

Processing Materials

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

Processing Materials

THE MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

DIRECTOR'S OFFICE: (406) 444-2074
PO BOX 201601



1539 ELEVENTH AVENUE
HELENA, MONTANA 59620-1601

GOVERNOR GREG GIANFORTE

DNRC DIRECTOR AMANDA KASTER

July 23rd, 2025

Richland County Conservation District
2745 West Holly St.
Sidney, MT 59270

Subject: Correct and Complete Application for Conservation District Water
Reservation Based Change No. 40S 30165372

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 within 60 days of the date of this letter per 85-2-307(2)(b), MCA.

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



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

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

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

Best,



Kailee Ingalls | Water Resource Specialist
Water Resources Division, Havre Regional Office
Montana Department of Natural Resources and Conservation
Physical| 210 6th Ave | Havre MT 59501
Mailing| PO Box 1828 | Havre MT 59501
DESK: 406-808-7126 **EMAIL:** kailee.ingalls@mt.gov

CC: Teresa Olson <tolson@hydrosi.com>

2912 7th Ave. N.

Billings, MT 59101-0906



Application Materials

- Application
- Any information submitted with Application including maps

Application Materials



CONSERVATION DISTRICT APPLICATION TO CHANGE WATER RESERVATION

§85-2-316, MCA

Form No. 606-CD (Revised 01/2024)

RECEIVED
For Department Use Only

JUL 21 2025

DNRC WATER RESOURCES
HAVRE REGIONAL OFFICE

When to use this form:

- Use Form 606-CD to add a point of diversion, place of use, or place of storage to a Conservation District Water Reservation.
- Complete this form if the point of diversion, or any portion of the proposed place of use or place of storage **was not** included in the original public notice.
- For a change in purpose, use Form 606, Application to Change a Water Right, instead.

Application # 30165372 Basin 405
 Priority Date _____ Time 12:30 AM/PM PM
 Rec'd By DN
 Fee Rec'd \$ 1000 Check # 8864
 Deposit Receipt # HRS2601143
 Payor Richland County Conservation District
 Refund \$ _____ Date _____

Filing fee:

- The filing fee for Form 606-CD is \$2500 **without** the filing fee reduction.
- The filing fee for Form 606-CD is \$1500 **with** the filing fee reduction.
- Please make checks payable to DNRC.

Important 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)).

1. Conservation District (CD): Richland County Conservation District

Mailing Address: 2745 West Holly ST City Sidney State MT Zip 59270

Phone Numbers: Work 406-943-3001 Cell _____

Email Address: richlandcd@gmail.com

2. Producer Name: Larry and Lauri Handy Trust, Larry and Lauri Handy Trustees

Mailing Address: 30467 County Rd. 149 City Poplar State MT Zip 59255

Phone Numbers: Home 406-774-3769 Work _____ Cell 406-768-7351

Email Address: _____

3. Project Completion – The Department will set the project completion deadline to December 31 of the year set by the Conservation District in its authorization.

4. Affidavit – A Conservation District Board Member Must Sign

5. "Sage Grouse Habitat Project Review" required if the diversion and/or place of use are located within an area designated as sage grouse habitat. (<https://sagegrouse.mt.gov/>)



CHANGE APPLICATION INFORMATION

This application may only be used to add a point of diversion, place of use, or place of storage to include a project that was not included in the original Water Reservation public notice.

- Yes ☐ No ☒ Was the point of diversion included in the original public notice?
Yes ☐ No ☒ Was the entire place of use included in the original public notice? If not, complete this form.

Section A. Water Reservation Details

- A.1 58.85 CFS How much flow rate remains for this CD water reservation prior to this application?
A.2 14,435.55 How much volume remains for this CD water reservation prior to this application?
A.3 4/1-10/31 What is the typical period of diversion the CD authorizes?
A.4 2.5 AF/AC What volume per acre (AF/AC) does the CD typically authorize?

Section B. Application Details

- B.1 ☒ Submit a copy of the Conservation District Application from the Producer.
B.2 ☒ Submit a signed copy of the Reserved Water Use Authorization from the Conservation District.
B.3 ☒ Submit a copy of the CD Public Notice from the Conservation District.
B.4 ☒ Submit a copy of the Affidavit of Publication from the Conservation District.
B.5 ☒ Submit a copy of the public notice Certificate of Service from the Conservation District.
B.6 ☒ Yes ☐ No ☒ Did the public notice of the Application receive any objections?
If Yes, attach a copy.

Section C. Project Location

- C.1 **Point of Diversion:** Describe the location of the proposed diversion(s) to the nearest 10 acres.
Include additional Points of Diversion on a separate sheet.

POD #1 NE 1/4 SE 1/4 SW 1/4 Sec 27 Twp 27N N/S Rge 51E E/W County Richland
Lot _____ Block _____ Tract No. _____ Subdivision Name _____
Government Lot _____ Latitude _____ Longitude _____

POD #2 _____ 1/4 _____ 1/4 _____ 1/4 Sec _____ Twp _____ N/S Rge _____ E/W County _____
Lot _____ Block _____ Tract No. _____ Subdivision Name _____
Government Lot _____ Latitude _____ Longitude _____

- C.2 **Place of Use:** Describe the location of the proposed Place of Use to the nearest 10 acres.
Include additional Places of Use on a separate sheet.
See enclosed additional sheet.

ACRES IRRIGATED. Describe to the nearest 10 acres. Include additional Places of Use on a separate sheet.

_____ Acres _____ Lot _____ Block _____ 1/4 _____ 1/4 _____ 1/4 Sec _____ Twp _____ N/S Rge _____ E/W
_____ Acres _____ Lot _____ Block _____ 1/4 _____ 1/4 _____ 1/4 Sec _____ Twp _____ N/S Rge _____ E/W
_____ Acres _____ Lot _____ Block _____ 1/4 _____ 1/4 _____ 1/4 Sec _____ Twp _____ N/S Rge _____ E/W
_____ Acres _____ Lot _____ Block _____ 1/4 _____ 1/4 _____ 1/4 Sec _____ Twp _____ N/S Rge _____ E/W



Section D. Supplemental Water Rights

When two or more water rights overlap the proposed place of use, the water rights are considered supplemental.

- D.1 Yes ☐ No ☒ Are there any water rights that overlap the place of use proposed in this application? If yes, identify those rights. If no, skip to Section D.

<i>Water Right No. & Basin</i>	<i>Priority Date</i>

- D.2 Why is this water reservation needed to supplement the acres?

- D.3 Explain how all of the supplemental water rights will be collectively operated.

Section E. Map – ARM 36.12.111

- E.1 ☒ Provide a map depicting the proposed point of diversion, means of conveyance, place of use, and place of storage.
- E.2 ☐ N/A If there are supplemental water rights, provide one map depicting all of the historic points of diversion, means of conveyance, and places of use. Label each point of diversion with the water right number.

Section F. Adverse Effect – ARM 36.12.1903

The determination of whether adverse effect will occur is based on the details of the proposed project. If the CD is adding a point of diversion or place of use, the CD needs to show that the proposed project will not create an adverse effect to junior or senior water rights. In some cases, adding a point of diversion may require the physical and legal demands on the source be known. If a legal demand analysis is needed and the legal demands exceed the amount of water physically available, the CD may need to provide a mitigation plan.

The Department will review the proposed project and contact the CD if mitigation is required or if other information is required to address possible adverse effects.



Section G. Adequate Diversion Means and Operation - ARM 36.12.1904

G.1 Describe the preliminary design plans and specifications for the proposed diversion and conveyance facilities and the equipment used to put the water to beneficial use.

Water will be pumped with a Cornell 5RB Frame pump powered by a John Deere 4045T-100 diesel motor.

The water will be pumped into 100' of 10" aluminum pipe. The pipe will hook into 10" 80 psi PIP pipe that will feed the 3/4 pivot. 10" hose line will feed the half pivot. Sprinkler design documents are enclosed.

G.2 Yes ☒ No ☐ Are there other water rights that use the same diversion from the source, such as a ditch? If yes, explain why this water right will not exceed the capacity of the diversion works.

An existing pivot is connected to the diversion pump. It is 40S 104484-00 (RI-009MT). The pump capacity will not be exceeded in operating the 3 pivots, they may be operated at once, or individually, depending on field needs.

Section H. Beneficial Use – ARM 36.12.1801

H.1 How does the water use benefit you, other persons, or the public?

Agricultural development benefits the individual producer and regional economy.

H.2 How did you determine the flow rate needed for the project?

Based on the sprinkler irrigation system needs and pump capacity.

H.3 How did you determine the acre-feet needed for the project?

Based on the sprinkler irrigation system and crop needs.

The information provided for this application is to the best of my knowledge true and correct. 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.

