped point of diversion and modified place of use (under the pivot swing). Work to complete the water right change is ongoing through the DNRC.

Proponent:

Peebles, Cole (/User/5562/Details)

Email:

cpeebles@wgmgroup.com (mailto:cpeebles@wgmgroup.com)

Phone:

(406) 289-0531

Mailing Address:

4072 Tongue River Road, Miles City, MT, 59301

Addt. Contact Info:

c/o: Rick Flotkoetter Cole Peebles of WGM Group submits on behalf of the Project Applicant: Coffee Cattle Co. Rick is the Coffee Cattle Company Contact. RFlotkoetter@coffeecattlecompany.com. 406-421-5425

Responsible Party:

WGM Group, Inc.

Contact Name:

Cole Peebles

Email:

cpeebles@wgmgroup.com (mailto:cpeebles@wgmgroup.com)

Phone:

406-289-0531

Mailing Address:

1111 E. Broadway St, Missoula, MT, 59802

Addt. Contact Info:

Cole Peebles of WGM Group submits on behalf of the Project Applicant: Coffee Cattle Co.

Permit Agencies:

Department of Natural Resources and Conservation

Vegetation Removal:

Yes

Reclamation of Surface Disturbance:

No

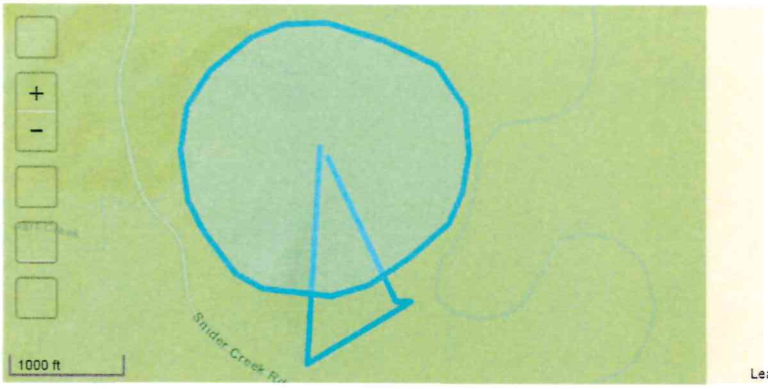
State or Federal Funding:

No

Reviewer:

Not Assigned

LOCATION DETAILS



EO Habitat Class:

EO-General Habitat

Core Area Names:

Not in any Core Area

Management Zones:

Great Plains Management Zone

Service Areas:

Southeastern

No Surface Occupancy Areas:

Not in any NSOA

Exempt Community Boundaries:

Not in any Exempt Community Boundary

In BLM Priority Habitat Area?

No

Counties:

Rosebud

TRS:

Township 1 North, Range 44 East, Sections 10, 11, 14, 15

TRS By Habitat Classification

EO-General Habitat

Township 1 North, Range 44 East, Sections 10, 11, 14, 15

Land Owner Information:

Private

REVIEWER COMMENTS

There are no comments for this project.

DISTURBANCE SUMMARY

Irrigation

The summary could not be loaded because this project has Irrigation disturbances represented by more than one type (points, lines, and polygons).

DDCT RESULTS

DDCT Analysis Area	Proposed Disturbances Area	Existing + Proposed Disturbances Area within DDCT Analysis Area	DDCT Result	New disturbed acres	Affected Leks within the DDCT Analysis Area
0 acres	0 acres	0 acres	0.00%	0 acres	0

HQT ANALYSES

Currently viewing 0 of 0 HQT Analyses Attachments

Reset Download Table

HQT Number	File Name	Title	Type	Uploaded/Generated Date
No records available				

DISTURBANCES

Excavation for Electrical and Pressure Main Burial Pivot Coverage

Basics

Disturbance Name:

Excavation for Electrical and Pressure Main Burial

Type of Disturbance:

Irrigation

Area:

1.014 acres

Length:

4,419.11 feet

Width:

10 feet

EO Habitat Classes:

EO-General Habitat

Core Area Names:

Not in any Core Area

Management Zones:

Great Plains Management Zone

Service Areas:

Southeastern

No Surface Occupancy Areas:

Not in any NSOA

Exempt Community Boundaries:

Not in any Exempt Community Boundary

In BLM Priority Habitat Area?

No

Counties:

Rosebud

TRS:

Township 1 North, Range 44 East, Sections 11, 14

TRS By Habitat Classification

EO-General Habitat

Township 1 North, Range 44 East, Sections 11, 14

Land Owner Information:

Private

Notes:

Burial of Pressure Main and Electrical Supply Lines

Questionnaire

Construction Timeframe:	05/05/2025 to 08/01/2025, Temporary (< 1 Year)
Operations Timeframe:	None
Is the project area (field) currently irrigated? If Diversion, spatial data should include location of diversion.	Yes
Will the pipe, power line, or cable be above ground	Buried
How will the buried pipeline, power line, or cable be installed (trencher, backhoe, trenchless plow, other)?	Backhoe

ATTACHMENTS

Currently viewing 1 of 1 Attachments ← Reset Download Table

File Name	Title	Type	Uploaded	Uploaded By	Description
			From: To:		
Peabody Pivot Project Map 4	Proposed Peabody Pivot Project Map 4	Plan of Development, Projec	04/23/2025 10:47 AM	Peebles, Cole (/User/5!	Plan view of the proposed ir

HISTORY

Currently viewing 3 of 3 Events ← Reset Download Table

Date	Triggered By	Event Type	Project Stage	Description	Attachments
From: To:					
04/23/2025 10:49 AM	Peebles, Cole	System Notificatior	Due Diligence	Email sent to cpeebles@wgmgroup.com	
04/23/2025 10:49 AM	Peebles, Cole	Project Stage Tran:	Due Diligence	Project Submitted for Review	Due Diligence Project Snapsl
04/23/2025 10:03 AM	Peebles, Cole	Initial Draft	Draft	Initial Draft	

Most Recent Submit: 04/23/2025

Review Start: 04/23/2025

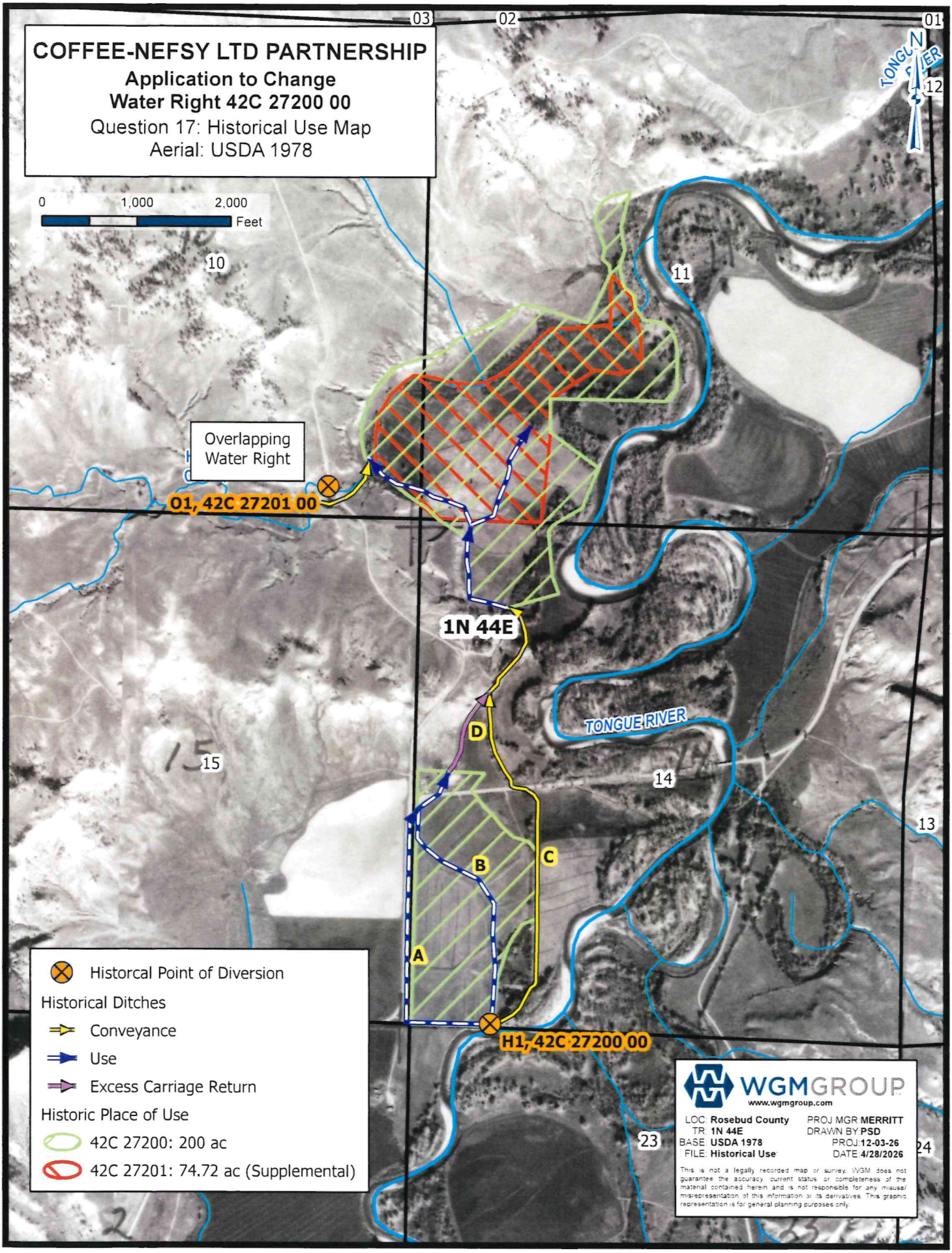
Review Complete: *Review Not Complete*

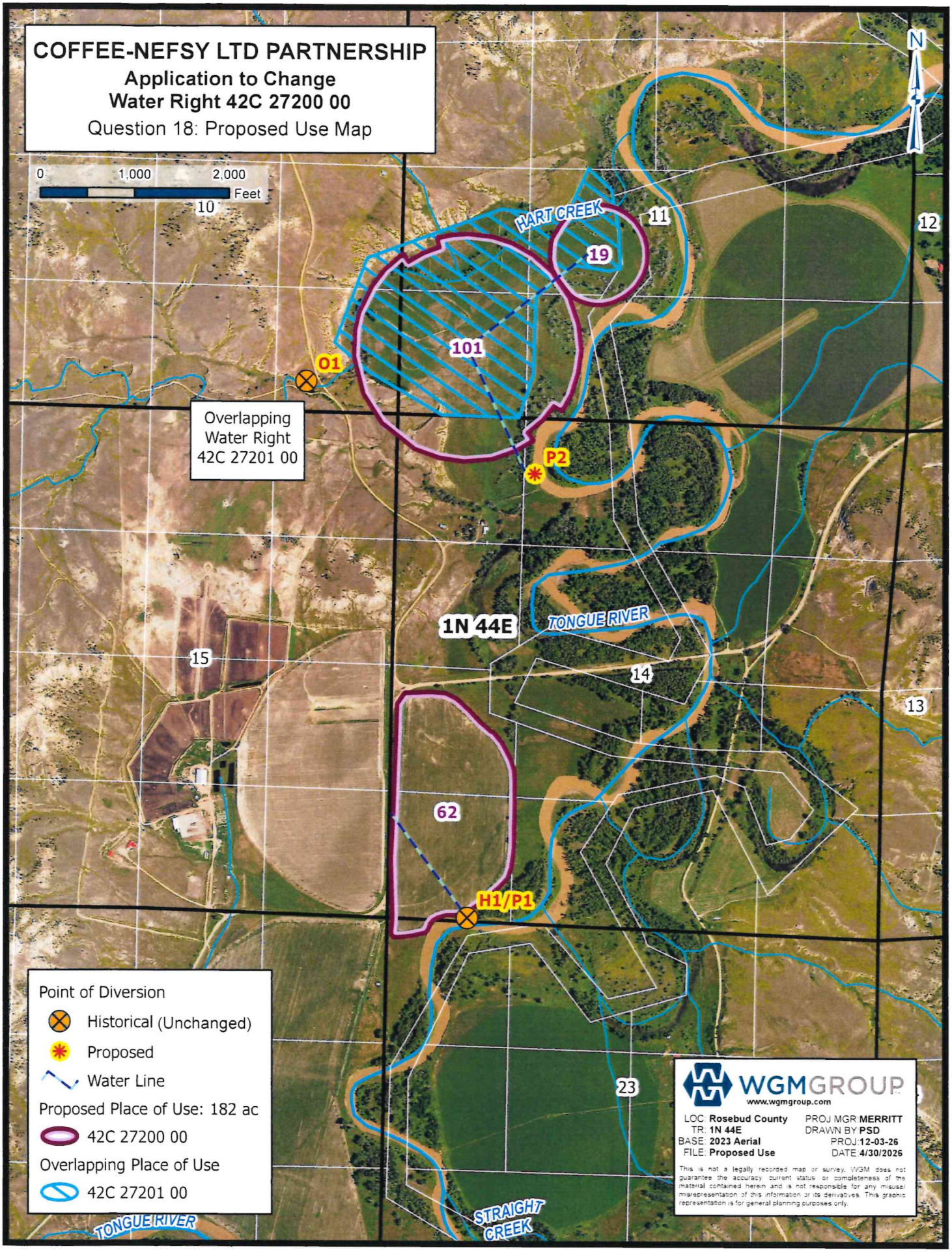
Review Duration: 0 days

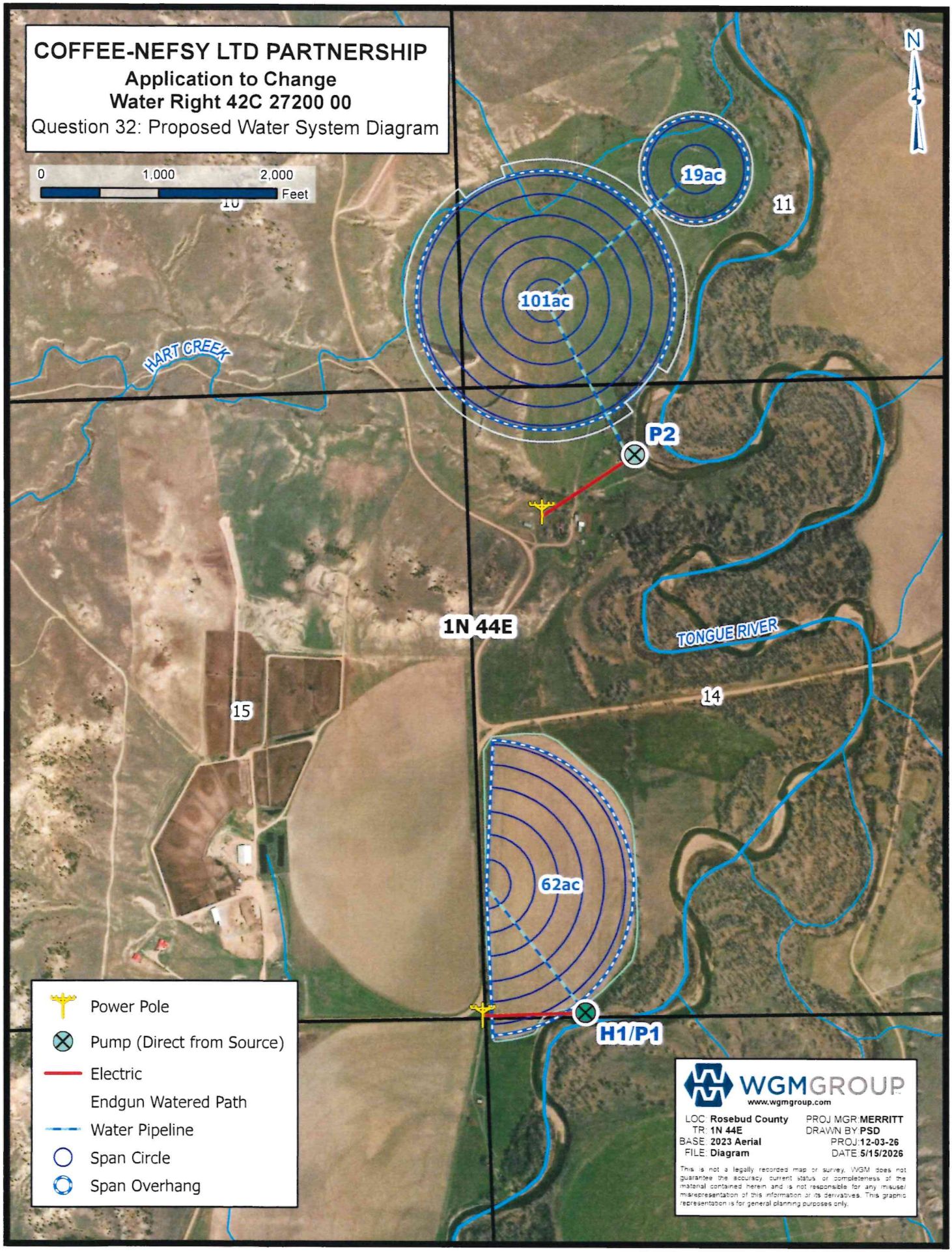
MONTANA SAGE GROUSE HABITAT CONSERVATION PROGRAM
1539 ELEVENTH AVE. HELENA, MT 59601 | SAGEGROUSE@MT.GOV (MAILTO:SAGEGROUSE@MT.GOV) | 406-444-6340

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Last Built on 04/07/2025 1:45 PM


COFFEE-NEFSY LTD PARTNERSHIP
Application to Change
Water Right 42C 27200 00
Question 17: Historical Use Map
Aerial: USDA 1978
0
1,000
2,000
Feet
03
02
01
12
11
10
15
14
13
23
24
Overlapping
Water Right
O1, 42C 27201 00
1N 44E
TONGUE RIVER
D
B
C
A
H1, 42C 27200 00
Historcal Point of Diversion
Historical Ditches
Conveyance
Use
Excess Carriage Return
Historic Place of Use
42C 27200: 200 ac
42C 27201: 74.72 ac (Supplemental)
WGMGROUP
www.wgmgroup.com
LOC: Rosebud County
TR: 1N 44E
BASE: USDA 1978
FILE: Historical Use
PROJ MGR: MERRITT
DRAWN BY: PSD
PROJ: 12-03-26
DATE: 4/28/2026
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.