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

Printed Name

Shawn Conradson, Chairman Richland City Conservation District

Applicant Signature

[Signature]

Date: 7/10/2025

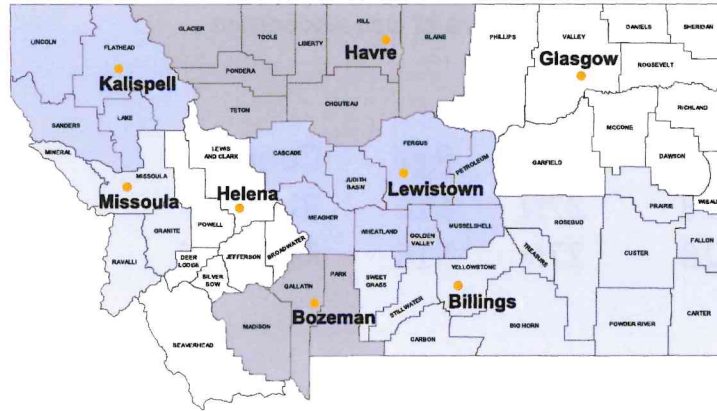
Printed Name

Applicant Signature

Date: _____



WATER RESOURCES REGIONAL OFFICES



BILLINGS

Airport Industrial Park, 1371 Rimtop Dr
Billings, MT 59105-9702

PHONE 406-247-4415 FAX 406-247-4416
EMAIL DNRCBillingsWater@mt.gov

Big Horn, Carbon, Carter, Custer, Fallon, Powder River, Prairie, Rosebud, Stillwater, Sweet Grass, Treasure, and Yellowstone Counties



HELENA

1424 9th Ave., PO Box 201601,
Helena, MT 59620-1601

PHONE 406-444-6999 FAX 406-444-9317
EMAIL DNRCHelenaWater@mt.gov

Beaverhead, Broadwater, Deer Lodge, Jefferson, Lewis and Clark, Powell, and Silver Bow Counties



BOZEMAN

2273 Boot Hill Court, Suite 110
Bozeman, MT 59715-7249

PHONE 406-586-3136 FAX 406-587-9726
EMAIL DNRCBozemanWater@mt.gov

Gallatin, Madison, and Park Counties



KALISPELL

655 Timberwolf Parkway, Suite 4
Kalispell, MT 59901-1215

PHONE 406-752-2288
EMAIL DNRCKalispellWater@mt.gov

Flathead, Lake, Lincoln, and Sanders Counties



GLASGOW

222 6th Street South, PO Box 1269
Glasgow, MT 59230-1269

PHONE 406-228-2561
EMAIL DNRCGlasgowWater@mt.gov

Daniels, Dawson, Garfield, McCone, Phillips, Richland, Roosevelt, Sheridan, Valley, and Wibaux Counties



LEWISTOWN

613 Northeast Main St., Suite E
Lewistown, MT 59457-2020

PHONE 406-538-7459
EMAIL DNRCLeWistownWater@mt.gov

Cascade, Fergus, Golden Valley, Judith Basin, Meagher, Musselshell, Petroleum, and Wheatland Counties



HAVRE

210 6th Ave., PO Box 1828
Havre, MT 59501-1828

PHONE 406-265-5516
EMAIL DNRCHavreWater@mt.gov

Blaine, Chouteau, Glacier, Hill, Liberty, Pondera, Teton, and Toole Counties



MISSOULA

2705 Spurgin Rd. Bldg. C, PO Box 5004
Missoula, MT 59806-5004

PHONE 406-721-4284 FAX 406-542-5899
EMAIL DNRCMissoulaWater@mt.gov

Granite, Mineral, Missoula, and Ravalli Counties



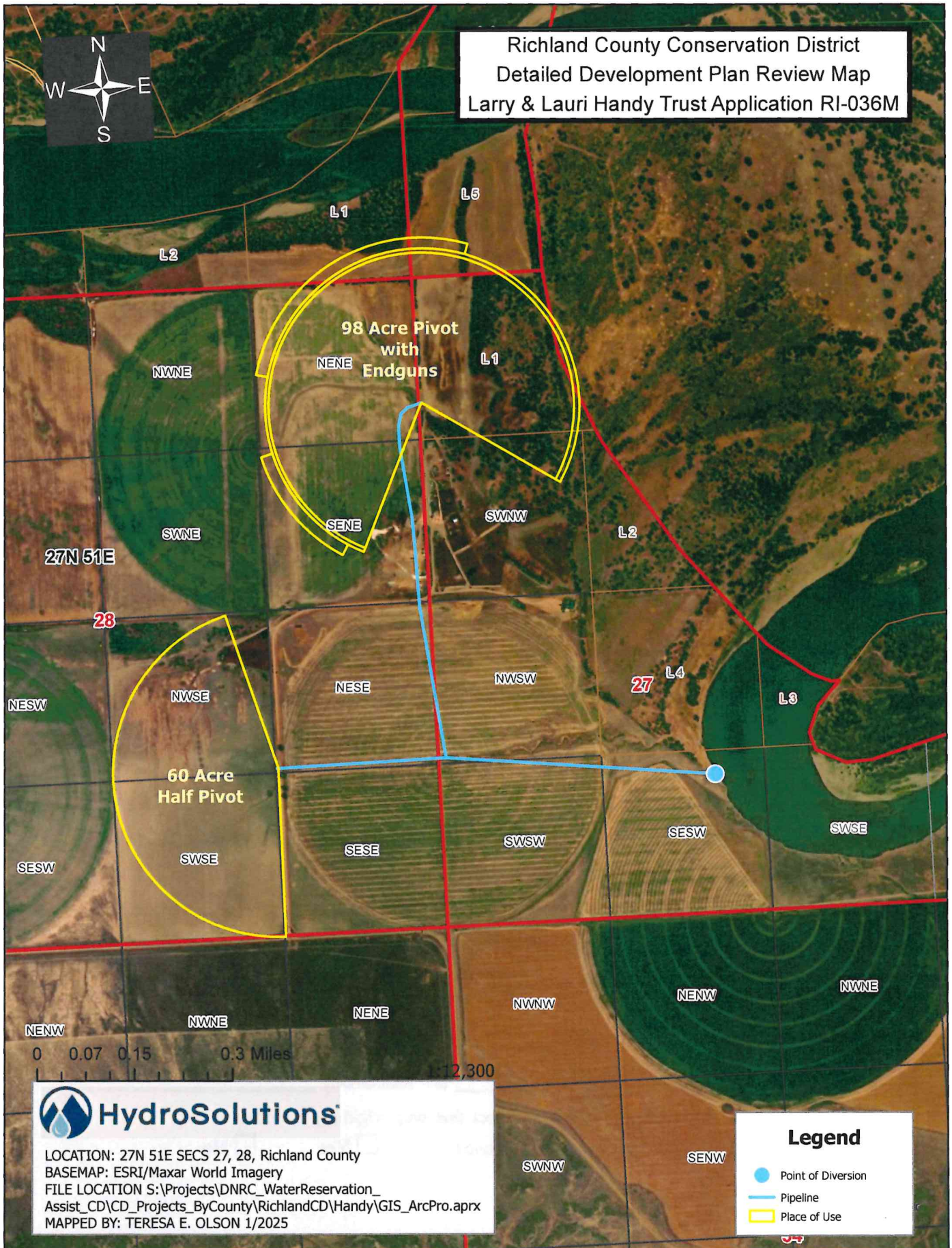
Handy Change Application 606-CD Place of Use Addendum

Acres	QtrSec	Sec	Twp	Rge	County
28	NWSE	28	27N	51E	Richland
<u>32</u>	SWSE	28	27N	51E	Richland
60 Acres					

Acres	Govt Lot	QtrSec	Sec	Twp	Rge	County
4.5	L1		21	27N	51E	Richland
4	L5		22	27N	51E	Richland
34	L1		27	27N	51E	Richland
35.5		NENE	28	27N	51E	Richland
4		N2SWNW	27	27N	51E	Richland
<u>16</u>		SENE	28	27N	51E	Richland
98 Acres						



Richland County Conservation District
Detailed Development Plan Review Map
Larry & Lauri Handy Trust Application RI-036M



APPLICATION FOR RESERVED WATER USE
RICHLAND COUNTY CONSERVATION DISTRICT

9/96

For District Use Only			
Application No.	<u>RI-D36M</u>	Date Received	<u>4-3-2007</u> Time <u>11:28</u>
Fee Received \$	<u>85⁰⁰</u>	Received By	<u>[Signature]</u>

Please Print or Type:

- Applicant Name Larry Handy
 Mailing Address 30467 CR 149
 City or Town Poplar State MT Zip 59255
 Home Phone (406) 774 3769 Other Phone (406) 768 7351
- Applying for (check one): ☒ New Irrigation, ☐ Supplemental, ☐ Both
- Source of Water: Missouri River
- Describe Irrigation System: Pivot Irrigation
- Crops to be Grown: Corn, wheat, Alfalfa, Hay, Barley
 Point of Diversion Description (to the nearest 10 acres): County ~~McCone~~ Richland
 government lot _____, _____ $\frac{1}{4}$, SE $\frac{1}{4}$, SW $\frac{1}{4}$, sec 27, twp 27N N/S, rge 51E N/W
- Point of Discharge Description (to the nearest 10 acres): County _____
 government lot _____, _____ $\frac{1}{4}$, _____ $\frac{1}{4}$, _____ $\frac{1}{4}$, sec _____, twp _____ N/S, rge _____ E/W
- Place of Use Description: County See Attached, New (n) or Supplemental (s)
 acres _____, gvt. lot _____, _____ $\frac{1}{4}$, _____ $\frac{1}{4}$, _____ $\frac{1}{4}$, sec _____, twp _____ N/S, rge _____ E/W, n/s
 acres _____, gvt. lot _____, _____ $\frac{1}{4}$, _____ $\frac{1}{4}$, _____ $\frac{1}{4}$, sec _____, twp _____ N/S, rge _____ E/W, n/s
 TOTAL acres _____ (addendum sheet is attached if more room is needed for place of use)
- Volume Requested: 368 acre-feet, Volume of Discharge: 368 acre-feet
- Flow Rate Requested: 1200 cubic ft. per second (cfs), or 1200 gallons per minute (gpm)
- Diversion Means: ☒ Pump: Type & Power 75HP SRB, ☐ Other _____
- Conveyance Means: ☒ Pipeline, Other Pivot #2 10" PIP Pipe + 10" Hose for Pivot 3.
- Period of Use: Month/Day 4/1 to Month/Day 10/31
- Reserved Water Rights Projects: Is this a project that was originally included in the Conservation District water reservation application? ☐ Yes ☐ No

CONTINUED FROM PAGE 1 – PLACE OF USE ADDENDUM

[illegible]

15. Location Map: A map showing the following must accompany this application:

- A. Township and range
- B. Section numbers and corners
- C. Scale of map in inches

- D. Project location and general layout
- E. Points of diversion and discharge
- F. Place of use

NOTE: Please be sure to attach an accurate map. Lack of an accurate map results in an incomplete application. The application will be returned for completion. A copy of an ASCS aerial photo or a USGS topographic map is required. Please use a dark pencil or pen when writing on the map. Assistance is available from the District or the Resource Development Bureau, DNRC in completing these forms.

☒ 16. Soils Map: Include a copy of the soils map and suitability evaluation for your project. Indicate on the map the location of the project, point(s) of diversion, and point(s) of discharge.

17. Engineering Details: All available engineering data must be submitted with this application:

- A. General layout plans for point of diversion structures ✓
- B. Placement plans of pumping plant/diversion structure ✓
- C. Control structures design and placement
- ☒ D. Typical cross-section for dikes
- ☒ E. Conveyance and delivery ditch designs
- ☒ F. Reservoir cross-section and capacities
- ☒ G. Structural tables
- H. Pipeline designs
- ☒ I. Yardage figures for land leveling and design grid
- J. Method of water use measurement
- K. Water availability and water quality evaluation
- L. Other information applicable to the project as deemed necessary by the District

18. Project Completion Date: 2027

19. The Reserved Water Development Manual which governs Reserved Water Use Authorization for the Conservation District is on file in the district office and available for review.

20. ***IMPORTANT NOTICE: No person may appropriate water or commence construction on any project facilities prior to the approval of the project by the District and the receipt of a Reserved Water Use Authorization!***

21. The applicant certifies that the statements above and documents attached are to the best of his/her knowledge true and correct.

Larry Hamely
Applicant's Signature

4-5-24
Date

Prepared By: Dylan Johnson

3/26/24
Date

Submit Application and Fee to: **Richland County Conservation District,
2745 West Holly Street, Sidney, MT 59270**



Job Larry Hardy Design

Sheet No. _____ of _____

Calculated by Dylan Johnson Date 4/3/24

Checked By _____ Date _____

$$\begin{aligned} \text{Pivot System} &= \text{Pivot 2} + \text{Pivot 3} \\ (\text{Additional}) &= 98 \text{ acres} + 60 \text{ Acres} \\ &= 158 \text{ acres} \end{aligned}$$

Pivot 2 (3/4 Pivot) Specs

$$\text{Length} = 1298'$$

$$\begin{aligned} 7 \cdot 180' 6 \frac{5}{8}" \text{ spans} &= 1260' \\ 1 \cdot 36' \text{ overhang} &- \frac{36' + 2' \text{ Transitions}}{1298'} \end{aligned}$$

Blue Premium Hose Drops

R 3030 Rotators (Nelson)

2 HP Booster Pump w/ SR100 Endgate

Back Boost Transformer @ Pivot Point #2

Water Requirements

$$\begin{aligned} GPM_2 &= \frac{453 (.3"/\text{day}) (98 \text{ acres})}{24 \text{ hr/day} (90\% \text{ eff.})} = 617 \text{ GPM} \rightarrow \cancel{700 \text{ GPM}} = 714 \frac{\text{GPM}}{\text{acre}} \\ &\quad \rightarrow 750 \text{ GPM} = 7.65 \frac{\text{GPM}}{\text{acre}} \end{aligned}$$

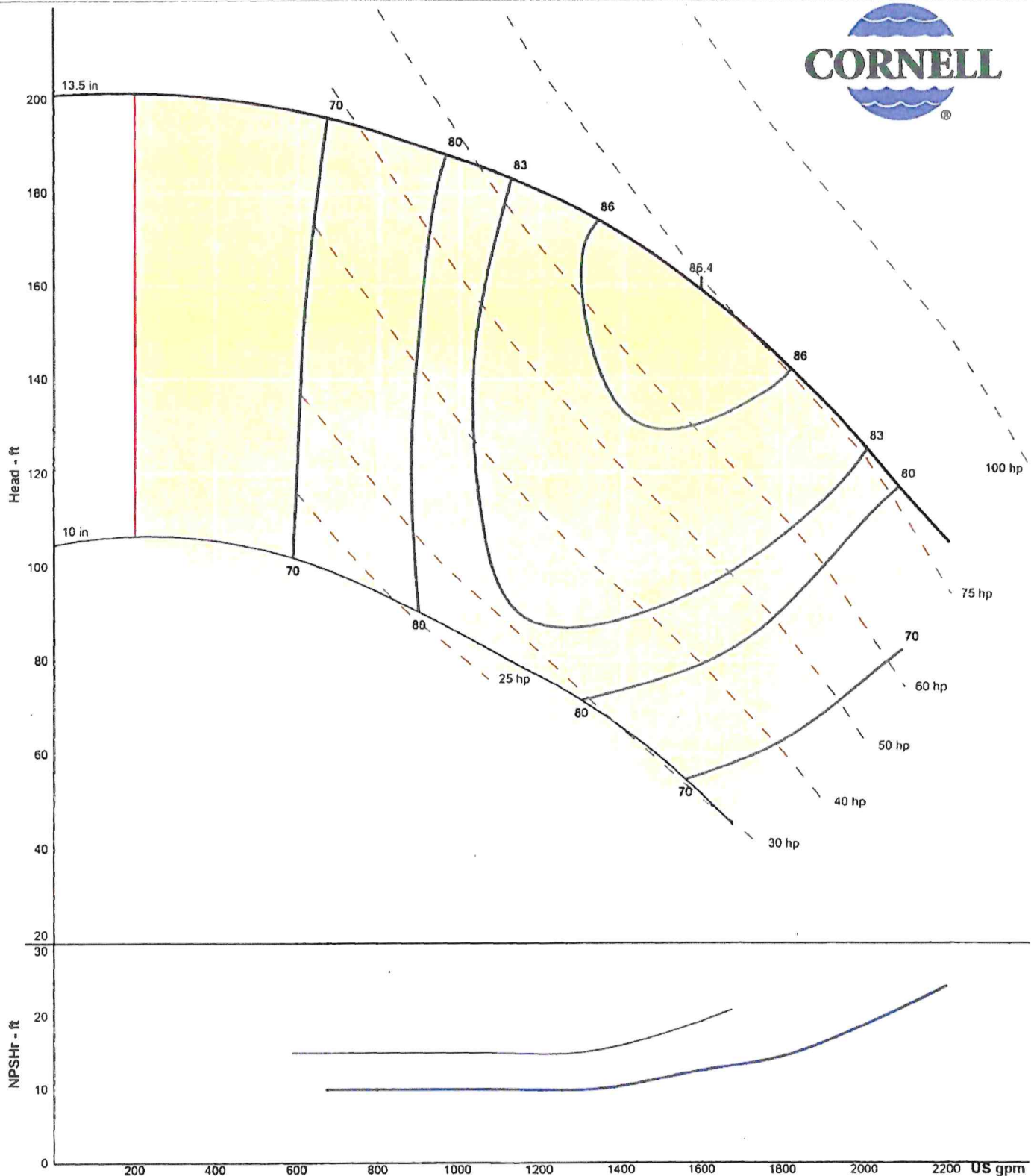
$$GPM_3 = \frac{453 (.3"/\text{day}) (60 \text{ acres})}{24 \text{ hr/day} (90\% \text{ eff.})} = 377.5 \text{ GPM} \rightarrow 450 \text{ GPM} = 7.5 \frac{\text{GPM}}{\text{acre}}$$

$$GPM_T = GPM_2 + GPM_3 = 1200 \text{ GPM}$$

Pump Selection

Cumil SRB 75HP E.M. Full Trim

* See attach pump curve



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.