COFFEE-NEFSY LTD PARTNERSHIP
Application to Change
Water Right 42C 27200 00
Question 18: Proposed Use Map
0
1,000
2,000
Feet
10
N
HART CREEK
11
12
19
101
O1
Overlapping
Water Right
42C 27201 00
P2
1N 44E
TONGUE RIVER
15
14
13
62
H1/P1
23
Point of Diversion
Historical (Unchanged)
Proposed
Water Line
Proposed Place of Use: 182 ac
42C 27200 00
Overlapping Place of Use
42C 27201 00
TONGUE RIVER
STRAIGHT
CREEK
WGMGROUP
www.wgmgroup.com
LOC: Rosebud County
TR: 1N 44E
BASE: 2023 Aerial
FILE: Proposed Use
PROJ MGR: MERRITT
DRAWN BY: PSD
PROJ: 12-03-26
DATE: 4/30/2026
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.


COFFEE-NEFSY LTD PARTNERSHIP
Application to Change
Water Right 42C 27200 00
Question 32: Proposed Water System Diagram
0
1,000
2,000
Feet
N
19ac
101ac
11
HART CREEK
P2
1N 44E
TONGUE RIVER
14
15
62ac
H1/P1
Power Pole
Pump (Direct from Source)
Electric
Endgun Watered Path
Water Pipeline
Span Circle
Span Overhang
WGMGROUP
www.wgmgroup.com
LOC: Rosebud County
TR: 1N 44E
BASE: 2023 Aerial
FILE: Diagram
PROJ MGR: MERRITT
DRAWN BY: PSD
PROJ: 12-03-26
DATE: 5/15/2026
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 No. 606-TAA *(Revised 10/2025)* **Applicant Name** COFFEE-NEFSY LTD PARTNERSHIP

APPLICATION TO CHANGE A WATER RIGHT
TECHNICAL ANALYSES ADDENDUM
§ 85-2-402, MCA

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 marked when the required item is attached to the Technical Analyses 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. 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 the see attachment ("A") checkbox on this form must be marked. Label units in narrative responses and tables.

APPLICATION DETAILS

Questions, Narrative Responses, and Tables	Check-boxes
1. Did you have a preapplication meeting AND complete a Change Preapplication Meeting Form (Form 606P)?	☐ Y ■ N
a. If no, complete the remainder of Form 606-TAA. Skip to question 2.	
b. If yes,	
i. Do the technical analyses submitted with Form 606 remain unchanged from those completed during the preapplication meeting process?	☐ Y ☐ N
1. If yes, has any element of the project described in Form 606 changed from the mandatory elements of the project described in Forms 606P-A and/or 606P-B?	☐ Y ☐ N
a. If yes, complete the remainder of Form 606-TAA. Skip to question 2.	
b. If no, Form 606-TAA is complete.	
2. If no,	
a. Are you submitting new technical analyses with Form 606 to replace the technical analyses completed during the preapplication meeting process?	☐ Y ☐ N
i. If yes, complete the remainder of Form 606-TAA. Skip to question 2.	
ii. If no, are you correcting the technical analyses in response to a Departmental scientific credibility review completed during the preapplication meeting process?	☐ Y ☐ N

1. If yes, does every element of the project described in Form 606 remain unchanged from the mandatory elements of the project described in Forms 606P-A and/or 606P-B AND do the corrected technical analyses analyze the project exactly as proposed on Forms 606 and 606P-A/606P-B?	☐ Y ☐ N
a. If yes, Form 606-TAA is complete.	
b. If no, complete the remainder of Form 606-TAA. Move on to question 2.	

HISTORICAL USE

Questions, Narrative Responses, and Tables	Check-boxes
2. Is the proposed change on a non-filed water project?	☐ Y ■ N
a. If yes, please submit a Non-Filed Water Project Addendum (Form 606/634-NFWPA).	☐ S
3. What type of water rights are proposed for change? Answer question 4 for each Statement of Claim, 5 for each Provisional Permit, and 6 for each other type of water right. Statement of Claim	☐ A
4. In the table below, write the water right number for each Statement of Claim proposed for change in the "Statement of Claim Number" column. If there is one or more previous change authorizations, write the application numbers for the change authorizations in the "Previous Change Authorization Number" column. If there are no previous change authorizations, write "none" in the "Previous Change Authorization Number" column and "N/A" in all the remaining columns. 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.	☐ A

Statement of Claim Number	Previous Change Authorization Number	Project Completion Notice Date
42C 27200-00	none	NA

5. In the table below, write the water right number for each Provisional Permit proposed for change in the "Provisional Permit Number" 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. Write the application number for each previous change authorization in the "Previous Change Authorization Number" column. If there are no previous change authorizations, write "none" in the "Previous Change Authorization" column and "N/A" in all the remaining columns. Write the date of the Project Completion Notice for each previous change authorization in the "Previous Change Project Completion Notice" column and if no Project Completion Notice has been submitted, write "none" instead.

☐ A

Provisional Permit Number	Project Completion Notice Date	Previous Change Authorization Number	Previous Change Project Completion Notice Date

6. In the table below, write the water right number for each water right proposed for change that is not a Statement of Claim or Provisional Permit, the type of water right, and the completion date. If a Groundwater Certificate, the completion date will be the date of filing. If an exempt or non-filed water right, the completion date will be July 1, 1973. If there are one or more previous change authorizations, write the application number for each change authorization in the "Previous Change Authorization Number" column. If there are no previous change authorizations, write "none" in the "Previous Change Authorization Number" column and "N/A" in all the remaining columns. Write the date of the Project Completion Notice for each previous change authorization in the "Previous Change Project Completion Notice Date" column and if the previous change authorization does not have a Project Completion Notice, write "none" instead.

☐ A

Water Right Number	Water Right Type	Completion Date	Previous Change Authorization Number	Previous Change Project Completion Notice Date

7. Are there previous Montana Water Court approved stipulations, Water Master reports, or prior Montana Water Court or Department decisions related to the water rights being changed?

■ Y ☐ N

a. If yes, explain.

■ A

Please see attached Water Court documents including a Master's Report (Attachment B3), Order Adopting and a DNRC Memo written at the request of the Water Court. These documents detail the resolution of the issue remarks on this claim and support the historically irrigated acreage.

8. Do you have knowledge of historical use?	☐ Y ■ N
a. If yes,	
i. Is this firsthand knowledge?	☐ Y ☐ N
ii. Who has this knowledge and what was their role?	☐ A
b. If no, from where was the historical use data derived? From the water right claim file, the Water Court orders and historical aerial photos	☐ A

Fill out the remaining Historical Use questions (questions 9 to 29) ***one time for each*** *water right proposed for change. Use the "Additional Water Right Historical Use (606-TAA)" sheet for each additional water right. 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.*

9. For which water right number(s) will question 10 through question 29 be answered? 42C 27200 00	☐ A

Historical Use: Place of Use

10. The historical use map submitted for Form 606 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?	■ Y ☐ N
11. Are you proposing to change all water rights associated with the historical place of use?	☐ Y ■ N
a. If no, identify the water rights 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

Water Right No.	Priority Date	Reason Not Included in Change
42C 27201	11/30/1910	Will continue to be utilized as historically used (when available)
		via water spreading to provide flood water to the historical place
		place of use (this right only). As the water spreading type will not
		be altered, the the place of use under this right will not be affected.
		Hart Creek is not available for diversion every year; flows are
		estimated to be available for irrigation roughly every fifth year.

12. Answer the section of this question relevant to the historical purpose. If there is more than one purpose, then answer all relevant parts of this question.	
a. All purposes	
i. Does the legal land description from the abstract encompass the actual location of the historical place of use?	■ Y ☐ N
ii. If no, explain the discrepancy and submit historical aerial photographs and/or other data sources to corroborate the location of these historical places of use, and, if a Statement of Claim, submit documentation of a written request submitted to the Water Court for amendment of the Claim. _____ _____	☐ S
b. Irrigation	
i. Is the water right being changed a Statement of Claim?	■ Y ☐ N
1. If yes, does the Water Resources Survey corroborate the acres irrigated listed on the abstract?*	☐ Y ■ N
Historical Use Map Attachment B4 a. If no, submit evidence that can corroborate the historical place of use, including number of irrigated acres. This includes, but is not limited to, aerial photographs, irrigation journals, or logs.	■ S
2. If no, submit one or more aerial photographs that can corroborate the historical place of use, including the number of irrigated acres.	■ S
c. Lawn and garden	
i. Submit aerial photographs that can corroborate the historical place of use, including the number of irrigated acres.	☐ S
d. Stock	
i. Submit aerial photographs, grazing records, or other records to corroborate the historical place of use.	☐ S
ii. Did the stock drink direct from source or direct from ditch?	☐ Y ☐ N
1. If no, submit data sources that make clear the location of the stock watering infrastructure.	☐ S
e. Multiple domestic, domestic, municipal, mining, commercial, and other purposes	
i. Submit 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

*While the Water Resource Survey document does not corroborate the acres, the Submitted WRS aerial does clearly show the POU to be irrigated. A memo from DNRC supports the irrigation noted on the 1944 aerial photo. The 1978 USDA photo also supports the historical irrigation

Historical Use: Point of Diversion *Continue to answer questions for water right(s) identified in question 9. Applications corroborating historical flow rate with the Historical Use Addendum (Form 606-HUA) may be eligible to skip question 15; see the Form 606-HUA for more information.*

13. For all historical points 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 from Form 606. ☐ A

POD ID	Means	Location (¼ ¼ ¼ Section)	Proposed for Change?
H1	PUMP	SESWSW 14 1N 44E	☐ Y ■ N
			☐ Y ☐ N
			☐ Y ☐ N

14. Do the legal land descriptions from the abstract encompass the actual locations of all historical points of diversion?	■ Y ☐ N
a. If no, explain the discrepancy and submit historical aerial photographs and/or other data sources to corroborate the location of these historical points of diversion, and, if a Statement of Claim, submit documentation of a written request submitted to the Water Court for amendment of the Claim.	☐ S

15. Answer questions below related to the diversion means for each historical point 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 cubic feet per second (CFS) and the method used to estimate historical capacity. Label using the same POD ID letter as for the Historical Use Map from Form 606. ☐ A

POD ID	Dimensions	Slope	Material	Estimated Capacity			Method
	FT	*%*		*Cap.*	*GPM*	*CFS*	
					☐	☐	
					☐	☐	
					☐	☐	
					☐	☐	

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 from Form 606. ■ A

POD ID	Estimated Capacity			Method
	Cap.	*GPM*	*CFS*	
H1	7.58	☐	☑	Pump: Max. pump capacity provided on 1981 Statement of Claim at 20cfs,
		☐	☐	use decreed at 7.58 cfs. Pump and pipe discharged into historical
		☐	☐	conveyance ditch which has a measured/verified capacity of
		☐	☐	7.58 cfs. See attached documentation (B5).

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 from Form 606. ☐ A

POD ID	Estimated Capacity			Method
	Cap.	*GPM*	*CFS*	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

16. Do other water rights share any of the points of diversion?	☐ Y ■ N
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 from Form 606.	☐ A

POD ID	Water Right No.	Estimated Capacity			Relationship
		Cap.	*GPM*	*CFS*	
			☐	☐	
			☐	☐	
			☐	☐	
			☐	☐	
			☐	☐	

Historical Use: Period of Diversion

Continue to answer questions for water right(s) identified in question 9.

17. Are the period of diversion and the period of use the same?	■ Y ☐ N
a. If no,	
i. Why are they different? _____ _____	☐ A
ii. Is there a place of storage?	☐ Y ☐ N
18. When was water diverted for the purposes of the water rights being changed?	☐ A

Start Date (Month (MM)/Day (DD))	End Date (MM/DD)
3/15	10/15

19. Does the Department have a standard, found in ARM 36.12.112, for the period of diversion for all purposes for which water is used?	■ Y ☐ N
a. If yes, does the period of diversion for all purposes fall within Department standards?	■ Y ☐ N
b. If no, or if any period of diversion falls outside Department standards, explain how the period of diversion is reasonable for the purpose(s). _____ _____ _____ _____ _____ _____	☐ A

Historical Use: Historical Diverted Volume

Continue to answer questions for water right(s) identified in question 9. Applications corroborating historical diverted volume with the Historical Use Addendum (Form 606-HUA) may be eligible to skip question parts of question 20; see the Form 606-HUA for more information.

20. Answer all relevant sections of this question based on whether the historical purpose was irrigation, non-irrigation, or both.	
a. Irrigation	
i. Do you want ARM 36.12.1902(10) to be used to calculate historical diverted volume?	■ Y ☐ N
1. If no, submit a Historical Water Use Addendum (Form 606-HUA).	☐ S
ii. What were the crop(s) grown? ALFALFA AND GRASS HAY	☐ A
1. How many cuttings were there per season and how many days did cuttings last? Did irrigation cease throughout the place of use for cuttings? Explain whether diversions ceased during times irrigation did not occur. Depending on the season, it was possible to get 2 or 3 cuttings. Water would have been shut off to the fields for about 15 days to cut, cure and bale hay.	☐ A
b. Non-irrigation	
i. Explain your historical diversion schedule, with sufficient detail to estimate the volume of water historically diverted. This may include, but is not limited to, days per year water was historically diverted or the number of diversions per year and the duration of each diversion.	☐ A
ii. Explain water diverted but not consumed by the non-irrigation purpose(s). This includes, but is not limited to, wastewater discharge and conveyance loss. Ditch-Specific Questions (questions 91 to 92) will gather information necessary for estimating losses from conveyance ditches.	☐ A

iii. Did historical diversions serve more than one non-irrigation purpose?	☐ Y ☐ N
1. If yes, how much of the diversions served each non-irrigation purpose and how did you determine this?	☐ A
21. Did diversions ever regularly cease within the period of use due to insufficient water in source or calls based on priority date?	☐ Y ☐ N
a. If yes, please explain.	☐ A

Historical Use: Historical Consumed Volume

Continue to answer questions for water right(s) identified in question 9. Applications corroborating historical consumptive volume with the Historical Use Addendum (Form 606-HUA) may be eligible to skip parts of question 23; see the Form 606-HUA for more information.