Company: Agri Industries
Name:
Date: 04/02/2024

Cornell
Catalog: Cornell.60, Vers 3.15.0
Clear Liquids - 1800 rpm
Design Point: —
Static Head: 0 ft

Size: 5RB
Speed: 1780 rpm
Dia: 13.5 in
Curve: 5RB18

Soil Map—Richland County, Montana (Half Pivot)



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

4/2/2024
Page 1 of 3

Soil Map—Richland County, Montana
(Half Pivot)

MAP LEGEND

	Area of Interest (AOI)		Spoil Area
	Soil Map Unit Polygons		Stony Spot
	Soil Map Unit Lines		Very Stony Spot
	Soil Map Unit Points		Wet Spot
	Special Point Features		Other
	Blowout		Special Line Features
	Borrow Pit		Water Features
	Clay Spot		Streams and Canals
	Closed Depression		Transportation
	Gravel Pit		Roads
	Gravelly Spot		Interstate Highways
	Landfill		US Routes
	Lava Flow		Major Roads
	Marsh or swamp		Local Roads
	Mine or Quarry		Background
	Miscellaneous Water		Aerial Photography
	Perennial Water		
	Rock Outcrop		
	Saline Spot		
	Sandy Spot		
	Severely Eroded Spot		
	Sinkhole		
	Slide or Slip		
	Sodic Spot		

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG 3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Richland County, Montana
Survey Area Data: Version 21, Aug 25, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 17, 2021—Sep 24, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AdC	Adger silty clay loam, 0 to 8 percent slopes	7.9	9.8%
Lo	Lohler silty clay loam	5.3	6.6%
Ma	Marias silty clay	16.2	20.1%
SaA	Wyola silty clay loam, 0 to 2 percent slopes	2.4	3.0%
Va	Vanda clay	48.7	60.5%
Totals for Area of Interest		80.6	100.0%

Soil Map—Richland County, Montana
(Larry Handy 3/4 Pivot)



Soil Map—Richland County, Montana
(Larry Handy 3/4 Pivot)

MAP LEGEND

	Area of Interest (AOI)		Spot Area
	Soil Map Unit Polygons		Stony Spot
	Soil Map Unit Lines		Very Stony Spot
	Soil Map Unit Points		Wet Spot
	Special Point Features		Other
	Blowout		Special Line Features
	Borrow Pit		Water Features
	Clay Spot		Streams and Canals
	Closed Depression		Transportation
	Gravel Pit		Rails
	Gravelly Spot		Interstate Highways
	Landfill		US Routes
	Lava Flow		Major Roads
	Marsh or swamp		Local Roads
	Mine or Quarry		Background
	Miscellaneous Water		Aerial Photography
	Perennial Water		
	Rock Outcrop		
	Saline Spot		
	Sandy Spot		
	Severely Eroded Spot		
	Sinkhole		
	Slide or Slip		
	Sodic Spot		

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Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Richland County, Montana
Survey Area Data: Version 21, Aug 25, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

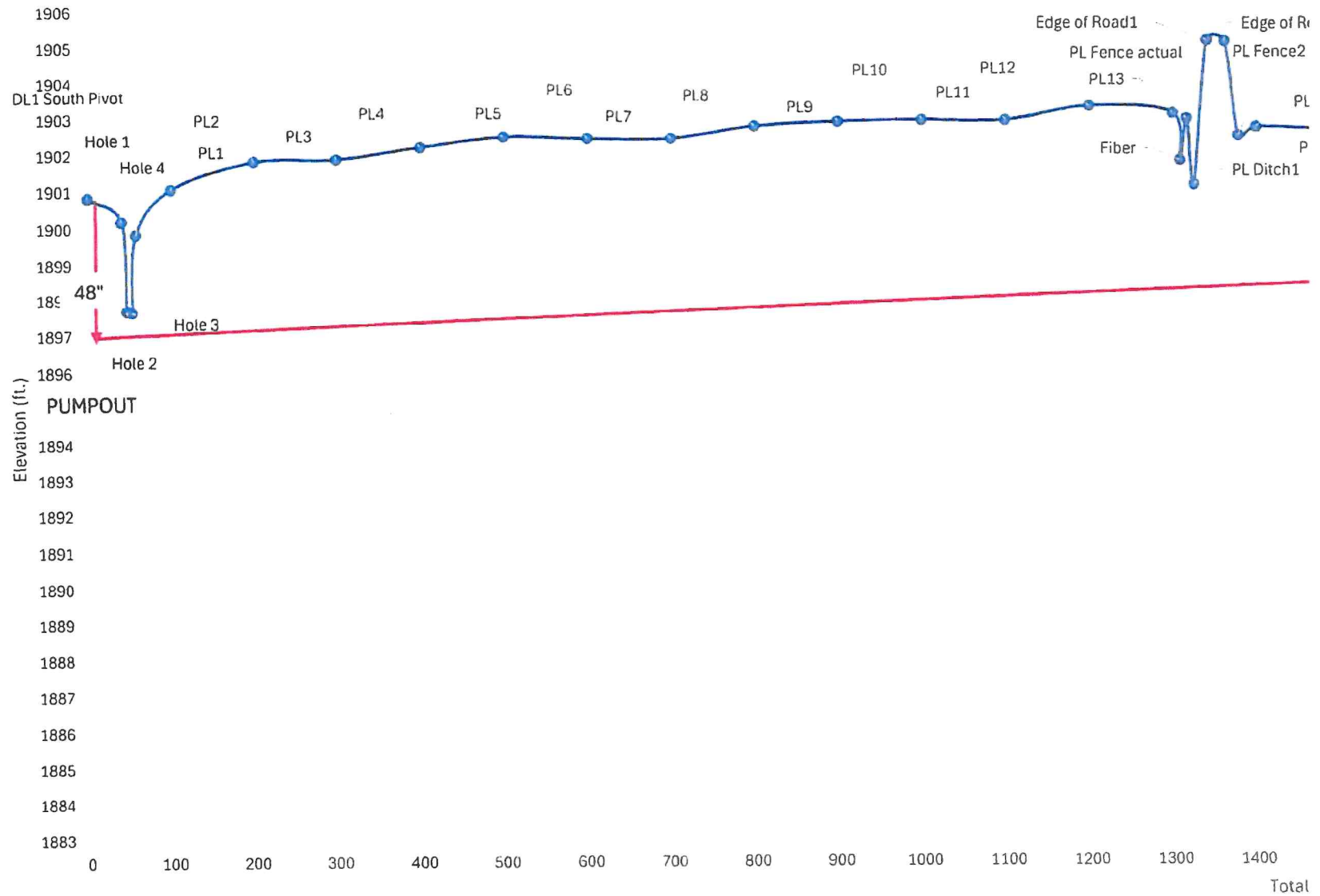
Date(s) aerial images were photographed: Jun 17, 2021—Sep 24, 2021