22. What are the historical purposes? Mark each purpose and answer the applicable questions below. ■ Irrigation. Answer question 23. ☐ Lawn and garden. Answer question 24. ☐ Stock. Answer question 25. ☐ Domestic and multiple domestic. Answer question 26. ☐ Municipal. Answer question 27. ☐ Other. Answer question 28.	
23. Irrigation — SEE TAA Attached Supplement (B2) FOR CALCULATIONS	
a. Will you use Department standards for historical consumptive use as defined in Department standard practice and administrative rule?	■ Y ☐ N
i. If no, submit a Historical Water Use Addendum (Form 606-HUA) to the Department.	☐ S
ii. If yes,	
1. 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. Graded Border Flood (GBF) south field Contour Ditch Flood (CDF) north field	☐ A
2. What was the slope of the historical place of use? Graded Border: approx. 0.5% to 1%, Contour: approx 0.5% to 2.5%	☐ A

3. Are there any factors beyond irrigation method type/subtype and place of use slope that may influence percent efficiency of irrigation?	☐ Y ■ N
a. If yes, submit evidence to support the modified percent efficiency of irrigation in the Historical Water Use Addendum (Form 606-HUA). These factors may include, but are not limited to, infrastructure age, soil characteristics, or field improvements.	☐ S
4. Based on answers to the above questions, what is the percent efficiency of irrigation? Graded Border: 65%, Contour: 55% (via the Change Manual)	☐ A
5. What is the County Management Factor associated with the county of the historical place of use? 47.7%	☐ A
6. What is evapotranspiration (ET) based on the irrigation method and county? 23.83, Brandenberg Station, Rosebud Co.	☐ A
7. What percent of applied water are irrecoverable losses per ARM 36.12.1902(17)? 5%	☐ A
24. Lawn and garden	
a. Will you use a Department standard for historical consumptive use volume for lawn and garden? Department standards include 2.5 acre-feet per acre (ARM 36.12.115(2)(b)), or a calculated volume based on Irrigation Water Requirements for turf grass.	☐ Y ☐ N
i. If yes, which standard?	☐ A
ii. If no, please provide an estimate of historical water use based on expert analysis and summarize the methods used to determine this estimate.	☐ A
25. Stock	
a. Which volume standard for animal units applies to historical use and why? The standards are either 15 gallons per animal unit per day for new appropriations or 30 gallons per animal unit per day for claims.	☐ A
b. How many animal units were historically served?	☐ A
c. Did these animal units rely entirely on the water rights proposed for change for their full water demand?	☐ Y ☐ N
i. If no, explain.	☐ A

26. Domestic and multiple domestic	
a. How many households were served? _____	☐ A
i. Will the Department standard of 1 acre-foot per household be used? The same standard is applied to historical and proposed uses.	☐ Y ☐ N
ii. If no, what standard will be used? _____ _____	☐ A
b. Did the historical use include wastewater disposal and treatment?	☐ Y ☐ N
i. 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
27. Municipal	
a. What is the volume of water (AF) historically consumed for municipal purposes? _____	☐ A
i. Submit evidence to support historical municipal use. 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
28. Other	
a. Specify the other purposes. _____	☐ A
b. What is the volume of water (AF) historically consumed for other purposes? _____	☐ A
c. Submit evidence to support the volume of water historically consumed.	☐ S

Historical Use: Historical Places of Storage

Continue to answer questions for water right(s) identified in question 9.

29. Did the historical use include one or more places of storage? 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)).	☐ Y X N
a. If yes, for each historical place of storage please provide the surface area in acres (AC), capacity (AF), annual net evaporation (FT/YR), and number of times per year the place of storage was filled. Use the same ID as for the historical use map (Form 606).	☐ A

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

SURFACE WATER

Questions, Narrative Responses, and Tables	Check-boxes
30. Is the proposed source surface water?	■ Y ☐ N
a. If yes, move on to question 31.	
b. If no, skip to question 37.	

Return Flow Analysis

31. Do the purposes of the water rights proposed for change include irrigation?	■ Y ☐ N
a. If yes, does the proposed change include a change in place of use *and/or* a change in purpose? If you propose to retire acres in the historical place of use and/or add new acres outside the historical place of use, this constitutes a change in place of use.	■ Y ☐ N
i. If yes, a return flow analysis is required. Move on to question 32.	
ii. If no, this section is complete, and you may skip to question 77.	
b. If no, this section is complete, and you may skip to question 77.	
32. Does the proposed change include a change in purpose?	☐ Y ■ N
a. If yes, consumptive use information is collected in the Change in Purpose section (questions 84 to 89), skip to question 33.	
b. If no, skip to question 33.	
33. Does the proposed change include a change in place of use? If yes, move on to question 34. If no, skip to question 37.	■ Y ☐ N
34. Submit a map showing the new, unchanged historical, and retired historical places of use. Create map on an aerial photograph or topographic map that shows the following: section corners, township and range, scale bar, and north arrow. If you have shapefiles associated with this map, in addition to submitting an image of the map, please submit electronic copies of the shapefiles to the Department.	■ S

SEE TAA Attached Supplement (B2) FOR CALCULATIONS FOR QUESTIONS 35 AND 36

35. How many acres, if any, will be retired from the historical place of use? 41	☐ A
36. Are irrigated acres proposed that are outside the historical place of use?	■ Y ☐ N
a. If yes,	
i. How many acres? 23	☐ A
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? center pivot	☐ A
iii. What is the slope (%) of the new place of use? 1% (Average over all)	☐ A
iv. Based on questions 36.a.ii to 36.a.iii, what is the percent efficiency of irrigation for the new acres? 80% (ivot efficiency granted via a DNRC meeting 5/13/2025.)	☐ A
v. What is the County Management Factor for the new acres? 72.7%	☐ A
vi. What is the ET based on the irrigation method and county for the new acres? 26.52	☐ A
vii. What percent of applied water are irrecoverable losses for new acres? 10%	☐ A
37. Did you elect on Form 606 to have the Department conduct the technical analyses?	☐ Y ■ N
a. If yes,	
i. Do you have information for the Department to consider about the source and location where return flows historically accrued?	☐ Y ☐ N
1. If yes, explain.	☐ A
ii. If an extended return flow analysis is necessary to analyze impacts to identified surface water rights for the purpose of evaluating adverse effect, pursuant to ARM 36.12.1303(3)(c)(iii), do you elect for the Department to use publicly available water quantity data for the extended return flow analysis? 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, and the extended analysis will not be available for the Department to assess the adverse effect criterion pursuant to ARM 36.12.1903.	☐ Y ☐ N

b. If no, do either of the following conditions apply to your return flow analysis? - Return flows enter back to the source upstream of or at the location of the next appropriator. - Water is left instream so historically diverted flows are available downstream of the point of diversion or upstream of the next appropriator.	■ Y ☐ N
i. If yes,	
1. List which conditions apply and explain why. Return flows enter back to the source upstream of the next appropriator	☐ A
2. Skip to question 77 because no extended return flow analysis is necessary to analyze impacts to identified surface water rights for the purpose of evaluating adverse effect, pursuant to ARM 36.12.1303(3)(c)(iii).	
ii. If no, an extended return flow analysis is necessary to analyze impacts to identified surface water rights for the purpose of evaluating adverse effect, pursuant to ARM 36.12.1303(3)(c)(iii). Answer the questions in the section "Extended Return Flow Analysis" (questions 71 to 76).	

GROUNDWATER

Questions, Narrative Responses, and Tables	**Check-boxes**
38. Is the proposed source groundwater?	☐ Y ■ N
a. If yes, move on to question 37.	
b. If no, skip to question 77.	

Groundwater Analysis for Changes

39. Does the proposed change include a change in point of diversion?	☐ Y ☐ N
a. If no, this section is complete; skip to question 52.	
b. If yes, a groundwater analysis for changes is required; answer questions specific to the groundwater diversion type.	
i. What is the groundwater diversion type? _____	☐ A

Well/ Pumping Pit	Answer questions 40 to 44	**Developed Spring**	Answer questions 45 to 49	**Pond**	Answer questions 50 to 51

Groundwater: Adequacy of Diversion: Well/Pumping Pit

☐ Applicable ☐ Not Applicable

40. Submit an Aquifer Test Data Form (Form 633) for each *new* well/pumping pit that will be constructed prior to technical analyses or *existing* well/pumping pit that is added by the change. If an aquifer test was already conducted for an *existing* well/pumping pit, and you would like to use that instead of conducting a new aquifer test, submit it and explain. _____ _____ _____	☐ S
41. Submit the Aquifer Testing Addendum (Form 600/606-ATA) and associated materials (e.g., well logs).	☐ S
42. Are you requesting a variance from ARM 36.12.121?	☐ Y ☐ N
a. If yes, submit Form 653.	☐ S
43. Have all the wells/pumping pits been constructed?	☐ Y ☐ N
a. If no,	
i. Submit a list of the POD IDs for all wells/pumping pits and mark whether they have or have not been constructed.	☐ S
ii. When will the proposed wells/pumping pits be constructed? _____	☐ A
iii. Is the requested volume for each proposed well/pumping pit known?	☐ Y ☐ N
1. If yes, list the flow rate and volume requested for each proposed well/pumping pit. Label with POD ID. _____ _____	☐ A
2. If no, what is the total requested volume (AF) and the number of proposed PODs? _____	☐ A
44. What is the flow rate (GPM or CFS), volume (AF), and period of diversion (MM/DD-MM/DD) required at each new well/pumping pit ("*new*") or existing well/pumping pit that is added by the change ("*existing*")? If the well/pumping pit is not yet constructed, use the estimated volume based on question 43.a.iii.2. What is the well/pumping pit depth (FT), if available, or estimated well/pumping pit depth (FT)? Label using the same POD ID number as the Proposed Use Map (Form 606) and, if available, GWIC ID. List whether the POD is *new* or an *existing* well added by the change.	☐ A

POD ID	GWIC ID	Flow Rate			Volume	Period of Diversion	Depth	Measured or Estimated	New or Existing
	(if available)	*Flow*	*GPM*	*CFS*	*AF*	*MM/DD-MM/DD*	*FT*		
			☐	☐					
			☐	☐					
			☐	☐					
			☐	☐					
			☐	☐					

Groundwater: Adequacy of Diversion: Developed Spring

☐ Applicable ☐ Not Applicable

45. Submit measurements to the Department for each *new* developed spring or *existing* developed spring that will be added by the change.	☐ S
46. Do you have flow rate (GPM or CFS) and volume measurements?	☐ Y ☐ N
47. With what method were measurements collected? _____ _____	☐ A
48. What is the interval of measurements? _____	☐ A
49. Is the interval of measurements sufficient to comply with the Department standard of monthly flow measurements taken at regular intervals or at department-approved intervals during the proposed period of diversion?	☐ Y ☐ N

Groundwater: Adequacy of Diversion: Pond

☐ Applicable ☐ Not Applicable

50. Submit Form 653 to apply for a variance from ARM 36.12.121 for the Aquifer Test.	☐ S
a. Submit bathymetry data, survey, or engineering plans for each *new* pond added or *existing* pond added or modified by the proposed change. Label using the same POD ID number as the Proposed Use Map (Form 606). List whether the pond is *new* or an *existing* pond.	☐ S
51. Are any of the *new* ponds, or *existing* ponds added or modified by the proposed change the pond, fed or drained by surface water in addition to groundwater?	☐ Y ☐ N
a. If yes,	
i. Explain. _____ _____ _____ _____	☐ A
ii. Submit measurements of the connected surface water source. These may include inflow and outflow measurements.	☐ S

Surface Water Depletion Analysis for Changes

52. Does the proposed change include any of the following scenarios that necessitate a surface water depletion analysis pursuant to ARM 36.12.1303(5)(c)? - Change in point of diversion - Change in place of use, purpose of use, or place of storage that result in a change in consumptive use or pumping schedule.	☐ Y ☐ N
a. If no, this section is complete; skip to question 64.	

b. If yes, a surface water depletion analysis is required; answer questions specific to the groundwater diversion type (see the table below) and questions for the extended surface water depletion analysis (questions 71 to 76).	
i. What is the groundwater diversion type? _____	☐ A

Well/ Pumping Pit	Answer questions 53 to 54	**Developed Spring**	Answer question 55	**Pond**	Answer questions 56 to 57

Surface Water Depletion Analysis: Well/Pumping Pit

53. Provide the following information for each well/pumping pit on the current version of the water rights proposed for change that will either remain on the water rights after the change ("*unchanged*") or will be retired ("*retired*"): flow rate (GPM or CFS), volume (AF), period of diversion required (MM/DD-MM/DD), well/pumping pit depth (FT) (if available, otherwise or estimated well/pumping pit depth (FT)), and whether it is *unchanged* or *retired*. Please use the same POD ID as the Historical Use Map (Form 606) and, if available, provide the GWIC ID number. ☐ A

POD ID	**GWIC ID**	**Flow Rate**			**Volume**	**Period of Diversion**	**Depth**	**Measured or Estimated**	**Unchanged or Retired**
	(if available)	*Flow*	*GPM*	*CFS*	*AF*	*MM/DD-MM/DD*	*FT*		
			☐	☐					
			☐	☐					
			☐	☐					
			☐	☐					
			☐	☐					

54. Provide the pumping schedule for each well/pumping pit (*new*, *existing*, *unchanged*, or *retired*) for both *before* and *after* the proposed change. Use the same POD ID as the project maps. For *new* and *existing* wells/pumping pits, use the Proposed Use Map (Form 606). For *unchanged* and *retired* wells/pumping pits use the Historical Use Map (Form 606). Attach any additional pumping schedules using *"Additional Pumping Schedule (606-TAA)"* sheet. For *retired* wells/pumping pits, mark "N/A" checkbox for after the change and for *new* wells/pumping pits, mark "N/A" checkbox for before the change. Mark the checkbox "Diverted volume/# of Days" if it is a year-round use and the pump schedule is an allocation of diverted volume by the number of days in the month. Mark the checkbox "80% dry year IWR" if it is an irrigation/lawn and garden use and the pump schedule is the 80% dry year net irrigation requirement (IWR, NRCS 2003). ☐ A

(Before) POD ID			
☐ Diverted volume/# of Days ☐ 80% dry year IWR ☐ N/A			
Month	**Volume (AF)**	**Month**	**Volume (AF)**
January		July	
February		August	
March		September	
April		October	
May		November	
June		December	

(After) POD ID			
☐ Diverted volume/# of Days ☐ 80% dry year IWR ☐ N/A			
Month	**Volume (AF)**	**Month**	**Volume (AF)**
January		July	
February		August	
March		September	
April		October	
May		November	
June		December	

Surface Water Depletion Analysis: Developed Spring

55. Is the type of groundwater diversion for your proposed project a developed spring? If yes, skip to question 64 because no surface water depletion analysis will be necessary.	☐ Y ☐ N

Surface Water Depletion Analysis: Pond

56. Are there any ponds on the current version of the water rights proposed for change that will remain on the water rights unchanged ("*unchanged*") or will be retired ("*retired*")?	☐ Y ☐ N
a. If yes,	
i. Did you skip questions 50 to 51.a.ii because there is no change in POD?	☐ Y ☐ N
1. If yes,	
a. Submit Form 653 to apply for a variance from ARM 36.12.121 for the Aquifer Test.	☐ S
ii. Submit bathymetry data, survey, or engineering plans for each *unchanged* pond or *retired* pond. Label the submittal with the POD ID and whether the pond is *unchanged* or *retired*.	☐ S
iii. Are any of the *unchanged* or *retired* ponds fed or drained by surface water, in addition to groundwater?	☐ Y ☐ N
1. If yes,	
a. Explain. _____ _____ _____ _____ _____	☐ A
b. Submit measurements of the connected surface water source. These may include inflow and outflow measurements.	☐ S
b. If no, this section is complete; skip to question 58.	