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Map Unit Legend

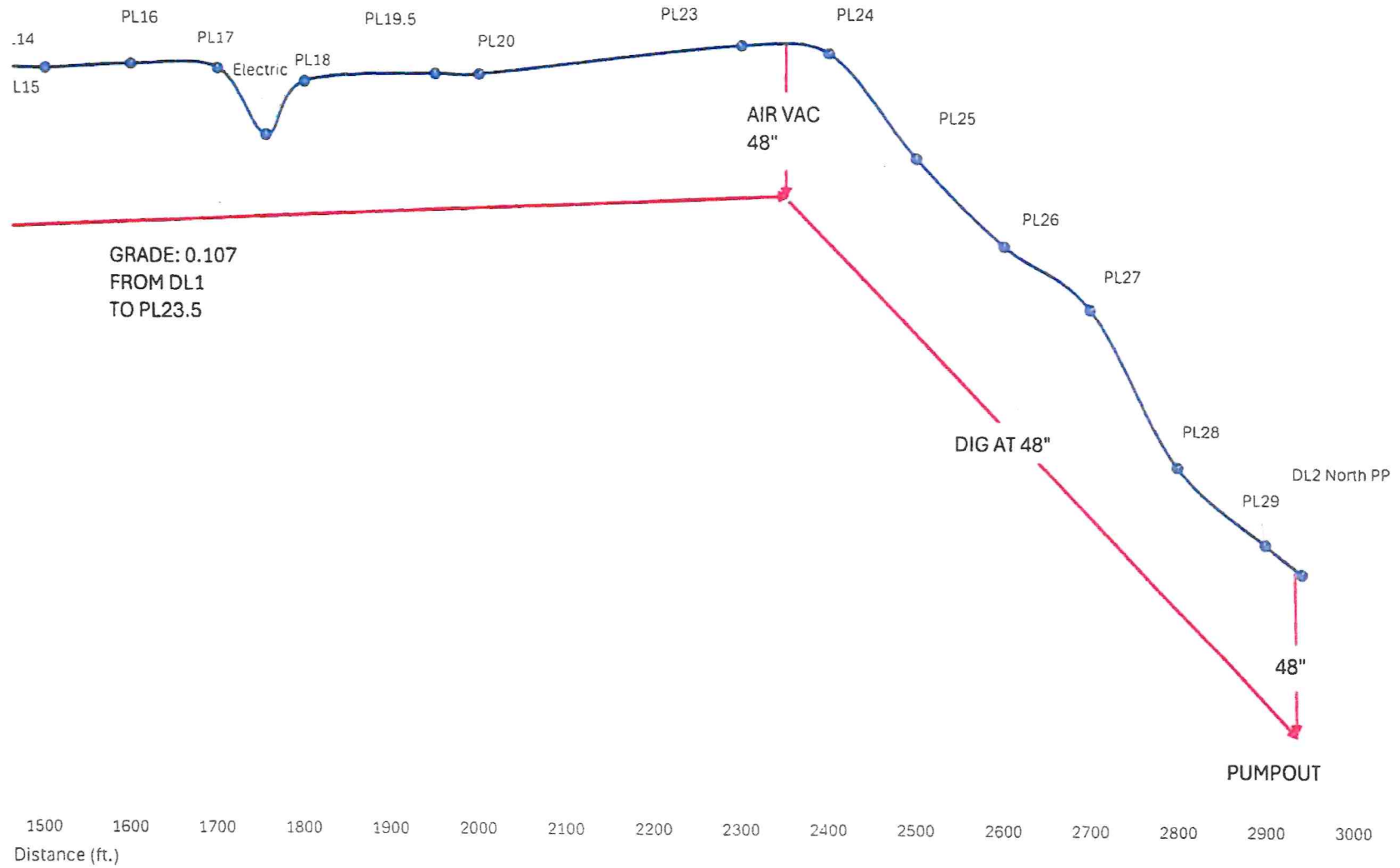
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
HaA	Havrelon silt loam, 0 to 1 percent slopes	5.6	3.0%
Hb	Havrelon silty clay loam	35.8	19.2%
Lo	Lohler silty clay loam	93.6	50.2%
Rd	Ridgellawn loam	7.1	3.8%
SaA	Wyola silty clay loam, 0 to 2 percent slopes	41.7	22.4%
Tm	Trembles fine sandy loam	2.6	1.4%
Va	Vanda clay	0.0	0.0%
Totals for Area of Interest		186.5	100.0%

(Pivot # 2) Larry Handy Pi



ipeline Profile (Pivot # 2)

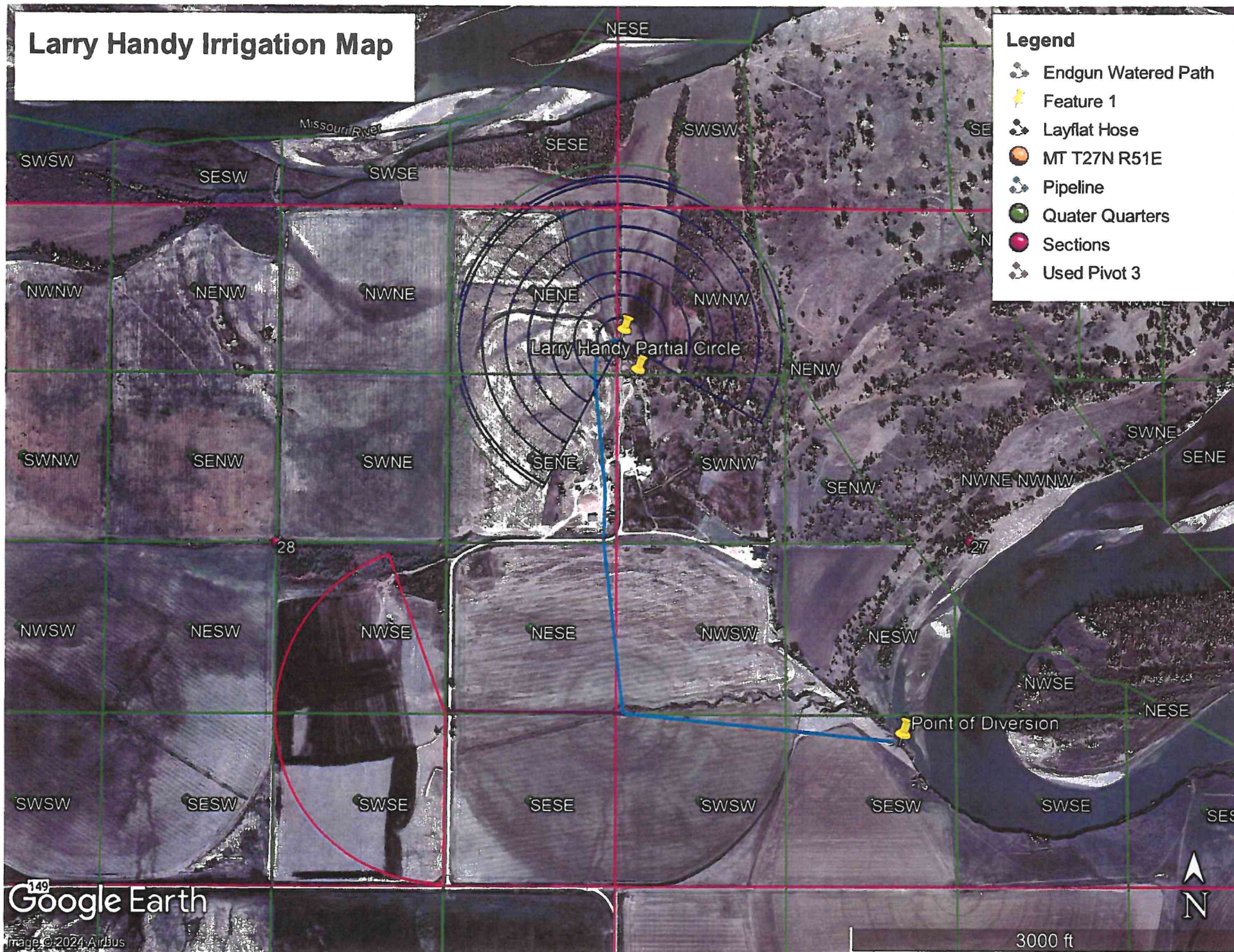
oad2



Larry Handy Irrigation Map

Legend

- Endgun Watered Path
- Feature 1
- Layflat Hose
- MT T27N R51E
- Pipeline
- Quater Quarters
- Sections
- Used Pivot 3





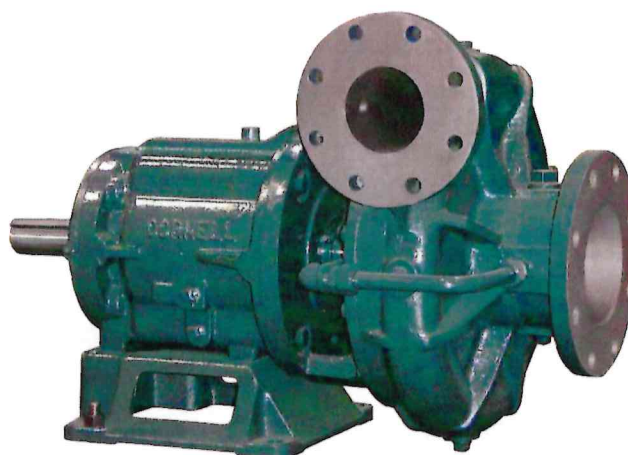
AVAILABLE MOUNTING CONFIGURATIONS

5RB-F FRAME MOUNT
 5RB-RP-F REDI-PRIME FRAME MOUNT
 5RB-EM ENGINE MOUNT
 5RB-RP-EM REDI-PRIME ENGINE MOUNT
 5RB-VF VERTICAL FRAME MOUNT
 5RB-VC VERTICAL COUPLED

OPERATING LEVELS

MIN FLOW	265 GPM	60.1 m ³ /h
MAX FLOW	3000 GPM	681 m ³ /h
DISCHARGE SIZE	5"	127 mm
SUCTION SIZE	8"	203 mm
SOLIDS HANDLING	1"	25.4 mm
MAX SPEED	2400 RPM	2400 RPM
SHUT-OFF HEAD	370'	113 m
MAX WORKING PRESSURE	155 PSI	1069 kPa
BEP HEAD	285'	86.9 m
BEP FLOW	2200 GPM	500 m ³ /h
BEP PERCENT	86%	86%

PARTS	STANDARD MATERIAL (CAST IRON BRONZE FITTED)
WEAR RINGS	Bronze SAE 660
IMPELLER	Bronze SAE 40
VOLUTE	Cast Iron ASTM A48 CL30
SHAFT	SAE 1144 Stressproof Steel
SHAFT SLEEVE	Bronze SAE 660
BACKPLATE	Cast Iron ASTM A48 CL30
PACKING (STANDARD)	Graphited Acrylic
MECHANICAL SEAL (OPTIONAL)	Single T-1, Buna, Carbon/ Ceramic
BEARING FRAME	Cast Iron ASTM A48 CL30



A typical picture of the pump is shown. Please contact Cornell Pump Company for further details. All information is approximate and for general guidance only.

The 5RB general purpose pump is designed with Cornell's renowned quality and durability. It features a 5" discharge and a 8" suction, enclosed multi-vane impeller and flanged tangential double volute. The pump end mounts to F16, F18, EM16, EM18, VC16, VC18, VF16 and VF18 bearing frames. Optional Redi-Prime or Venturi Prime priming system is available. Bearings are heavy-duty, grease lubricated, single ball bearings with a minimum of 20,000 hours bearing life.

- External hydraulic balance line
- Back pullout design
- Replaceable hub & suction wear rings
- Replaceable shaft sleeve
- High efficiency hydraulics
- Low operating costs
- Modular bearing frame
- Long B-10 bearing life (20,000 hour min.)
- Two year warranty
- Optional Cycloseal® with type 1 mechanical seal
- Optional Run-Dry™ lubrication system
- Grease lubrication standard - oil lubrication optional
- SAE #1, 2, 3 & 4 engine mount available to fit
- Oversized shaft and bearings
- Double volute



AGRICULTURE



FOOD



INDUSTRIAL



MINING



MUNICIPAL



OIL & GAS



REFRIGERATION

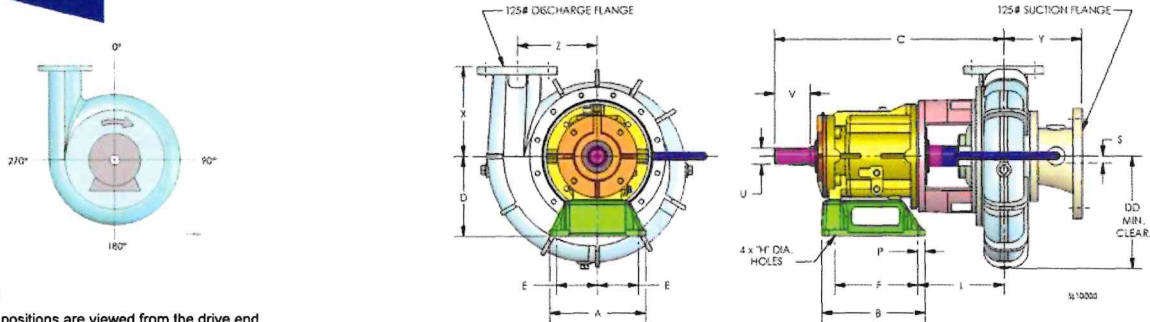


RENTAL



DATA SHEET

5RB-F



NOTES:

Discharge positions are viewed from the drive end.
Standard increments of discharge position are shown
in the chart below (DISCH INCR). Consult factory for
other discharge positions.

PUMP DIMENSIONS

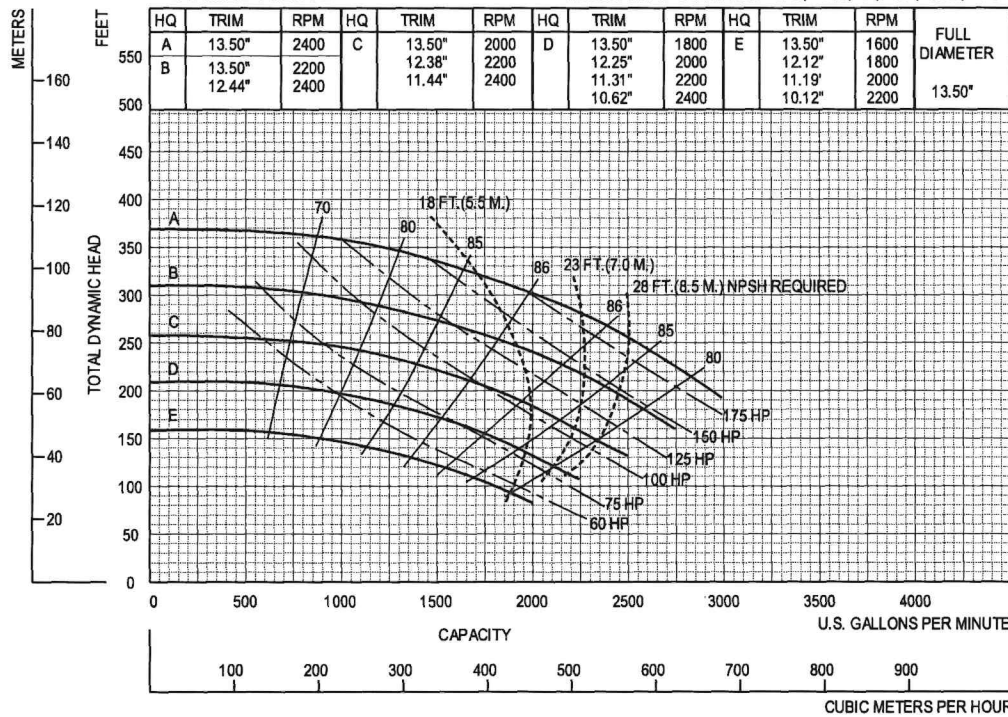
MODEL	FRAME	CONNECTION		DISCH. INC.	A	B	C	D	DD	E	F	H	L	P	S	U	V	X	Y	Z	KEYWAY
		DISCH.	SUCT.																		
5RB	F16	5	8	90°	12	12.88	28.62	9.75	14.25	5.12	10.38	0.81	10.77	0.88	0.88	2	4.5	11	9.78	10	.50X.25

Feet x .305 = Meters
Inches x 25.4 = Millimeters
GPM x .227 = Cubic Meters/Hour
GPM x 3.785 = Liters/Minute
HP x .746 = KW

Speed	Impeller Dia.	Style	Solids Dia.	N _S	Suction	Discharge	No. vanes
VARIOUS	VARIOUS	ENCLOSED	1"	1654	8"	5"	6

DOUBLE VOLUTE

MOUNTING CONFIG.: CC, VM, F, VF, EM, VC



Performances shown are for cool water, dose-coupled electric configuration with Cydoseal.® Other mounting configurations, seal arrangements or liquids may require horsepower and/or performance adjustments.