57. Provide the schedule of diversions for out-of-pond use for each pond (*new*, *existing*, *unchanged*, or *retired*) for both *before* and *after* the proposed change. Use the same POD ID as the project maps. For *new* and *existing* ponds, use the Proposed Use Map (Form 606). For *unchanged* and *retired* ponds use the Historical Use Map (Form 606). Attach any additional diversion schedules using the same format as the table below. For *retired* ponds, mark "N/A" checkbox for after the change and for *new* ponds, mark "N/A" checkbox for before the change. Mark the checkbox "Diverted volume/# of Days" if it is a year-round use and the diversion schedule is an allocation of diverted volume by the number of days in the month. Mark the checkbox "80% dry year IWR" if it is an irrigation or lawn and garden use and the diversion schedule is the 80% dry year net irrigation requirement (IWR, NRCS 2003).	☐ A

(Before) POD ID			
☐ Diverted volume/# of Days ☐ 80% dry year IWR ☐ N/A			
Month	**Diversions for Out-of-Pond Use (AF)**	**Month**	**Diversions for Out-of-Pond Use (AF)**
January		July	
February		August	
March		September	
April		October	
May		November	
June		December	

(After) POD ID			
☐ Diverted volume/# of Days ☐ 80% dry year IWR ☐ N/A			
Month	**Diversions for Out-of-Pond Use (AF)**	**Month**	**Diversions for Out-of-Pond Use (AF)**
January		July	
February		August	
March		September	
April		October	
May		November	
June		December	

Extended Surface Water Depletion Analysis

58. Did you elect on Form 606 for the Department to conduct the technical analyses?	☐ Y ☐ N
a. If yes, the information required to answer questions 59 to 63 is not available prior to the technical analyses. In lieu of answering questions 59 to 63, do you elect for the Department to use publicly available water quantity data for the extended surface water depletion analysis? If this extended surface water depletion analysis is needed and sufficient publicly available water quantity data are not available, then the Department will not be able to conduct the extended surface water depletion analysis, and the extended analysis will not be available for the Department to assess the adverse effect criterion pursuant to ARM 36.12.1903. This section is complete, skip to question 64.	☐ Y ☐ N

b. If no, list the hydraulically connected surface water sources and answer questions 59 to 63 one time per source. Use the "Additional Hydraulically Connected Source (606-TAA)" sheet for each additional source. _____ _____ _____	☐ A
59. What is the surface water source for which you are answering questions 60 to 63? _____	☐ A
60. Are stream gage data available?	☐ Y ☐ N
a. If yes, answer question 61.	
b. If no, answer 62.	
61. Stream gage data are available	
a. Is one stream gage located above, and one stream gage located below the point of net depletion accumulation?	☐ Y ☐ N
i. If no, is only one stream gage located near the point of net depletion accumulation?	☐ Y ☐ N
1. If yes, is the stream gage upstream or downstream? _____	☐ A
b. List the gage name(s). Write "N/A" for Gage 2 if one gage available. Gage 1: _____ Gage 2: _____	☐ A
c. What is the distance between the gage(s) and the point of net depletion accumulation? Write "N/A" for Gage 2 if one gage available. Gage 1: _____ Gage 2: _____	☐ A
d. Is there a limiting or controlling factor on the source between the stream gage(s) and the point of net depletion accumulation? This includes dams that control the flow and streams with large gaining and/or losing reaches.	☐ Y ☐ N
i. If yes, explain. _____ _____	☐ A
e. How long is the period of record? Write "N/A" for Gage 2 if one gage is available. Gage 1: _____ Gage 2: _____	☐ A
f. Who operates and maintains the gage(s)? Write "N/A" for Gage 2 if one gage is available. Gage 1: _____ Gage 2: _____	☐ A

g. Is each available stream gage operated and maintained by USGS or DNRC?	☐ Y ☐ N
i. If yes, skip to question 61.h.	
ii. If no, answer the following questions for each gage not operated and maintained by USGS or DNRC.	
1. How frequently are stage data recorded? Write "N/A" for Gage 2 if only one gage is not operated or maintained by USGS. Gage 1: _____ Gage 2: _____	☐ A
2. If data gaps were to occur, are they identified and left unfilled or estimated using interpolation, ice correction, or indirect discharge measurements methods? Answer below.	
a. Gage 1.	☐ Y ☐ N
b. Gage 2. Write "N/A" on the line instead of answering yes or no, if only one gage is not operated or maintained by USGS or DNRC. _____	☐ Y ☐ N
3. 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? Answer below.	
a. Gage 1.	☐ Y ☐ N
b. Gage 2. Write "N/A" on the line instead of answering yes or no, if only one gage is not operated or maintained by USGS or DNRC. _____	☐ Y ☐ N
4. Were there requirements for maintaining a permanent gage datum and meeting specified accuracy limits? Answer below.	
a. Gage 1.	☐ Y ☐ N
b. Gage 2. Write "N/A" on the line instead of answering yes or no, if only one gage is not operated or maintained by USGS or DNRC. _____	☐ Y ☐ N
h. Do the data for one or more available stream gages meet the Department's standard to be sufficient to calculate the median of the mean monthly flow rate and volume during the months with net depletions? See the "Department Standard Practice for Determining Physical Surface Water Availability" in the Permit Manual for more information.	☐ Y ☐ N
i. If yes, record how many meet the standard, then skip to question 64 because this section is complete. _____	☐ A
ii. If no, answer question 62.	

62. If no gage data are available or if available gage data do not meet the Department's standard to be sufficient to calculate the median of the mean monthly flow rate and volume during the months with net depletions, is the source otherwise measured?	☐ Y ☐ N
a. If no, measurements may be necessary. The Department cannot deem the application correct and complete until the Department receives gage data and/or measurements that meet the Department's measurement standards or, in combination with an approved request to deviate from the Department's standards, are sufficient to complete any necessary technical analyses or scientific credibility reviews and to evaluate the applicable criteria. Skip to question 63.	
b. If yes,	
i. Submit measurements to the Department.	☐ S
ii. Who collected the measurements? _____	☐ A
iii. With what method were the data collected? _____ _____	☐ A
iv. What is the period of record? _____	☐ A
v. What is the frequency of measurement? _____	☐ A
vi. Are there gaps in the data?	☐ Y ☐ N
1. If yes, what is the nature of the gaps and how are gaps handled to ensure data quality? _____ _____	☐ A
vii. Is there a process for maintaining the data and meeting specified accuracy limits?	☐ Y ☐ N
1. If yes, explain. _____ _____	☐ A
viii. Do 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 months with net depletions? Refer to the "Department Standard Practice for Determining Physical Surface Water Availability" in the Permit Manual for more information.	☐ Y ☐ N
1. If yes, this section is complete. Skip to question 64.	
2. If no, answer question 63.	

63. Do 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 calibration of a Department-accepted estimation technique? If the Department finds that your measurements are not sufficient to validate an estimation technique or that no estimation technique is appropriate for the source characteristics, further measurements may be required. Refer to the "Department Standard Practice for Determining Physical Surface Water Availability" in the Permit Manual for more information.	☐ Y ☐ N
a. If yes,	
i. Describe how the measurements are representative of high, moderate, and low flows. _____ _____ _____	☐ A
ii. If you conducted the technical analyses, summarize the estimation technique. If the Department will conduct the technical analyses, write "N/A" instead. _____ _____ _____	☐ A
b. If no, but a Department-accepted estimation technique will be appropriate for the hydraulically connected source:	
i. Did you request to deviate from the requirements of "Department Standard Practice for Determining Physical Surface Water Availability" found in the Permit Manual? Please note that the application cannot be deemed correct and complete until the Department receives measurements that meet these requirements or, in combination with an approved request to depart, are sufficient to complete any necessary technical analyses or scientific credibility reviews and to evaluate the applicable criteria.	☐ Y ☐ N
1. If yes, submit a copy of the request to deviate and, if available, the Department's decision.	☐ S
c. If no, because no Department-accepted estimation technique will be appropriate for the hydraulically connected source:	
i. Describe why no Department-accepted estimation technique is appropriate for the source characteristics. _____ _____ _____ _____	☐ A
ii. Do the available measurement data, gage and/or otherwise measured, meet the Department's standard for monthly measurements throughout the months with net depletions?	☐ Y ☐ N

1. If no, did you request to deviate from the requirements of "Department Standard Practice for Determining Physical Surface Water Availability" found in the Permit Manual? Please note that the application cannot be deemed correct and complete until the Department receives measurements that meet these requirements or, in combination with an approved request to depart, are sufficient to complete any necessary technical analyses or scientific credibility reviews and to evaluate the applicable criteria.	☐ Y ☐ N
a. If yes, submit a copy of the request to depart, and if available, the Department's decision.	☐ S

Return Flow Analysis

64. Do the purposes of the water rights proposed for change include irrigation?	☐ Y ☐ N
a. If yes, does the proposed change include a change in place of use *and/or* a change in purpose? If you propose to retire acres in the historical place of use and/or add new acres outside the historical place of use, this constitutes a change in place of use.	☐ Y ☐ N
i. If yes, a return flow analysis is required. Move on to answer question 65.	
ii. If no, this section is complete and the "Extended Return Flow Analysis" section is not required; skip to question 77.	
b. If no, this section is complete and the "Extended Return Flow Analysis" section is not required; skip to question 77.	
65. Does the proposed change include a change in purpose?	☐ Y ☐ N
a. If yes, consumptive use information is collected in the Change in Purpose section (questions 84 to 89), skip to question 66.	
b. If no, skip to question 66.	
66. Does the proposed change include a change in place of use? If yes, move on to question 67. If no, skip to question 70.	☐ Y ☐ N
67. Submit a map showing the new, unchanged historical, and retired historical places of use. Create map on an aerial photograph or topographic map that shows the following: section corners, township and range, scale bar, and north arrow. If you have shapefiles associated with this map, in addition to submitting an image of the map, please submit electronic copies of the shapefiles to the Department.	☐ S
68. How many acres, if any, will be retired from the historical place of use? _____	☐ A
69. Are irrigated acres proposed that are outside the historical place of use?	☐ Y ☐ N
a. If yes,	
i. How many acres? _____	☐ A
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? _____	☐ A
iii. What is the slope (%) of the new place of use? _____	☐ A

iv. Based on question 69.a.ii to 69.a.iii, what is the percent efficiency of irrigation for the new acres? _____	☐ A
v. What is the County Management Factor for the new acres? _____	☐ A
vi. What is the ET based on the irrigation method and county for the new acres? _____	☐ A
vii. What percent of applied water are irrecoverable losses for new acres? _____	☐ A
70. Did you elect on Form 606 to have the Department conduct the technical analyses?	☐ Y ☐ N
a. If yes,	
i. Do you have information for the Department to consider about the source and location where return flows historically accrued?	☐ Y ☐ N
1. If yes, explain. _____ _____ _____	☐ A
ii. If an extended return flow analysis is necessary to analyze impacts to identified surface water rights for the purpose of evaluating adverse effect, pursuant to ARM 36.12.1303(5)(d)(iii), do you elect for the Department to use publicly available water quantity data for the extended return flow analysis? If the extended return flow analysis is required and sufficient publicly available water quantity data is not available (such as if measurements are required), then the Department will not be able to conduct the extended analysis, and the extended analysis will not be available for the Department to assess the adverse effect criterion pursuant to ARM 36.12.1903.	☐ Y ☐ N
b. If no, do either of the following conditions apply to your return flow analysis? - Return flows enter back to the source upstream of or at the location of the next appropriator. - Water is left instream so historically diverted flows are available downstream of the point of diversion or upstream of the next appropriator.	☐ Y ☐ N

i. If yes, list which conditions apply and explain why. Skip to question 77 because no extended return flow analysis is necessary to analyze impacts to identified surface water rights for the purpose of evaluating adverse effect, pursuant to ARM 36.12.1303(5)(d)(iii). _____ _____ _____ _____ _____ _____ _____ _____ _____	☐ A
ii. If no, an extended return flow analysis is necessary to analyze impacts to identified surface water rights for the purpose of evaluating adverse effect, pursuant to ARM 36.12.1303(5)(d)(iii). Answer the questions in the section "Extended Return Flow Analysis" (questions 71 to 76).	

PROJECT-SPECIFIC QUESTIONS

Extended Return Flow Analysis

Questions, Narrative Responses, and Tables	Check-boxes
71. If you conducted the technical analyses and question 31 or question 64 identified the need for a return flow analysis, did question 37 or question 70 identify that an extended return flow analysis is necessary? If yes, answer questions 72 to 76 one time for each surface water source receiving return flows that requires an extended return flow analysis. If there is more than one, use an "Additional Return Flow Source (606-TAA)" sheet for each additional source. If no, this section is complete; skip to question 77.	☐ Y ■ N
72. What is the surface water source for which you are answering questions 73 to 76? _____	☐ A
73. Are stream gage data available?	☐ Y ☐ N
a. If yes, answer question 74.	
b. If no, answer question 75.	
74. Stream gage data are available	
a. Is one stream gage located above, and one stream gage located below the location where return flows accrue?	☐ Y ☐ N
i. If no, is only one stream gage located near the location where return flows accrue?	☐ Y ☐ N
1. If yes, is the stream gage upstream or downstream? _____	☐ A
b. List the gage name(s). Write "N/A" for Gage 2 if one gage available. Gage 1: _____ Gage 2: _____	☐ A

c. What is the distance between the gage(s) and the location where return flows accrue? Write "N/A" for Gage 2 if one gage available. Gage 1: _____ Gage 2: _____	☐ A
d. Is there a limiting or controlling factor on the source between the stream gage(s) and the location where return flows accrue? This includes dams that control the flow and streams with large gaining and/or losing reaches.	☐ Y ☐ N
i. If yes, explain. _____ _____	☐ A
e. How long is the period of record? Write "N/A" for Gage 2 if one gage is available. Gage 1: _____ Gage 2: _____	☐ A
f. Who operates and maintains the gage(s)? Write "N/A" for Gage 2 if one gage is available. Gage 1: _____ Gage 2: _____	☐ A
g. Is each available stream gage operated and maintained by USGS or DNRC?	☐ Y ☐ N
i. If yes, skip to question 74.h.	
ii. If no, answer the following questions for each gage not operated and maintained by USGS or DNRC.	
1. How frequently are stage data recorded? Write "N/A" for Gage 2 if only one gage is not operated or maintained by USGS. Gage 1: _____ Gage 2: _____	
2. If data gaps were to occur, are they identified and left unfilled or estimated using interpolation, ice correction, or indirect discharge measurements methods? Answer below.	
a. Gage 1.	☐ Y ☐ N
b. Gage 2. Write "N/A" on the line instead of answering yes or no, if only one gage is not operated or maintained by USGS or DNRC. _____	☐ Y ☐ N
3. 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? Answer below.	
a. Gage 1.	☐ Y ☐ N
b. Gage 2. Write "N/A" on the line instead of answering yes or no, if only one gage is not operated or maintained by USGS or DNRC. _____	☐ Y ☐ N
4. Were there requirements for maintaining a permanent gage datum and meeting specified accuracy limits? Answer below.	
a. Gage 1.	☐ Y ☐ N
b. Gage 2. Write "N/A" on the line instead of answering yes or no, if only one gage is not operated or maintained by USGS or DNRC. _____	☐ Y ☐ N

h. Do the data for one or more available stream gages meet the Department's standard to be sufficient to calculate the median of the mean monthly flow rate and volume during the months when return flows accrue? See the "Department Standard Practice for Determining Physical Surface Water Availability" in the Permit Manual for more information.	☐ Y ☐ N
i. If yes, record how many meet the standard, then skip to question 77 because this section is complete. _____	☐ A
ii. If no, answer question 75.	
75. If no gage data are available or if available gage data do not meet the Department's standard to be sufficient to calculate the median of the mean monthly flow rate and volume during the months when return flows accrue, is the source otherwise measured?	☐ Y ☐ N
a. If no, measurements may be necessary. The Department cannot deem the application correct and complete until the Department receives gage data and/or measurements that meet the Department's measurement standards or, in combination with an approved request to deviate from the Department's standards, are sufficient to complete any necessary technical analyses or scientific credibility reviews and to evaluate the applicable criteria. Skip to question 76.	
b. If yes,	
i. Submit measurements to the Department.	☐ S
ii. Who collected the measurements? _____	☐ A
iii. With what method were the data collected? _____ _____	☐ A
iv. What is the period of record? _____	☐ A
v. What is the frequency of measurement? _____	☐ A
vi. Are there gaps in the data?	☐ Y ☐ N
1. If yes, what is the nature of the gaps and how are gaps handled to ensure data quality? _____ _____	☐ A
vii. Is there a process for maintaining the data and meeting specified accuracy limits?	☐ Y ☐ N
1. If yes, explain. _____ _____	☐ A

viii. Do 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 months when return flows accrue? Refer to the "Department Standard Practice for Determining Physical Surface Water Availability" in the Permit Manual for more information.	☐ Y ☐ N
1. If yes, this section is complete. Skip to question 77.	
2. If no, answer question 76.	
76. Do 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 calibration of a Department-accepted estimation technique? If the Department finds that your measurements are not sufficient to validate an estimation technique or that no estimation technique is appropriate for the source characteristics, further measurements may be required. Refer to the "Department Standard Practice for Determining Physical Surface Water Availability" in the Permit Manual for more information.	☐ Y ☐ N
a. If yes,	
i. Describe how the measurements are representative of high, moderate, and low flows. _____ _____ _____	☐ A
ii. If you conducted the technical analyses, summarize the estimation technique. If the Department will conduct the technical analyses, write "N/A" instead. _____ _____ _____ _____ _____ _____	☐ A
b. If no, but a Department-accepted estimation technique will be appropriate for the source receiving return flows:	
i. Did you request to deviate from the requirements of "Department Standard Practice for Determining Physical Surface Water Availability" found in the Permit Manual? Please note that the application cannot be deemed correct and complete until the Department receives measurements that meet these requirements or, in combination with an approved request to depart, are sufficient to complete any necessary technical analyses or scientific credibility reviews and to evaluate the applicable criteria.	☐ Y ☐ N
1. If yes, submit a copy of the request to deviate and, if available, the Department's decision.	☐ S
c. If no, because no Department-accepted estimation technique will be appropriate for the source receiving return flows:	
i. Describe why no Department-accepted estimation technique is appropriate for the source characteristics. _____ _____ _____ _____	☐ A

ii. Do the available measurement data, gage and/or otherwise measured, meet the Department's standard for monthly measurements throughout the months when return flows accrue?	☐ Y ☐ N
1. If no, did you request to deviate from the requirements of "Department Standard Practice for Determining Physical Surface Water Availability" found in the Permit Manual? Please note that the application cannot be deemed correct and complete until the Department receives measurements that meet these requirements or, in combination with an approved request to depart, are sufficient to complete any necessary technical analyses or scientific credibility reviews and to evaluate the applicable criteria.	☐ Y ☐ N
a. If yes, submit a copy of the request to depart, and if available, the Department's decision.	☐ S