Cornell Pump Company • Portland, Oregon

5RB - VARIOUS RPM

12/11/12

NEW PAGE

5RBVA

DS5RBF-103014

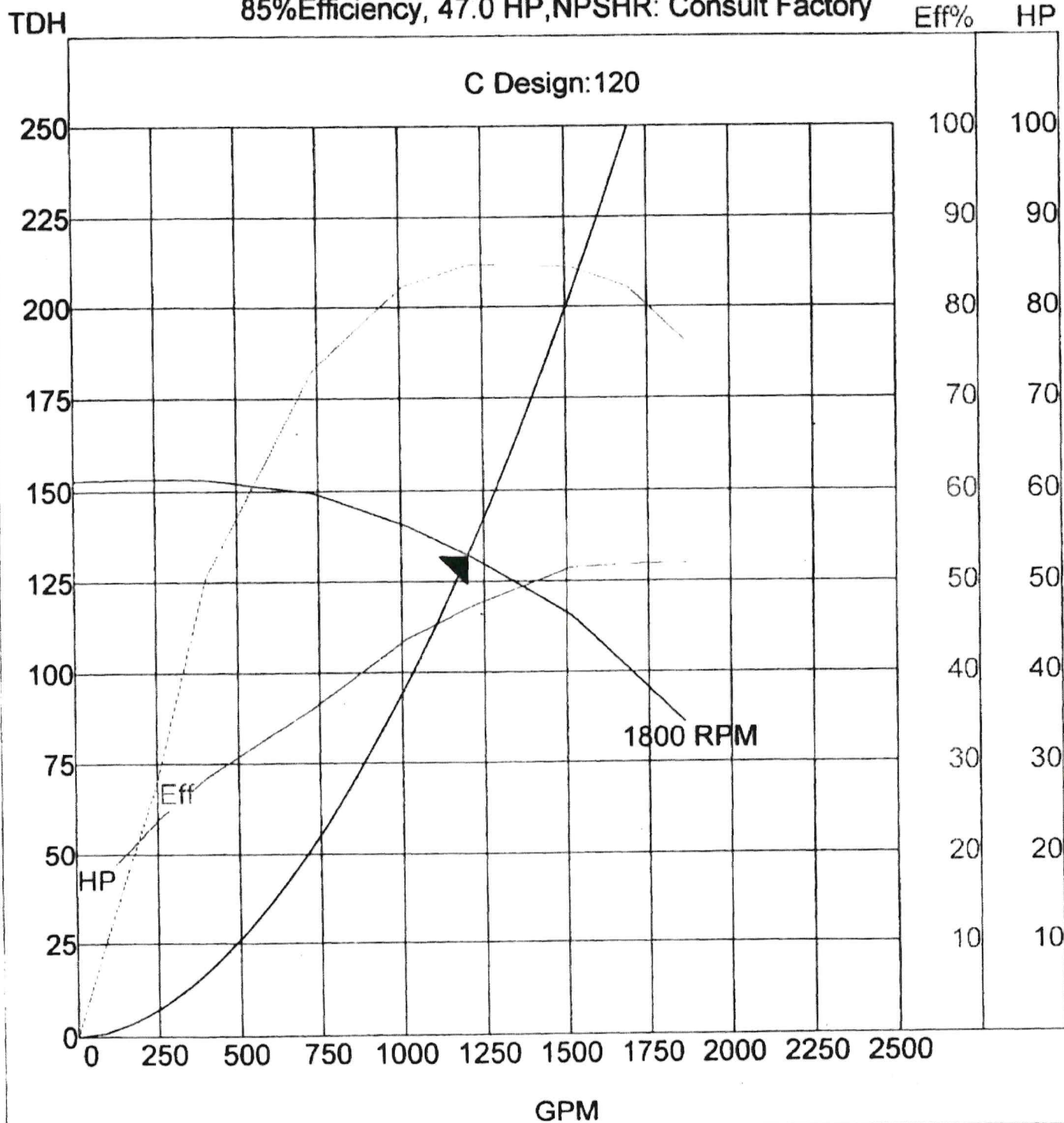
CORNELL PUMP COMPANY

GLR)104484-405

2323 S.E. Harvester Drive
Portland, Oregon 97222

Phone (503)653-0330
FAX (503)653-0338

Prepared For: Larry Handy
5RB 1200 GPM @132' TDH, 1800 RPM 11.75" Impeller
85%Efficiency, 47.0 HP,NPSHR: Consult Factory

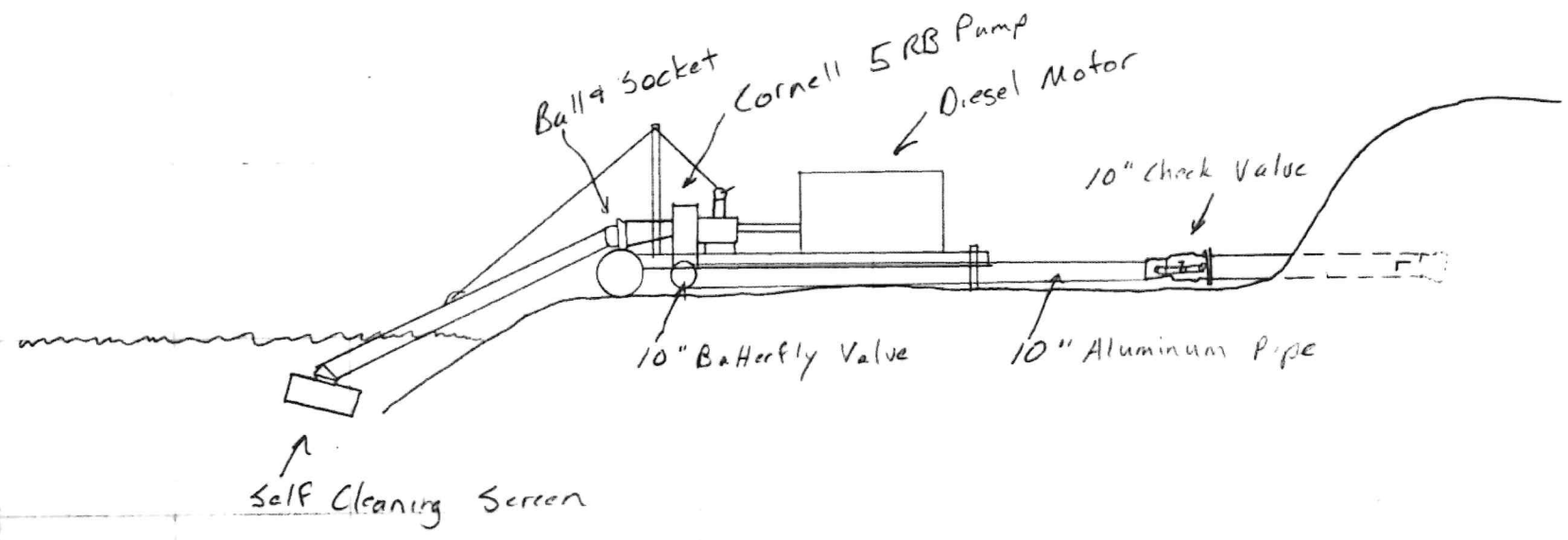


Internet: <http://www.cpcusa/~cornell>

E-Mail: cornell@cpcusa.com

G(R) 1044E4-405

Side View





Valley Dealer

AGRI INDUSTRIES - WILLISTON
3105 2nd St W
PO Box 1166
Williston, ND 58801
United States

Customer

Larry Handy
30467 County Road 149
Poplar, MT 59255-9509
US

Dealer No.

00000337

Field Name

Larry Handy #2

Parent Order No. 15099627
Sprinkler Order No. 15100163

Plant MCCOOK MANUFACTURING

Dealer PO PO-12436
Order Date 01/08/2024
Load Date 01/23/2024
Method Of Shipment W/SYS (15099627)

7 Span Valley Standard Pivot 7000
Machine Flow 700 (GPM)
Pivot Pressure 25 (PSI)

Span and Overhang								Field Area		Flow	
Model	Qty	Length (ft)	Pipe	Coupler	D. U.						
			O.D. (in)	Spacing (in)	Qty	Profile	Tire				
7000	7	180.0	6 5/8	108	20	Standard	11.2 x 38	138.3 (Ac) Total		700 (GPM)	
7000	1	36.0	6 5/8	110	6			121.6 (Ac) Pivot 360°		5.06 (GPM per Acre)	
								16.7 (Ac) EG on 100%		0.27 (in per day) App Rate	
								1298.3 (ft) Machine Length		0.157 (in) App Depth @ 100%	
								86.6 (ft) End Gun Radius		94.1 (GPM) End Gun	

Messages	Pressure	LRDU Drive Train
<u>Caution:</u> None	25 (PSI) Pivot Pressure	34 RPM Center Drive @60 Hz freq.
<u>Dealer:</u> None	Calculated Pressure	11.2 x 38 Tire
	0.0 (ft) Highest Elevation	52:1 Wheel GB Ratio, LRDU Dist 1262.1 (ft)
	0.0 (ft) Lowest Elevation	14.0 Hrs/360° @ 100% 9.45 (Ft per Min)
		14 Hrs/360° @ 100%

Sprinkler -- Computer Spacing	
<u>Sprinkler Configuration</u>	<u>Range (ft)</u>
Valley U-Pipe 6(in) Galvanized 3/4 M NPT x 3/4 M Hose	All
Blue Premium Hose Drop Variable Length 60(in) Ground Clr	
Nelson Regulator All Flo ACME 15(PSI) 3/4 F NPT	
Nelson D3000 Integrated Weight 1.00	
Nelson R3030 D8 - Orange 3/4 F Acme	
990.50 (ft)	Total Drop Hose Length

Customer Larry Handy

Field Name Larry Handy #2

Valley Standard Pivot 7000 Machine Summary

Pressure Loss

Pipe Length (ft)	Pipe I.D. (in)	Pipe Finish	C-Factor	Loss (PSI)
1280.2	6.42	Galvanized	150	7.4
18.1	3.79	Galvanized	150	0.3
Total =				7.7

End Gun(s) & Booster Pump Information

	<u>Primary End Gun</u>
	Nelson SR100 End Gun 0.55 Nozzle Berkeley 2 HP Booster Pump
	<u>Secondary End Gun</u>
	Nelson R55i VT End Gun # 60 Nozzle
Will be operated at the same time as the primary end gun.	