Temporary Change

77. Does the proposal include a temporary change? *This includes proposing to add a place of use on State of Montana Trust Land, with all points of diversion on private land, because the change authorization will be temporary for the duration of the lease term.* If yes, answer the questions in this section (questions 78 to 82). If no, this section is complete; skip to question 83.	☐ Y ■ N
78. What elements of the water rights are being temporarily changed? _____	☐ A
79. For what purpose will the water rights be temporarily used? _____	☐ A
80. For how many years will the water rights be temporarily changed? _____	☐ A
81. Will the temporary change be intermittent over the years?	☐ Y ☐ N
a. If yes, explain. _____ _____	☐ A
82. 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
a. If yes, explain the water conservation or storage project. _____ _____ _____ _____	☐ A

Change in Purpose

83. Does the project involve a change in purpose? If yes, answer the questions in this section (questions 84 to 89). If no, this section is complete, and you can skip to question 90.	☐ Y ■ N
84. Identify the new and unchanged purposes and for each purpose, the period of diversion (mm/dd-mm/dd), period of use (mm/dd-mm/dd), flow rate (GPM or CFS), and volume (AF).	☐ A

Purpose	**New or Un-changed**	**Period of Diversion** *(MM/DD-MM/DD)*	**Period of Use** *(MM/DD-MM/DD)*	**Flow Rate** *Flow Rate*	*GPM*	*CFS*	**Volume** *(AF)*
					☐	☐	
					☐	☐	
					☐	☐	
			Total		☐	☐	

85. Answer the questions specific to each new and unchanged purpose identified in question 84.	

Lawn and garden	Question 86	**Stock**	Question 87	**Domestic and multiple domestic**	Question 88	**Other purpose**	Question 89

86. Lawn and garden	
a. Will consumptive use be based on the standard of 2.5 acre-feet per acre or a calculated volume based on Irrigation Water Requirements for turf grass?	☐ Y ☐ N
i. If yes, which standard? _____	☐ A
ii. If no, describe how consumptive use will be estimated. This must be based on expert analysis. _____ _____ _____	☐ A
87. Stock	
a. How many animal units will be served? _____	☐ A
88. Domestic and multiple domestic	
a. How many households and bedrooms per household will be served? _____	☐ A
b. Will the Department volume standard be used to determine consumptive use?	☐ Y ☐ N
i. If no, what volume standard will be used? _____	☐ A

c. Will the proposed use include wastewater disposal and treatment?	☐ Y ☐ N
i. 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
89. Other purpose	
a. What is the other purpose (e.g., municipal, commercial)?	☐ A
b. What is the percentage of consumption for the proposed use? Please explain.	☐ A

Ditch-Specific Questions

Applications corroborating historical diverted volume with the Historical Use Addendum (Form 606-HUA) may be eligible to skip one or more questions in this section; see the Form 606-HUA for more information.

90. Does the historical use of water include at least one conveyance ditch? If yes, answer questions 91 to 92. If no, skip to question 93.	■ Y ☐ N
91. Submit a Historical Use Ditch Map that shows every ditch conveying water for the historical use of all water rights proposed for change. Label the ditch names, PODs, the POUs, and the ditch measurement locations (requested in question 92.d). The map should be created on a historical image or topographic map with the following: section corners, township and range, scale bar, and north arrow.	■ S
92. Answer questions 92.a to 92.h one time for each historical conveyance ditch. If there is more than one historical conveyance ditch, use an "Additional Historical Ditch (606-TAA)" sheet for each additional ditch.	
a. What is the ditch name? Ditch Segment C: The Applicant considers this the only hist. conveyance ditch.	☐ A
b. List the water rights proposed for change that were conveyed by the ditch. 42C 27200 00	☐ A
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. 5100ft. See TAA Attached Supplement (B2)	☐ A

d. Provide at least one set of ditch measurements, which include width (FT), depth (FT), and slope (%). Include the location of each measurement, labeled with the 2-digit measurement ID number, used on the map submitted for question 91. ☐ A

ID #	Width (FT)	Depth (FT)	Slope (%)	Date of Measurement
M1	8ft top 2 ft botton	1.50 ft	0.137%	04/07/2022
The ditch splits immediately below the point where this measurement was taken. The portion of the ditch, Ditch C, used for conveyance loss calcs is downstream of the split. It is estimated that Ditch C was 7 ft wide at the top, 2 ft wide at the bottom and 16 in deep.				

e. What is a reasonable Manning's n value? List the factors used for estimation. ☐ A

0.025 Based on guidelines (Chow, 1959) for a relatively uniform, earth-lined channel which was historically cleared of debris and its vegetation burned.

f. What type of soils compose the historical conveyance ditch? For lined ditches, write "lined" instead. ☐ A

Havre loam, occasionally flooded

g. Are other water rights conveyed by the historical conveyance ditch? ☐ Y ■ N

i. If yes,

1. List the water right numbers and their flow rates. ☐ A

2. What is the sum of the flow rates, including the water rights proposed for change? ☐ A

3. Submit 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. The map should be created on an aerial photograph or topographic map and show the following: section corners, township and range, scale bar, and north arrow. If you elected for the Department to conduct technical analyses, write "N/A" instead if you agree with the Department using publicly available data to create the map. ☐ S

h. Were any water rights proposed for change part of one historical water right that was split?	☐ Y ■ N
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
1. If no, do any of the water rights proposed for change have a carriage water requirement?	☐ Y ☐ N
a. If yes,	
i. List the water rights with a carriage water requirement _____ _____	☐ A
ii. Update your Historical Use Ditch Map (question 91) 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.	☐ S
93. Does the proposed use include at least one existing or new conveyance ditch? If yes, answer questions 94 to 95. If no, skip to question 96.	☐ Y ■ N
94. Submit a Proposed Use Ditch Map that shows every ditch conveying the water rights 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 95.e). The map should be created on an aerial photograph or topographic map with the following: section corners, township and range, scale bar, and north arrow.	☐ S
95. Answer questions 95.a to 95.i.i one time for each proposed use conveyance ditch. Use an "Additional Proposed Ditch (606-TAA)" sheet for each additional ditch.	
a. What is the ditch name? _____	☐ A
b. Is this ditch a historical conveyance ditch detailed in questions 91 to 92?	☐ Y ☐ N
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
1. If yes, answer questions 95.c to 95.i.i using current data.	
2. If no, do not answer questions 95.c to 95.i.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 96.	
c. List the water rights proposed for change that are going to be conveyed by the ditch. _____ _____	☐ A
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. _____ _____	☐ A

e. Provide at least one set of ditch measurements, which include width (FT), depth (FT), and slope (%). Include the location of each measurement, labeled with the 2-digit measurement ID number, used on the map submitted for question 94. ☐ A

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

f. What is a reasonable Manning's n value? List the factors used for estimation. ☐ A

_____

_____

_____

g. What type of soils compose the proposed conveyance ditch? For lined ditches, write "lined" instead. ☐ A

_____

_____

_____

h. Are other water rights conveyed by the proposed conveyance ditch? ☐ Y ☐ N

i. If yes,

1. List the water right numbers and their flow rates. ☐ A

_____

_____

_____

2. What is the sum of the flow rates, including the proposed flow rates of the water rights proposed for change? ☐ A

_____

_____

3. Submit 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. The map should be created on an aerial photograph or topographic map and show the following: section corners, township and range, scale bar, and north arrow. If you elected for the Department to conduct technical analyses, write "N/A" instead if you agree with the Department using publicly available data to create the map. _____ ☐ S

i. Were any water rights proposed for change identified as having a carriage water requirement in question 92.h.i.1.a.i? ☐ Y ☐ N

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 elected for the Department to conduct technical analyses, write "N/A" instead if you agree with the Department using publicly available data to create the map. _____ ☐ S

Change in Place of Storage

96. Does the project involve a change in place of storage? If yes, answer the questions in this section (questions 97 to 102) for each individual place of storage. Use the "Additional Place of Storage (606-TAA)" sheet for additional places of storage. If no, this section is complete; skip to question 103.	☐ Y ■ N
97. Is this application to add a new place of storage or change an existing place of storage? _____	☐ A
a. If you propose 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; otherwise write "NA." _____ _____ _____	☐ A
98. Is the place of storage located on-stream?	☐ Y ☐ N
a. If no, describe any losses related to conveyance that are not detailed in "Ditch-Specific Questions." _____ _____ _____	☐ A
99. 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 = Capacity (AF)* _____	☐ S
100. What is the proposed surface area of the place of storage? _____	☐ A
101. What is the annual net evaporation of water from the place of storage based on proposed capacity and proposed surface area, using the standards in ARM 36.12.116(1) and the Department's Gridded Net Evaporation map layer? _____ _____	☐ A
102. Will the place of storage be lined?	☐ Y ☐ N

Mitigation, Aquifer Recharge, and Marketing for Mitigation/Aquifer Recharge

103. Does your application include one of the following purposes? If no, this section is complete; skip to question 108.	☐ Y ■ N
a. Mitigation water. If yes, answer questions 104 and 105.	☐ Y ☐ N
b. Aquifer recharge water. If yes, answer questions 106 and 107.	☐ Y ☐ N
c. Marketing for mitigation/aquifer recharge. If yes, answer question 107.	☐ Y ☐ N

104. Mitigation Water and Aquifer Recharge Water

a. Identify the water right(s) for which the mitigation water/aquifer recharge will be used. ☐ A

_____

b. Identify the application or preapplication number where these water rights were identified as needing mitigation or aquifer recharge to meet the adverse effect criterion. ☐ A

_____

c. What is the timing, flow rate, and volume of net depletions identified as needing mitigation or aquifer recharge water to meet the adverse effect criterion? ☐ A

Month	Days	Flow Rate			Volume	Month	Days	Flow Rate			Volume
		Flow	*GPM*	*CFS*	*AF*			*Flow*	*GPM*	*CFS*	*AF*
January			☐	☐		July			☐	☐	
February			☐	☐		August			☐	☐	
March			☐	☐		September			☐	☐	
April			☐	☐		October			☐	☐	
May			☐	☐		November			☐	☐	
June			☐	☐		December			☐	☐	

d. Will other water contribute to the need for mitigation or aquifer recharge water? This may include water rights with a mitigation or aquifer recharge purpose, marketing for mitigation contracts, or mitigation water secured via other types of contracts. ☐ Y ☐ N

i. If yes, describe the origin of this water and in the table below, list how much it will contribute. ☐ A

_____

Month	Days	Flow Rate			Volume	Month	Days	Flow Rate			Volume
		Flow	*GPM*	*CFS*	*AF*			*Flow*	*GPM*	*CFS*	*AF*
January			☐	☐		July			☐	☐	
February			☐	☐		August			☐	☐	
March			☐	☐		September			☐	☐	
April			☐	☐		October			☐	☐	
May			☐	☐		November			☐	☐	
June			☐	☐		December			☐	☐	

105. Mitigation Water

a. What is the legal land description (¼ ¼ ¼ section of start and end) of the mitigation reach and the start of net depletions for which mitigation water will be used? ☐ A

_____

b. By what means will mitigation water be made available? ☐ A

_____

_____

_____

_____

c. Submit a copy of all relevant discharge permits (§ 85-2-364, MCA). If there are no relevant discharge permits, write "N/A" instead. _____ ☐ S

106. Aquifer Recharge Water	
a. What is the legal land description (¼ ¼ ¼ section) of the start of net depletions for which the aquifer recharge water will be used? _____	☐ A
b. What is the volume of net depletions that will be offset by the aquifer recharge water? *The volume of aquifer recharge water injected may not equal the volume of net depletions.* _____	☐ A
c. Describe the method of aquifer recharge. Include, if available, a preliminary design. _____ _____ _____ _____ _____	☐ A
d. Submit a copy of all relevant discharge permits (§ 85-2-364, MCA). If there are no relevant discharge permits, write "N/A" instead. _____	☐ S
e. Describe any constraints on the aquifer recharge schedule, such as priority date limitations. _____ _____	☐ A
f. What is the proposed area or location of aquifer recharge? *The location is subject to refinement during the technical analyses.* If you elected to do your own technical analyses, write "N/A" instead. _____ _____ _____	☐ A
107. Marketing for Mitigation/Aquifer Recharge	
a. What is the proposed location of the reach where water is to be marketed (¼ ¼ ¼ section of start and end of reach)? _____	☐ A
b. Is this marketing for mitigation?	☐ Y ☐ N
i. If yes, by what means will mitigation water be made available? _____ _____ _____ _____	☐ A

c. Is this marketing for aquifer recharge?	☐ Y ☐ N
i. If yes,	
1. Describe the method of aquifer recharge. Include a preliminary design. _____ _____ _____ _____	☐ A
2. Submit a copy of all relevant discharge permits (§ 85-2-364, MCA). If there are no relevant discharge permits, write "N/A" instead. _____	☐ S
3. What is the volume of water that will be used for aquifer recharge? _____	☐ A
4. Describe any constraints on the aquifer recharge schedule, such as priority date limitations. _____ _____	☐ A
5. What is the proposed area or location of aquifer recharge? *The location is subject to refinement during the technical analyses.* If you elected to do your own technical analyses, write "N/A" instead. _____ _____ _____	☐ A
d. Describe your ability to measure and operate all existing diversions to adjust flow rate as water is sold or leased. _____ _____ _____ _____	☐ A
e. How will you cease diversions for the existing beneficial use as water is sold or leased? _____ _____ _____ _____	☐ A

Instream Flow Change

108. Does the project involve an instream flow change? If yes, answer the questions in this section (questions 109 to 114). If no, this section is complete; skip to question 115.	☐ Y ■ N
109. What is the source name where streamflow will be maintained or enhanced? _____	
110. What is the location (¼ ¼ ¼ section of start and end of reach) and length (FT) of the protected reach? _____	☐ A

111. Describe the way the streamflow is to be maintained or enhanced. _____ _____	☐ A
112. Do you propose to retire all water use associated with the historical purposes throughout the entire period of use? This includes conveyance loss associated with historical ditches.	☐ Y ☐ N
a. If no, describe the proposed change to existing purposes, including flow rate, volume, and, if applicable, acres. _____ _____ _____ _____	☐ A
113. If you conducted the technical analyses, do historical return flows go back to the source of supply? If you elected for the Department to conduct technical analyses, this information will not yet be available for creation of the instream flow proposal; write "NA": _____	☐ Y ☐ N
114. 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
a. If yes, complete the Salvage Water section (questions 115 to 118).	

Salvage Water

115. 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 116 to 118). If no, this section is complete.	☐ Y ▣ N
116. 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 others. Explain. _____ _____ _____	☐ A
117. How much water was salvaged from implementation of the water saving method? Include flow rate (GPM or CFS) and volume (AF). _____	☐ A
118. How did you determine the amount of water salvaged? _____ _____ _____ _____ _____	☐ A

APPLICATION TO CHANGE WATER RIGHT 42C 27200 00
TECHNICAL ANALYSIS ADDENDUM ATTACHED SUPPLEMENT (B2)

Form 606 TAA - Question 23
Historical Consumed Volume Irrigation

The historical place of use consists of 200 acres of flood irrigation. There were two subtypes of flood irrigation used, Graded Border Flood (GBF) and Contour Ditch Flood (CDF), that irrigated 61 acres and 139 acres of the POU, respectively. In estimating Total Historical Consumed Volume, Management Factor Values and Evapotranspiration (ET) values were taken from the *ARM 36.12.1902* for Rosebud County at the geographically nearest Brandenberg Weather Station.

Graded Border Flood (GBF): 61 Acres

- 23.83 in IWR
- 65% efficiency, 0.5% to 1% slope
- 47.7 County Management Factor

Historical Consumptive Use (HCU = Crop Consumption) Graded Border Flood (GBF)
= (23.83 in * 0.477 * 61 ac)/12 in = 57.78 AF
Vol Applied = 57.78 / 0.65 = 88.90 AF
Irrecoverable Losses (5%) = (88.90 * 0.05) = 4.44 AF
HCU GBF w/ IL = HCV GBF = (57.78 AF + 4.44 AF) = 62.22 AF

Contour Ditch Flood: 139 Acres

- 23.83 in IWR
- 55% efficiency,1.5% to 3.0%
- 47.7% County Management Factor

HCU CDF = (23.83 in *0.477 * 139 ac) / 12 in = 131.67 AF
Vol Applied = 131.67 / 0.55 = 239.39 AF
Irrecoverable Losses (5%) = (239.39 * 0.05) = 11.97 AF
HCU CDF w/IL = HCV CDF = (131.67 + 11.97 AF) = 143.64 AF

Total HCV = HCV GBF + HCV CDF = 62.22 AF + 143.64 AF = 205.86 AF

APPLICATION TO CHANGE WATER RIGHT 42C 27200-00
TECHNICAL ANALYSIS ADDENDUM ATTACHED SUPPLEMENT (B2)

Form 606 TAA - Question 35
Proposed Retired Volume

There will be 41 total acres retired in the place of use, 6.0 acres that were historically irrigated as GBF subtype and 35.0 acres that were historically irrigated as CDF. The Historical Consumed Volume from the 41 retired acres are estimated to offset the proposed volume of the 23 new acres proposed outside the historical place of use (See Question 36 below).

Graded Border Flood Retired Acres: 6.0 Acres

- 23.83 in IWR
- 65% efficiency, 0.5% to 1% slope
- 47.7 County Management Factor

HCU GBF Retired (23.83 in * 0.477 * 6.0 ac) / 12 in = 5.68 AF
Irrecoverable Losses (5%) = (5.68 / 0.65) * 0.05 = 0.44 AF
HCU GBF Retired Acres w/ IL = HCV GBF Retired = (5.68 + 0.44 AF) = 6.12 AF

Contour Ditch Flood Retired Acres: 35.0 Acres

- 23.83 in IWR
- 55% efficiency, 1.5% to 3.0%
- 47.7% County Management Factor

HCU CDF = (23.83 in * 0.477 * 35.0 ac) / 12 in = 33.15 AF
Irrecoverable Losses (5%) = (33.15 / 0.55) * 0.05 = 3.01 AF
HCU CDF w/IL = HCV CDF Retired = (33.15 + 3.01 AF) = 36.16 AF

Total Historical Consumed Volume Retired = 6.12 AF + 36.16 AF = 42.28 AF

Form 606 TAA - Question 36
Proposed Consumed Volume

There are 23 Proposed acres outside the historical place of use. Water will be diverted into buried pipelines and therefore will have 0 AF conveyance loss. In estimating Proposed Consumed Volume, Management Factor Values and Evapotranspiration (ET) values were taken from the *ARM 36.12.1902* for Rosebud County at the geographically nearest Brandenberg Weather Station.

Proposed New Ac: 23 Acres

- 26.52 in IWR
- 80% efficiency
- 72.7% County Management Factor
  Note that the proposed use field efficiency of 80% is based on the understanding that modern pivot irrigation nozzles are more efficient. They are designed to maximize water droplet size thus reducing wind-drift and evaporative losses.

HCU Proposed = (26.52 * 0.727 * 23) / 12 = 36.95 AF
Irrecoverable Losses (10%) = (36.95 / 0.8) * 0.10 = 4.62 AF
HCU Proposed w/ IL = HCV Proposed New Ac 36.95 + 4.62 = 41.57 AF

APPLICATION TO CHANGE WATER RIGHT 42C 27200-00
TECHNICAL ANALYSIS ADDENDUM ATTACHED SUPPLEMENT (B2)

Form 606 TAA - Question 92
Ditch Conveyance Loss

92.c
Reference also Historical Use of Ditches Map for Form 606-TAA Question 91.

Ditch Segments A and B are wholly within the southern place of use and therefore have a conveyance loss of zero.

Ditch Segment C conveyed a portion of the Diverted Flow to the northern historical POU.

The minor flow rate amount of excess flood carriage water conveyed to the northern POU via Ditch Segment D (then dumping into Ditch Segment C) is not considered to be of significance in the calculations of conveyance losses to the northern historical POU.

Ditch Segment C

Seepage Conveyance Loss = Seepage Loss + Vegetation Loss + Ditch Evaporation

$$\text{Seepage Loss} = \frac{(\text{wetted perimeter})(\text{ditch length})(\text{loss rate})(\text{days})}{43560\ ft^2/acre}$$

Wetted perimeter = 72.29 ft
Ditch length = 5100 ft
Loss Rate = 0.60 ft^3/ft^2/day
Days = 214
7.29 * 5100 * 0.6 * 214 / 43560 = 109.59 AF

Vegetation Loss = (% loss/mile)(flow)(days)(ditch length) * 2
% loss/mile = 0.0075
Flow = 5.37 CFS
Days = 214
Ditch length = 0.966 miles
0.0075 * 5.37 * 214 * 0.966 * 2 = 16.65 AF

Ditch Evaporation = (surface area of ditch)(evaporation rate)/43560 ft^2/acre
Surface area = wetted width (ft) * length of ditch (ft) = 8ft * 5470ft = 43760 ft^2
Evaporation rate = 1.675

Seepage Conveyance Loss = Seepage Loss + Vegetation Loss + Ditch Evaporation

= 109.59 + 16.65 + 1.38 = 127.62

Form 606 TAA Attachement B3

Montana Water Court
PO Box 1389
Bozeman, MT 59771-1389
(406) 586-4364
1-800-624-3270 (In-state only)
Fax: (406) 522-4131

FILED
DEC 08 2014
Montana Water Court

IN THE WATER COURT OF THE STATE OF MONTANA
YELLOWSTONE RIVER DIVISION
TONGUE RIVER BELOW HANGING WOMAN CREEK (42C)

* *

CLAIMANT: **Coffee-Nefsy Limited Partnership**

OBJECTORS: United States of America (Bureau of Reclamation);
United States of America (Bureau of Indian Affairs)

NOTICE OF INTENT TO APPEAR: Northern Cheyenne Tribe

CASE 42C-67
42C 27200-00 ✓

NOTICE OF FILING OF MASTER'S REPORT

This Master's Report was filed with the Clerk of the Montana Water Court on the above stamped date. Please read this Report carefully.

You may file a written objection to the Report if you disagree with the Master's Findings of Fact, Conclusions of Law, or Recommendations; or if there are errors in the Report. The above stamped date indicates the date the Master's Report was filed and mailed. Rule 23 of the Water Adjudication Rules requires written objections to the Master's Report must be filed within 10 days of the date of the Master's Report. Because the Report was mailed to you, the Montana Rules of Civil Procedure allow an additional 3 days be added to the 10 day objection period. Rule 6(d), M.R.Civ.P. This means your objection must be received no later than 13 days from the above stamped date.

If you file an objection, you must mail a copy of the objection to all parties on the Service List found at the end of the Master's Report. The original objection and a certificate of mailing to all parties on the Service List must be filed with the Water Court. If you do not file a timely objection, the Water Court will conclude that you agree with the

content of this Master's Report.

MASTER'S REPORT

Big Sky Coal Company irrigation claim 42C 27200-00 appeared in the Preliminary Decree with the following issue remarks:

> FLOW RATE MAY REQUIRE MODIFICATION BASED ON RESOLUTION OF MAXIMUM ACRES ISSUE.
>
> USDA AERIAL PHOTOGRAPH NO(S). 278-185, DATED 09/15/1978, APPEARS TO INDICATE 192.5 ACRES IRRIGATED. A DESCRIPTION OF THESE ACRES IS IN THE CLAIM FILE.
>
> USDI AERIAL PHOTOGRAPH NO. MA 29 29, DATED 00/00/1944, APPEARS TO INDICATE 156.75 ACRES IRRIGATED. A DESCRIPTION OF THESE ACRES IS IN THE CLAIM FILE.
>
> THE PRIORITY DATE MAY BE QUESTIONABLE. THIS CLAIM IS FOR A FILED [RIGHT (SIC)] ON TONGUE RIVER WITH A PRIORITY DATE PREDATING CASE NO. 2809 CUSTER COUNTY.

The United States of America (Bureau of Reclamation), the United States of America (Bureau of Indian Affairs), and Apsaalooke (Crow) Tribe objected to Big Sky Coal Company claim 42C 27200-00. Diamond Cross Properties, LLC and the Northern Cheyenne Tribe each filed a notice of intent to appear. Unconditional withdrawals were filed by the Apsaalooke (Crow) Tribe on September 20, 2010 and Diamond Cross Properties, LLC on August 28, 2012.

On June 27, 2012 the United States' Motion For Summary Judgment was filed. As requested by the parties, the prehearing calendar including filing an answer to the Motion For Summary Judgment was extended as the parties were continuing settlement discussions. On February 7, February 12, and February 13, 2013, all of the remaining parties filed a Stipulation And Agreement requesting changes to the claim to resolve the objections and notice of intent to appear. Recitals paragraph 5 of the Stipulation And Agreement states that the United States' Motion For Summary Judgment was filed but "[u]pon agreement by the parties, no response to the United States' motion was filed by Claimant." Paragraph 10 of the Stipulation And Agreement states that "[t]his Stipulation

is a settlement of the United States' objections as between the United States and Claimant." It is apparent from these statements that the United States' Motion For Summary Judgment is considered moot by the parties and therefore, the Court will not address the United States' Motion For Summary Judgment any further. As the Court had concerns about the requested changes, a letter was sent to the parties on February 11, 2013 requesting additional information or clarification.

On April 25, 2013 the ownership of the claim was updated to Goose Lake Farms, LLC and Eleven G Farms, LLC. On July 16, 2013 Goose Lake Farms, LLC and Eleven G Farms, LLC filed a Response to the Court's questions and requested a conference call to discuss the questions with all parties and the Court. The conference call was held on August 27, 2013 and the deadline for response to the Court's February 1, 2013 letter was extended to October 11, 2013. On October 10, 2013 Goose Lake Farms, LLC and Eleven G Farms, LLC filed their Response. On October 25, 2013 the United States (both agencies) filed their Response. On November 12, 2014 the Northern Cheyenne Tribe filed its Response accepting the claimants' October 10, 2013 Response.

As there was insufficient information in the record to address and resolve the issue remark concerning the 1944 aerial photograph, on June 12, 2014 the Court issued an Order Setting Deadlines Pursuant To Section 85-2-248(5), MCA requesting a second review of the number of acres shown as irrigated within the place of use on the 1944 aerial photograph. On July 17, 2014 Misty Hauer, DNRC Water Resource Specialist, filed her Memorandum stating that she reviewed the 1944 aerial photograph and measured 187 acres as irrigated. The marked copy of the aerial photograph attached to this Memorandum has been added to the claim file for future reference.

On July 18, 2014 Goose Lake Farms, LLC and Eleven G Farms, LLC filed a Notice Of Substitution Of Parties stating that the ground pertinent to this claim was recently sold to Coffee-Nefsy Limited Partnership and that "Coffee-Nefsy Limited Partnership adopts the pleadings and positions of Goose Lake Farms, LLC and Eleven G Farms, LLC." The ownership of the claim was updated by the DNRC on December 1, 2014.

FINDINGS OF FACT

1. The Preliminary Decree states that the priority date is December 10, 1896 and the type of historical right is "filed". The priority date should be June 19, 1944 and the type of historical right should be "use". The priority date issue remark should be stricken as now moot.

2. The Preliminary Decree states that the maximum acres irrigated is 299.75 acres and the place of use is:

ACRES	QTRSEC	SEC	TWP	RGE	COUNTY
18.75	SESE	10	1N	44E	ROSEBUD
80.00	SW	11	1N	44E	ROSEBUD
121.00	NW	14	1N	44E	ROSEBUD
40.00	NWSW	14	1N	44E	ROSEBUD
40.00	SWSW	14	1N	44E	ROSEBUD
299.75					

The maximum acres irrigated should be 200.00 acres and the place of use should be:

ACRES	QTRSEC	SEC	TWP	RGE	COUNTY
5.00	NESE	10	1N	44E	ROSEBUD
10.00	SESE	10	1N	44E	ROSEBUD
4.00	SENW	11	1N	44E	ROSEBUD
30.00	NESW	11	1N	44E	ROSEBUD
21.00	NWSW	11	1N	44E	ROSEBUD
10.00	SESW	11	1N	44E	ROSEBUD
38.00	SWSW	11	1N	44E	ROSEBUD
16.00	NWNW	14	1N	44E	ROSEBUD
30.00	NWSW	14	1N	44E	ROSEBUD
36.00	SWSW	14	1N	44E	ROSEBUD
200.00					

For 200.00 acres, the allowed variance is between 180.80 acres and 219.20 acres. As the issue remark concerning the 1978 aerial photograph identifies 192.50 acres and as Ms. Hauer's recent measurement of irrigated acreage shown on the 1944 aerial photograph identifies 187.00 acres irrigated, the two issue remarks concerning the maximum acres irrigated and place of use should be stricken as addressed and resolved.

3. The Preliminary Decree states that the flow rate 11.35 cfs. The flow rate should be 7.58 cfs.

CONCLUSIONS OF LAW

1. The Montana Water Court has jurisdiction over all matters relating to the determination of existing water rights. Section 3-7-224, MCA.

2. A properly filed Statement of Claim for Existing Water Right is prima facie proof of its content pursuant to section 85-2-227, MCA. This prima facie proof may be contradicted and overcome by other evidence that proves, by a preponderance of the evidence, that the elements of the claim do not accurately reflect the beneficial use of the water right as it existed prior to July 1, 1973. This is the burden of proof for every assertion that a claim is incorrect including for claimants objecting to their own claims. Rule 19, W.R.Adj.R.

3. As the requested priority date is "spring 1944", the priority date is the last day within the spring of 1944, June 19, 1944. Rule 13(f),(3)(iv)(C), W.R.C.E.R.

4. The settlement documentation filed by the parties constitutes a voluntary reduction in the elements of this claim. These reductions are within the parameters of the statement of claim.

RECOMMENDATIONS

Based upon the above Findings of Fact and Conclusions of Law, this Master recommends that the Court accept the settlement filed in this matter and make the changes specified in the Findings of Fact to correct the Preliminary Decree for this Basin. A Post Decree Abstract of Water Right Claim is served with this Report to confirm the recommended changes have been made in the state's centralized record system.

DATED this 8 day of December, 2014.

Kathryn L. W. Lambert
Senior Water Master

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Caption updated 12/8/14

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POST DECREE
ABSTRACT OF WATER RIGHT CLAIM
TONGUE RIVER, BELOW HANGING WOMAN CREEK
BASIN 42C

IMPORTANT NOTICE

AN ASTERISK (*) HAS BEEN PLACED NEXT TO EACH ITEM CHANGED BY ORDER OF THE MONTANA WATER COURT AFTER ISSUANCE OF THE PREVIOUS DECREE.

Water Right Number: **42C 27200-00** STATEMENT OF CLAIM
Version: 2 – POST DECREE
Status: ACTIVE

Owners: COFFEE-NEFSY LTD PARTNERSHIP
%WILLIAM COFFEE
PO BOX 80850
BILLINGS, MT 59108 0850

***Priority Date:** JUNE 19, 1944

***Type of Historical Right:** USE

Purpose (use): IRRIGATION

Irrigation Type: FLOOD

***Flow Rate:** 7.58 CFS

Volume: THE TOTAL VOLUME OF THIS WATER RIGHT SHALL NOT EXCEED THE AMOUNT PUT TO HISTORICAL AND BENEFICIAL USE.

Climatic Area: 1 - HIGH

***Maximum Acres:** 200.00

Source Name: TONGUE RIVER

Source Type: SURFACE WATER

Point of Diversion and Means of Diversion:

ID	Govt Lot	Qtr Sec	Sec	Twp	Rge	County
1		SESWSW	14	1N	44E	ROSEBUD

Period of Diversion: MARCH 15 TO OCTOBER 15

Diversion Means: PUMP

Period of Use: MARCH 15 TO OCTOBER 15

***Place of Use:**

ID	Acres	Govt Lot	Qtr Sec	Sec	Twp	Rge	County
1	5.00		NESE	10	1N	44E	ROSEBUD
2	10.00		SESE	10	1N	44E	ROSEBUD
3	4.00		SENW	11	1N	44E	ROSEBUD
4	30.00		NESW	11	1N	44E	ROSEBUD
5	21.00		NWSW	11	1N	44E	ROSEBUD
6	10.00		SESW	11	1N	44E	ROSEBUD
7	38.00		SWSW	11	1N	44E	ROSEBUD
8	16.00		NWNW	14	1N	44E	ROSEBUD
9	30.00		NWSW	14	1N	44E	ROSEBUD

***Place of Use:**

ID	Acres	Govt Lot	Qtr Sec	Sec	Twp	Rge	County
10	36.00		SWSW	14	1N	44E	ROSEBUD
Total:	200.00						

Remarks:

THE WATER RIGHTS FOLLOWING THIS STATEMENT ARE SUPPLEMENTAL WHICH MEANS THE RIGHTS HAVE OVERLAPPING PLACES OF USE. THE RIGHTS CAN BE COMBINED TO IRRIGATE ONLY OVERLAPPING PARCELS. EACH RIGHT IS LIMITED TO THE FLOW RATE AND PLACE OF USE OF THAT INDIVIDUAL RIGHT. THE SUM TOTAL VOLUME OF THESE WATER RIGHTS SHALL NOT EXCEED THE AMOUNT PUT TO HISTORICAL AND BENEFICIAL USE.

27200-00 27201-00

STARTING IN 2008, PERIOD OF DIVERSION WAS ADDED TO MOST CLAIM ABSTRACTS, INCLUDING THIS ONE.

Montana Water Court
PO Box 1389
Bozeman, MT 59771-1389
(406) 586-4364
1-800-624-3270 (In-state only)
Fax: (406) 522-4131

FILED
JAN 13 2015
Montana Water Court

IN THE WATER COURT OF THE STATE OF MONTANA
YELLOWSTONE RIVER DIVISION
TONGUE RIVER BELOW HANGING WOMAN CREEK (42C)

* *

CLAIMANT: Coffee-Nefsy Limited Partnership

OBJECTORS: United States of America (Bureau of Reclamation); United States of America (Bureau of Indian Affairs)

NOTICE OF INTENT TO APPEAR: Northern Cheyenne Tribe

CASE 42C-67
42C 27200-00

ORDER ADOPTING MASTER'S REPORT

Pursuant to Montana Code Annotated, § 85-2-233(5), the above entitled case was assigned to Senior Water Master Kathryn L. W. Lambert. The Water Master filed a report containing Findings of Fact and Conclusions of Law with the Clerk of Court. Copies of the report were served upon the parties on December 8, 2014. The time frame for filing objections has elapsed. No objections to the Findings and Conclusions have been filed by any party.

Pursuant to Rule 53(e), Montana Rules of Civil Procedure, the Court **ADOPTS** the Master's Report and its Recommendations, and **APPROVES** the changes to the centralized computer record system that are reflected on each abstract served with the report.

DATED this 13 day of JANUARY, 2015.

Douglas Ritter
Associate Water Judge

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Johnson@Lund-Law.com

DEPAR MENT OF NATURAL RES URCES
AND CONSERVATION

WATER ADJUDICATION BUREAU • 910 Helena Avenue, Helena, MT 59601
(406) 444-0560 Telefax (406) 444-0569

FILED
JUL 17 2014
Montana Water Court

STEVE BULLOCK, GOVERNOR
STATE OF MONTANA

DIRECTOR'S OFFICE (406) 444-2074
FAX NUMBER (406) 444-2684

PO BOX 201601
HELENA, MONTANA 59620-1601

MEMORANDUM

DATE:	July 14, 2014
CASE HEADING:	42C-67
TO:	Kathryn Lambert, Senior Water Master
FROM:	Misty Hauer, Water Resource Specialist
CLAIMANT(S):	Goose Lake Farms, LLC; Eleven G Farms, LLC
OBJECTOR(S):	United States of America (Bureau of Reclamation); United States of America (Bureau of Indian Affairs)
THIRD PARTY(IES):	Diamond Cross Properties, LLC; Northern Cheyenne Tribe

INTRODUCTION:

The June 12, 2014 Order from the Montana Water Court required Goose Lake Farms, LLC and Eleven G Farms, LLC to have an information meeting with the DNRC and submit documentation for the historic place of use to the DNRC by July 9, 2014. The DNRC was ordered to respond to the Montana Water Court by July 16, 2014 with findings.

MATERIALS REVIEWED:

- Scanned claim file
- WRS Aerial Photo MA-29-29, circa 1944

DISCUSSION:

Claim 42C 27200-00, is a flood irrigation claim diverted from the Tongue River:

This claim has the following issue remarks, codes F180, P270, P283, and P370:

CENTRALIZED SERVICES DIVISION (406) 444-2074
CONSERVATION & RESOURCE DEVELOPMENT DIVISION (406) 444-6667
FORESTRY DIVISION (406) 542-4300
RESERVED WATER RIGHTS COMPACT COMMISSION (406) 444-6675
OIL & GAS DIVISION (406) 444-2074
TRUST LAND MANAGEMENT DIVISION (406) 444-2074

F180: FLOW RATE MAY REQUIRE MODIFICATION BASED ON RESOLUTION OF MAXIMUM ACRES ISSUE.

P270: USDA AERIAL PHOTOGRAPH NO(S). 278-185 , DATED 09/15/1978 , APPEARS TO INDICATE 192.5 ACRES IRRIGATED. A DESCRIPTION OF THESE ACRES IS IN THE CLAIM FILE.

P283: USDI AERIAL PHOTOGRAPH NO. MA 29 29 , DATED 00/00/1944 , APPEARS TO INDICATE 156.75 ACRES IRRIGATED. A DESCRIPTION OF THESE ACRES IS IN THE CLAIM FILE.

P370: THE PRIORITY DATE MAY BE QUESTIONABLE. THIS CLAIM IS FOR A FILED ON TONGUE RIVER WITH A PRIORITY DATE PREDATING CASE NO. 2809 CUSTER COUNTY.

This water right has been in court case 42C-67 since 06/10/2011, the parties have agreed to a stipulation of 200 acres of irrigation, with a priority date of May 21, 1915, and as a use right rather than a filed right.

After careful review of Water Resources Survey photo number MA-29-29, dated 1944, it is apparent that approximately 187 acres is irrigated, see the attached Post Decree Map Report. With the reduction in acreage, the DNRC claimant contact points become 180.78 to 219.22 acres. The 200 acres falls within the claimant contact points which resolves the place of use issue, according to the Water Right Claim Examination Rules.

RECOMMENDATIONS:

It is recommended that the acreage be reduced to 200 acres, the type of right be changed to use, the priority date be modified to May 21, 1915 per the agreed upon stipulation, and the issue remarks be removed from the claim.

ENCLOSURES:

- Post Decree Map Report
- Red marked abstract
- Letter, map, and copy of the stipulation from Water Right Consultant, Tracey Turek.

SIGNED:

By: Misty A. Hauer July 14, 2014

Misty Hauer, Water Resource Specialist
406-444-0484 mhauer@mt.gov

REVIEWED:

By: Laura R Hinck July 14, 2014

Laura Hinck, Water Resource Specialist Supervisor

SERVICE LIST:

Kathryn Lambert, Senior Water Master
Montana Water Court
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(406) 586-6254
Lund@lund-law.com
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This Order Only:
Laura Hinck
Water Resource Specialist Supervisor
DNRC- Helena Regional Office
Water Resources Division
PO Box 201601
Helena, MT, 59620-1601

PROPOSED

STATE OF MONTANA

DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

1424 9TH AVENUE P.O.BOX 201601 HELENA, MONTANA 59620-1601

GENERAL ABSTRACT

Water Right Number: 42C 27200-00 STATEMENT OF CLAIM
Version: 1 -- ORIGINAL RIGHT
Version Status: ACTIVE

Owners: GOOSE LAKE FARMS LLC
%DAVID W BROCKPAHLER
1850 LAKE DRIVE W
CHANHASSEN, MN 55317

ELEVEN G FARMS LLC
%DAVID W BROCKPAHLER
1850 LAKE DR W
CHANHASSEN, MN 55317-8585

Priority Date: ~~DECEMBER 10, 1896~~ May 21, 1915

Enforceable Priority Date: ~~DECEMBER 10, 1896~~ May 21, 1915

Type of Historical Right: ~~FILED~~ USE

Purpose (use): IRRIGATION

Irrigation Type: FLOOD

Maximum Flow Rate: 11.35 CFS

~~THE FLOW RATE OF THIS WATER RIGHT HAS BEEN REDUCED TO THE 17 GPM PER ACRE GUIDELINE. THE FLOW RATE MAY BE CONTESTED BY PROPER OBJECTION.~~

Maximum Volume: THE TOTAL VOLUME OF THIS WATER RIGHT SHALL NOT EXCEED THE AMOUNT PUT TO HISTORICAL AND BENEFICIAL USE.

Climatic Area: 1 - HIGH

Maximum Acres: ~~299.75~~ 200.00

Source Name: TONGUE RIVER

Source Type: SURFACE WATER

Point of Diversion and Means of Diversion:

ID	Govt Lot	Qtr Sec	Sec	Twp	Rge	County
1		SESWSW	14	1N	44E	ROSEBUD

Period of Diversion: MARCH 15 TO OCTOBER 15
Diversion Means: PUMP

Period of Use: MARCH 15 to OCTOBER 15

Place of Use:

ID	Acres	Govt Lot	Qtr Sec	Sec	Twp	Rge	County
1	~~18.75~~		~~SESE~~	~~10~~	~~1N~~	~~44E~~	~~ROSEBUD~~
2	~~80.00~~		~~SW~~	~~11~~	~~1N~~	~~44E~~	~~ROSEBUD~~
3	~~121.00~~		~~NW~~	~~14~~	~~1N~~	~~44E~~	~~ROSEBUD~~
4	~~40.00~~		~~NWSW~~	~~14~~	~~1N~~	~~44E~~	~~ROSEBUD~~
5	~~40.00~~		~~SWSW~~	~~14~~	~~1N~~	~~44E~~	~~ROSEBUD~~
Total:	~~299.75~~	SEE BELOW					

Geocodes/Valid: 29-1052-10-1-01-01-1621 - Y
29-1052-11-1-01-01-1470 - Y
29-1052-11-3-01-01-1145 - Y
29-1052-11-4-04-01-0000 - Y
~~29-1052-14-1-01-01-1169 - Y~~
29-1052-14-2-01-01-0000 - Y

Remarks:

THE WATER RIGHTS FOLLOWING THIS STATEMENT ARE SUPPLEMENTAL WHICH MEANS THE RIGHTS HAVE OVERLAPPING PLACES OF USE. THE RIGHTS CAN BE COMBINED TO IRRIGATE ONLY OVERLAPPING PARCELS. EACH RIGHT IS LIMITED TO THE FLOW RATE AND PLACE OF USE OF THAT INDIVIDUAL RIGHT. THE SUM TOTAL VOLUME OF THESE WATER RIGHTS SHALL NOT EXCEED THE AMOUNT PUT TO HISTORICAL AND BENEFICIAL USE.
27200-00 27201-00

STARTING IN 2008, PERIOD OF DIVERSION WAS ADDED TO MOST CLAIM ABSTRACTS, INCLUDING THIS ONE.

NOTICE OF WATER RIGHT TRANSFER RECEIVED 09/22/1992.

Remarks:

OWNERSHIP UPDATE RECEIVED

OWNERSHIP UPDATE TYPE DOR # 108755 RECEIVED 03/11/2013.

~~FLOW RATE MAY REQUIRE MODIFICATION BASED ON RESOLUTION OF MAXIMUM ACRES ISSUE.~~

~~USDA AERIAL PHOTOGRAPH NO(S). 278-185 , DATED 09/15/1978 , APPEARS TO INDICATE 192.5 ACRES IRRIGATED. A DESCRIPTION OF THESE ACRES IS IN THE CLAIM FILE.~~

~~USDI AERIAL PHOTOGRAPH NO. MA 29 29 , DATED 00/00/1944 , APPEARS TO INDICATE 156.75 ACRES IRRIGATED. A DESCRIPTION OF THESE ACRES IS IN THE CLAIM FILE.~~

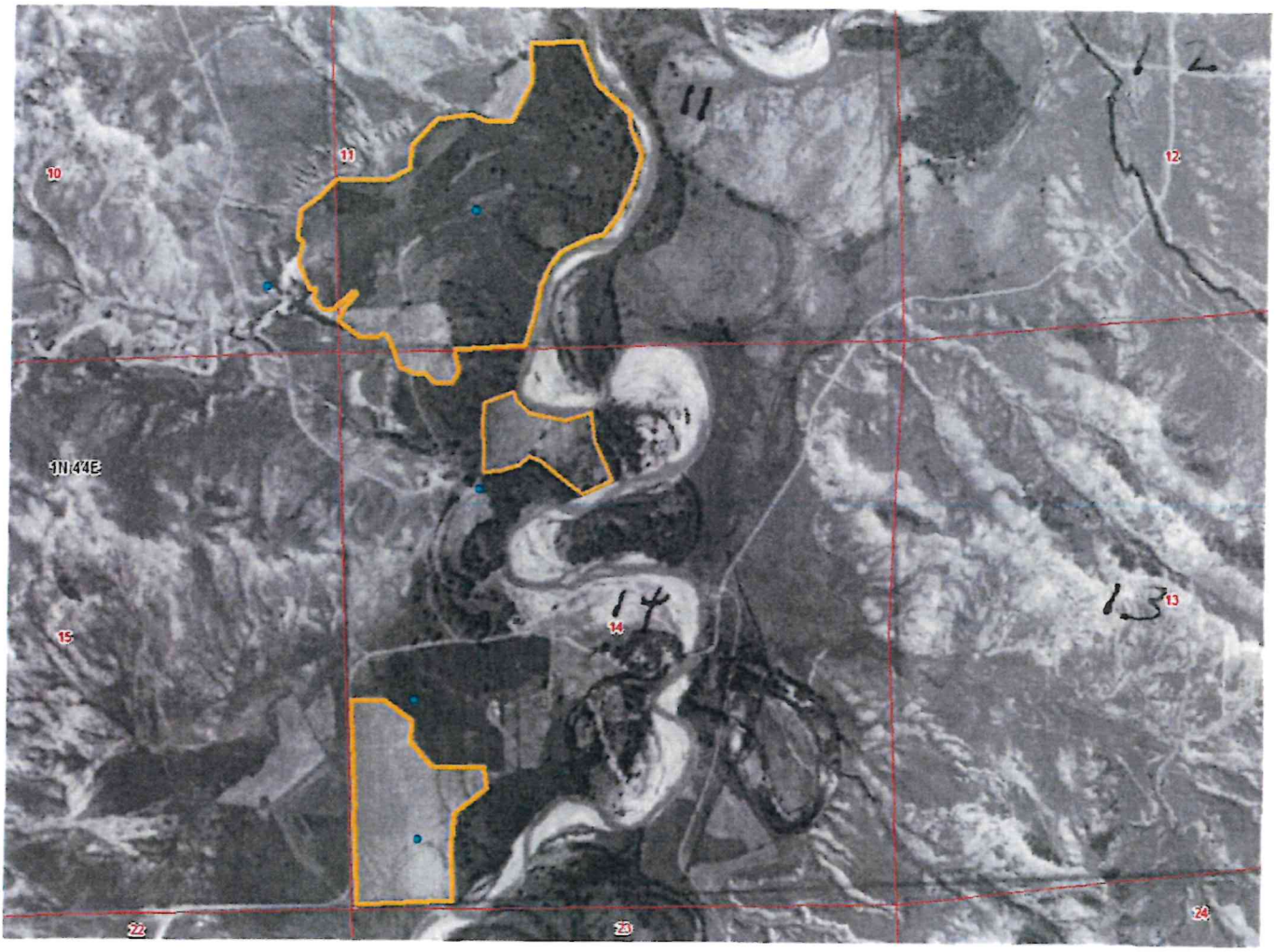
~~THE PRIORITY DATE MAY BE QUESTIONABLE. THIS CLAIM IS FOR A FILED ON TONGUE RIVER WITH A PRIORITY DATE PREDATING CASE NO. 2809 CUSTER COUNTY.~~

Stipulation Place of Use:

Acres-	Govt Lot	Qtr Section	Section	Township	Range
10.00		SESE	10	1N	44E
5.00		NESE	10	1N	44E
10.00		SESW	11	1N	44E
38.00		SWSW	11	1N	44E
21.00		NWSW	11	1N	44E
30.00		NESW	11	1N	44E
4.00		SENW	11	1N	44E
16.00		NWNW	14	1N	44E
36.00		SWSW	14	1N	44E
30.00		NWSW	14	1N	44E

Acres Total: 200.00

Post Decree Report, DNRC Water Resource Specialist, Misty Hauer: 07/14/2014



Aerial Photo Number MA-29-029, circa 1944 appears to indicate 187 acres irrigated in sections 10, 11, & 14, compared to the claimed place of use.

The claimant contact points for 200 acres is: 180.78 to 219.22 acres irrigated.

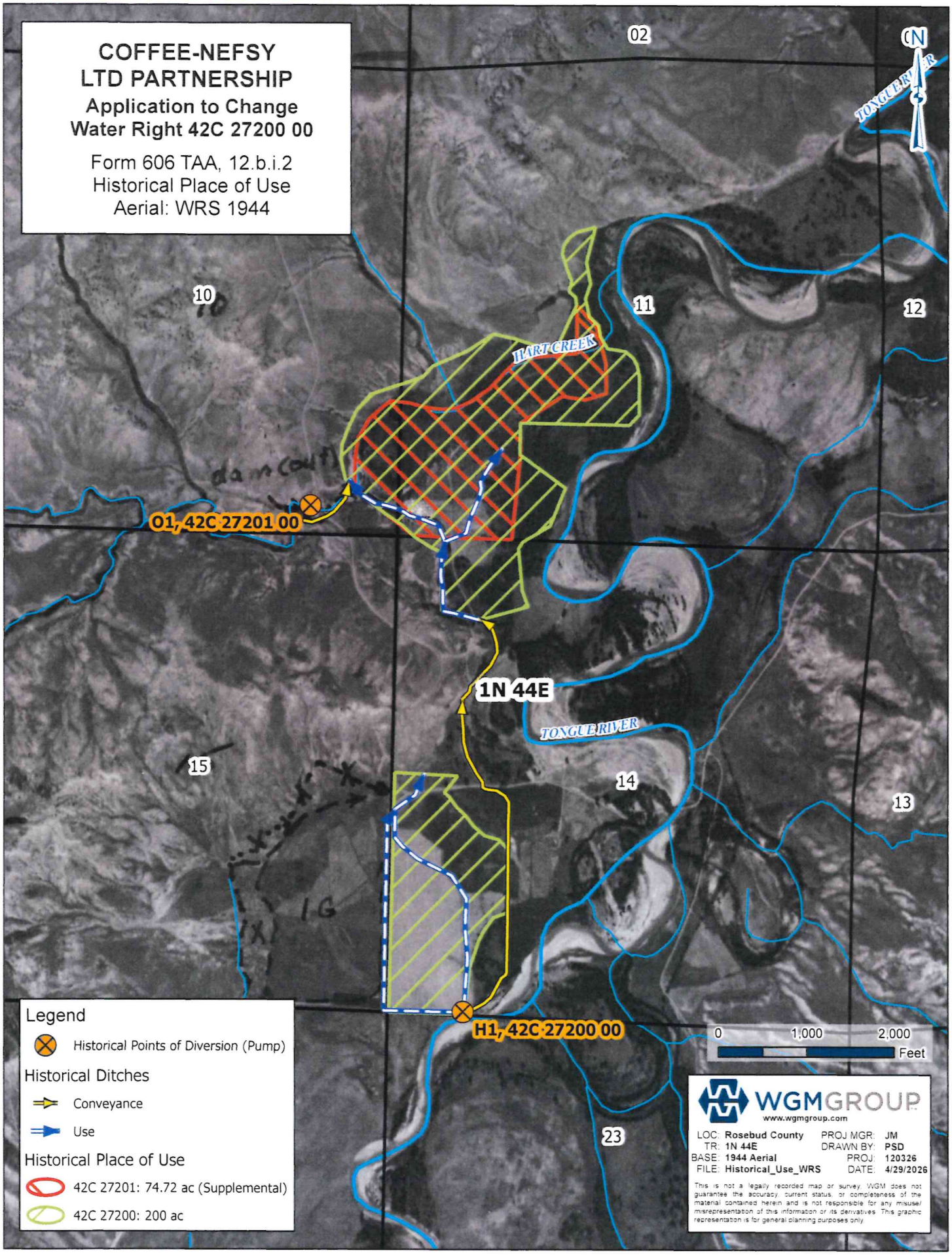
Map Key:

Examined Place of Use

Section Lines

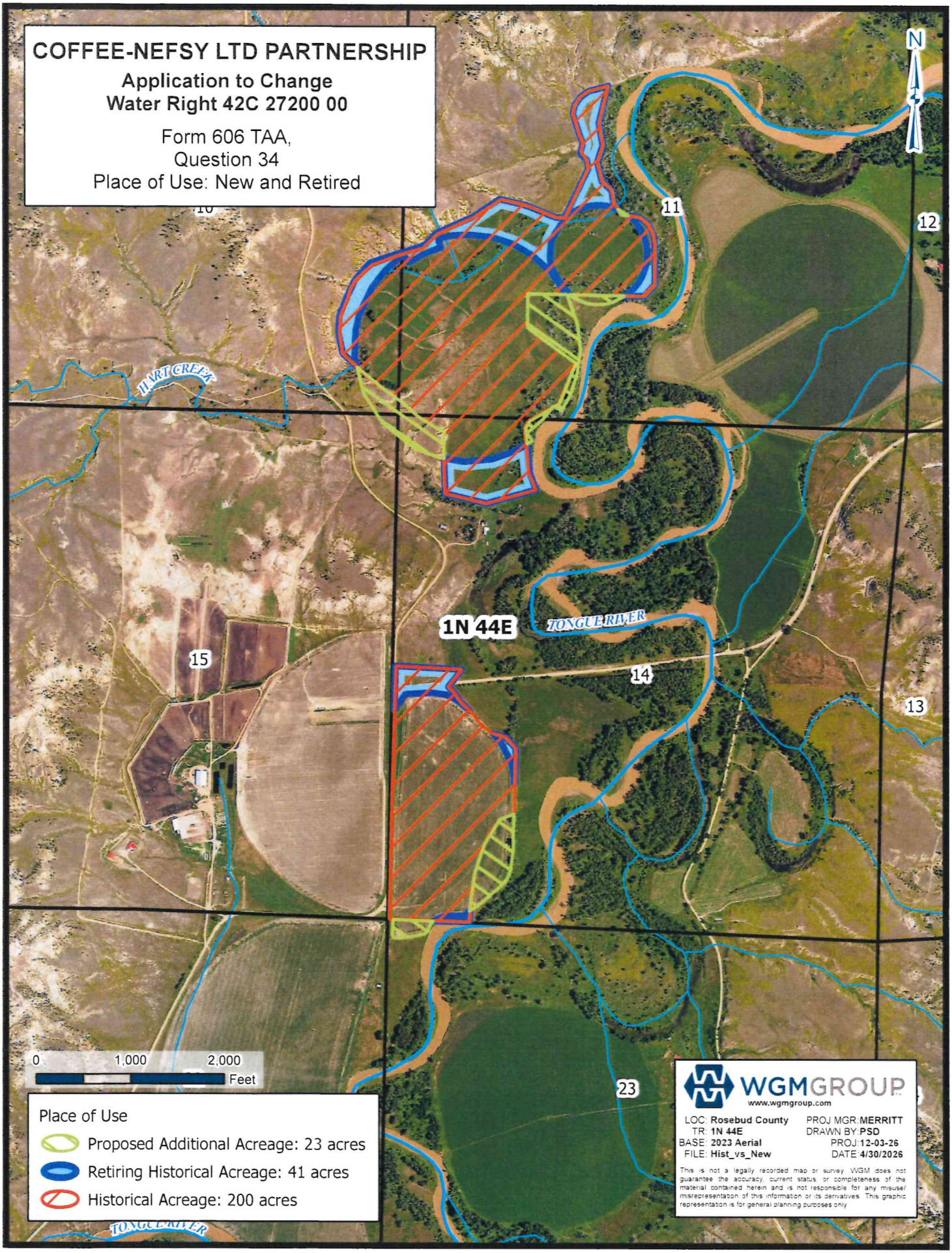
COPY-original detached and added to claim file 42C 27200-00 – Flambert 10/29/14

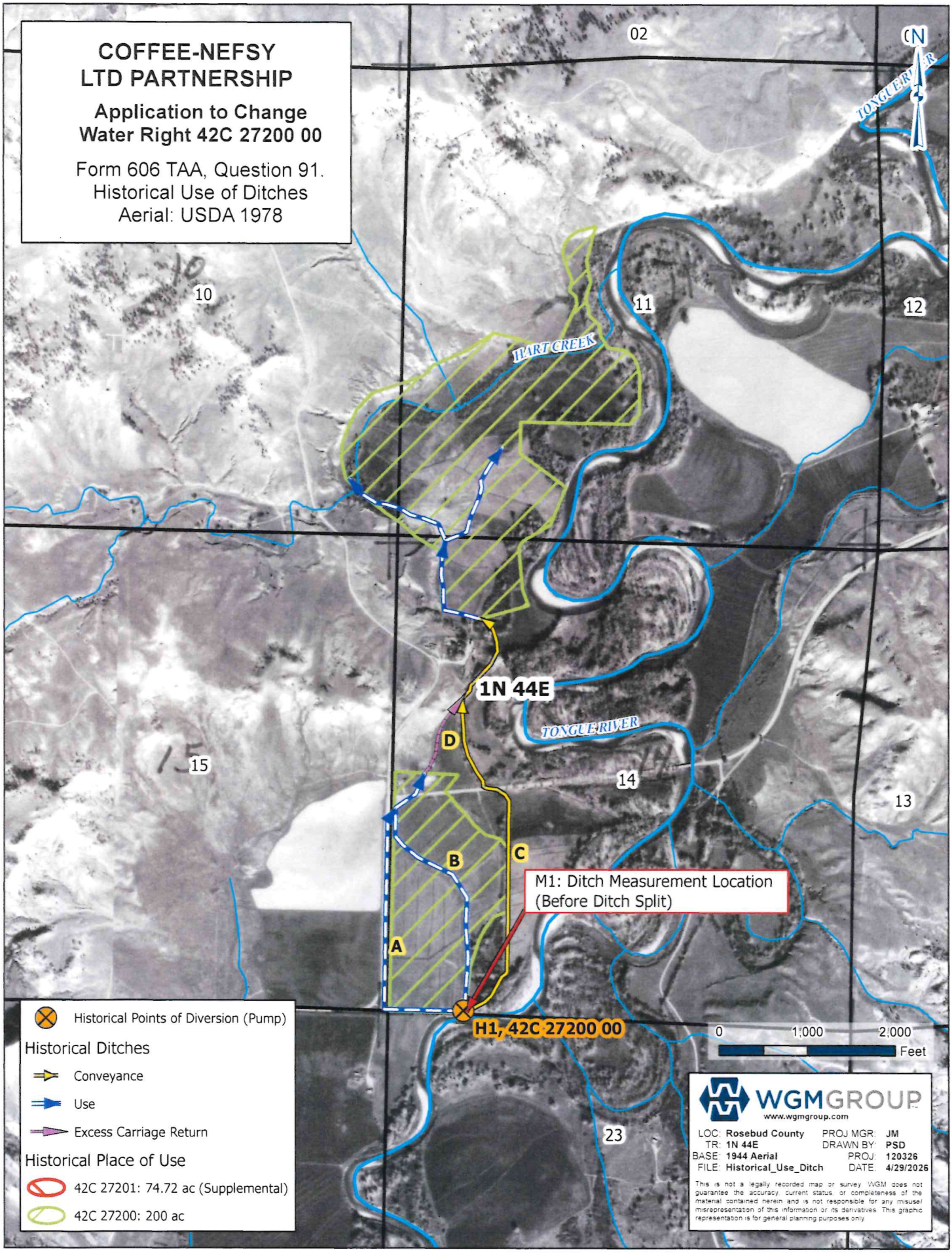
Form 606-TAA Attachment B4



DITCH FLOW AND WETTED PERIMETER FOR USE IN CONVEYANCE LOSS CALCS

d (Depth (ft))	P Wetted Perimeter	b Bottom Width	Top Flow Width	z:1 Side Slope	Slope	A Cross Sectional Area	R Hydraulic Radius	Manning's n	Flow (cfs)
0.20	3.26	2	3.2000	3	0.00137	0.52	0.159	0.025	0.34
0.24	3.52	2	3.4388	3	0.00137	0.65	0.185	0.025	0.47
0.28	3.77	2	3.6776	3	0.00137	0.79	0.211	0.025	0.62
0.32	4.02	2	3.9164	3	0.00137	0.94	0.235	0.025	0.79
0.36	4.27	2	4.1552	3	0.00137	1.11	0.259	0.025	0.99
0.40	4.52	2	4.3940	3	0.00137	1.28	0.282	0.025	1.21
0.44	4.78	2	4.6328	3	0.00137	1.46	0.305	0.025	1.46
0.48	5.03	2	4.8716	3	0.00137	1.64	0.327	0.025	1.72
0.52	5.28	2	5.1104	3	0.00137	1.84	0.349	0.025	2.02
0.56	5.53	2	5.3492	3	0.00137	2.05	0.371	0.025	2.34
0.60	5.78	2	5.5880	3	0.00137	2.27	0.392	0.025	2.69
0.64	6.03	2	5.8268	3	0.00137	2.50	0.414	0.025	3.06
0.68	6.29	2	6.0656	3	0.00137	2.73	0.435	0.025	3.46
0.72	6.54	2	6.3044	3	0.00137	2.98	0.456	0.025	3.89
0.76	6.79	2	6.5432	3	0.00137	3.23	0.476	0.025	4.36
0.80	7.04	2	6.7820	3	0.00137	3.50	0.497	0.025	4.85
0.84	7.29	2	7.0208	3	0.00137	3.77	0.518	0.025	5.37
0.98	8.22	2	7.8998	3	0.00137	4.87	0.592	0.025	7.58
1.20	9.59	2	9.2000	3	0.00137	6.72	0.701	0.025	11.71


COFFEE-NEFSY LTD PARTNERSHIP
Application to Change
Water Right 42C 27200 00
Form 606 TAA,
Question 34
Place of Use: New and Retired
N
11
12
HART CREEK
1N 44E
TONGUE RIVER
15
14
13
23
0
1,000
2,000
Feet
Place of Use
Proposed Additional Acreage: 23 acres
Retiring Historical Acreage: 41 acres
Historical Acreage: 200 acres
WGMGROUP
www.wgmgroup.com
LOC: Rosebud County
TR: 1N 44E
BASE: 2023 Aerial
FILE: Hist_vs_New
PROJ MGR: MERRITT
DRAWN BY: PSD
PROJ: 12-03-26
DATE: 4/30/2026
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.


COFFEE-NEFSY
LTD PARTNERSHIP
Application to Change
Water Right 42C 27200 00
Form 606 TAA, Question 91.
Historical Use of Ditches
Aerial: USDA 1978
02
10
11
12
13
14
15
23
N
TONGUE RIVER
HART CREEK
1N 44E
TONGUE RIVER
A
B
C
D
M1: Ditch Measurement Location
(Before Ditch Split)
H1, 42C 27200 00
Historical Points of Diversion (Pump)
Historical Ditches
Conveyance
Use
Excess Carriage Return
Historical Place of Use
42C 27201: 74.72 ac (Supplemental)
42C 27200: 200 ac
0
1,000
2,000
Feet
WGMGROUP
www.wgmgroup.com
LOC: Rosebud County
TR: 1N 44E
BASE: 1944 Aerial
FILE: Historical_Use_Ditch
PROJ MGR: JM
DRAWN BY: PSD
PROJ: 120326
DATE: 4/29/2026
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