Span Flow

Span Number	Irrigated Length (ft)	Area (Ac)	Rqd (GPM)	Act (GPM)	Rqd (GPM per Acre)	Act (GPM per Acre)	% Deviation
1	179.9	2.4	11.7	13.7	4.91	5.74	16.9
2	180.1	7.1	34.7	34.7	4.91	4.91	0.0
3	180.1	11.7	57.6	57.6	4.91	4.91	-0.1
4	180.1	16.4	80.6	80.8	4.91	4.92	0.2
5	180.1	21.1	103.6	103.6	4.91	4.91	-0.0
6	180.1	25.8	126.5	126.7	4.91	4.91	0.1
7	179.8	30.4	149.3	149.0	4.91	4.90	-0.2
O/H	36.2	6.7	33.7	33.9	5.05	5.07	0.5
EG	86.6	16.7	97.9	94.1	5.84	5.62	-3.8
Totals		138.3		694.1			
Drain Sprinkler			8.7	8.2			
Total Machine Flow				702.3			

Advanced Options

Drain Sprinkler = Senninger Directional
 Last Sprinkler Coverage = 1 ft
 Sprinkler Coverage Length = 1299.3 ft
 Use Last Coupler= YES
 Minimum Mainline Pressure = 6 PSI

Shipping Options

Ship Drop Hardware
 Ship Endgun Nozzle
 Ship Endgun & Hardware
 Do not ship Endgun Valve / Nozzle Valve Hardware
 Do not ship Boosterpump Hardware

Parent Order No 15099627

Dealer AGRI INDUSTRIES - WILLISTON

Sprinkler Order No 15100163

Customer Larry Handy

Field Name Larry Handy #2

Valley Standard Pivot 7000 Machine Sprinkler Chart

Cpl No	Dist From Pivot (ft)	Spk No	Dist Last Spk (ft)	Nozzle Size	Color	Spk Model	Wear Pad	Drop Length (in)	Regulator	Line (PSI)	Spk (PSI)	Rqd (GPM)	Act (GPM)
1	6.3			Gauge						25.0			
2	15.3			Plug									
3	24.3			Plug									
Sprinkler : Nelson Rotator R3030													
4	33.3	1		14	Lime	R3030	D8 - Orange	114	All Flo ACME 15A	24.0	16.0	0.6	1.3
5	42.3			Plug									
6	51.3	2	18.0	14	Lime	R3030	D8 - Orange	123	All Flo ACME 15A	23.5	16.0	0.7	1.3
7	60.3			Plug									
8	69.3	3	18.0	14	Lime	R3030	D8 - Orange	130	All Flo ACME 15A	23.1	16.0	0.9	1.3
9	78.3			Plug									
10	87.3	4	18.0	14	Lime	R3030	D8 - Orange	133	All Flo ACME 15A	22.8	16.0	1.1	1.3
11	96.2			Plug									
12	105.2	5	17.9	14	Lime	R3030	D8 - Orange	133	All Flo ACME 15A	22.7	16.0	1.3	1.3
13	114.2			Plug									
14	123.2	6	18.0	15	Lime/Notch	R3030	D8 - Orange	129	All Flo ACME 15A	22.6	16.0	1.6	1.6
15	132.2			Plug									
16	141.1	7	17.9	16	Lavender	R3030	D8 - Orange	123	All Flo ACME 15A	22.7	16.0	1.8	1.8
17	150.1			Plug									
18	159.1	8	18.0	17	Lavender/Notch	R3030	D8 - Orange	113	All Flo ACME 15A	22.9	16.0	2.0	2.0
19	168.1			Plug									
20	177.1	9	18.0	18	Gray	R3030	D8 - Orange	101	All Flo ACME 15A	23.2	16.0	2.3	2.2
	181.7	Tower Number : 1 Span Length(ft) : 179.9											
21	186.4			Plug									
22	195.4	10	18.3	19	Gray/Notch	R3030	D8 - Orange	108	All Flo ACME 15A	22.8	15.9	2.5	2.5
23	204.4			Plug									
24	213.4	11	18.0	20	Turquoise	R3030	D8 - Orange	120	All Flo ACME 15A	22.2	15.9	2.7	2.8
25	222.4			Plug									
26	231.4	12	18.0	21	Turq/Notch	R3030	D8 - Orange	129	All Flo ACME 15A	21.7	15.9	2.9	3.0
27	240.4			Plug									
28	249.4	13	18.0	22	Yellow	R3030	D8 - Orange	134	All Flo ACME 15A	21.3	15.8	3.2	3.3

Customer Larry Handy

Field Name Larry Handy #2

Valley Standard Pivot 7000 Machine Sprinkler Chart

Cpl No	Dist From Pivot (ft)	Spk No	Dist Last Spk (ft)	Nozzle Size	Color	Spk Model	Wear Pad	Drop Length (in)	Regulator	Line (PSI)	Spk (PSI)	Rqd (GPM)	Act (GPM)
29	258.4			Plug									
30	267.4	14	18.0	22	Yellow	R3030	D8 - Orange	137	All Flo ACME 15A	21.1	15.8	3.4	3.3
31	276.3			Plug									
32	285.3	15	17.9	23	Yellow/Notch	R3030	D8 - Orange	136	All Flo ACME 15A	21.0	15.8	3.6	3.6
33	294.3			Plug									
34	303.3	16	18.0	24	Red	R3030	D8 - Orange	132	All Flo ACME 15A	21.0	15.7	3.9	4.0
35	312.3			Plug									
36	321.2	17	17.9	24	Red	R3030	D8 - Orange	125	All Flo ACME 15A	21.1	15.7	4.1	4.0
37	330.2			Plug									
38	339.2	18	18.0	25	Red/Notch	R3030	D8 - Orange	114	All Flo ACME 15A	21.3	15.7	4.3	4.3
39	348.2			Plug									
40	357.2	19	18.0	26	White	R3030	D8 - Orange	101	All Flo ACME 15A	21.6	15.6	4.6	4.6
	361.8		Tower Number : 2 Span Length(ft) : 180.1										
41	366.5			Plug									
42	375.5	20	18.3	27	White/Notch	R3030	D8 - Orange	108	All Flo ACME 15A	21.2	15.6	4.8	5.0
43	384.5			Plug									
44	393.5	21	18.0	27	White/Notch	R3030	D8 - Orange	120	All Flo ACME 15A	20.7	15.5	5.0	4.9
45	402.5			Plug									
46	411.5	22	18.0	28	Blue	R3030	D8 - Orange	129	All Flo ACME 15A	20.2	15.5	5.2	5.4
47	420.5			Plug									
48	429.5	23	18.0	28	Blue	R3030	D8 - Orange	134	All Flo ACME 15A	19.9	15.5	5.5	5.4
49	438.5			Plug									
50	447.5	24	18.0	29	Blue/Notch	R3030	D8 - Orange	137	All Flo ACME 15A	19.7	15.4	5.7	5.7
51	456.4			Plug									
52	465.4	25	17.9	29	Blue/Notch	R3030	D8 - Orange	136	All Flo ACME 15A	19.5	15.4	5.9	5.7
53	474.4			Plug									
54	483.4	26	18.0	30	Dark Brown	R3030	D8 - Orange	132	All Flo ACME 15A	19.6	15.4	6.1	6.1
55	492.4			Plug									
56	501.3	27	17.9	31	Dk Brown/Notch	R3030	D8 - Orange	125	All Flo ACME 15A	19.7	15.3	6.4	6.5
57	510.3			Plug									
58	519.3	28	18.0	31	Dk Brown/Notch	R3030	D8 - Orange	114	All Flo ACME 15A	19.9	15.3	6.6	6.5
59	528.3			Plug									
60	537.3	29	18.0	32	Orange	R3030	D8 - Orange	101	All Flo ACME 15A	20.3	15.2	6.9	6.9

Customer Larry Handy

Field Name Larry Handy #2

Valley Standard Pivot 7000 Machine Sprinkler Chart

Cpl No	Dist From Pivot (ft)	Spk No	Dist Last Spk (ft)	Nozzle Size	Color	Spk Model	Wear Pad	Drop Length (in)	Regulator	Line (PSI)	Spk (PSI)	Rqd (GPM)	Act (GPM)
541.9		Tower Number : 3		Span Length(ft) : 180.1									
61	546.6			Plug									
62	555.6	30	18.3	33	Orange/Notch	R3030	D8 - Orange	108	All Flo ACME 15A	19.9	15.2	7.1	7.4
63	564.6			Plug									
64	573.6	31	18.0	33	Orange/Notch	R3030	D8 - Orange	120	All Flo ACME 15A	19.4	15.2	7.3	7.4
65	582.6			Plug									
66	591.6	32	18.0	33	Orange/Notch	R3030	D8 - Orange	129	All Flo ACME 15A	18.9	15.2	7.5	7.4
67	600.6			Plug									
68	609.6	33	18.0	34	Dark Green	R3030	D8 - Orange	134	All Flo ACME 15A	18.6	15.1	7.8	7.8
69	618.6			Plug									
70	627.6	34	18.0	34	Dark Green	R3030	D8 - Orange	137	All Flo ACME 15A	18.4	15.1	8.0	7.8
71	636.5			Plug									
72	645.5	35	17.9	35	Dk Green/Notch	R3030	D8 - Orange	136	All Flo ACME 15A	18.3	15.0	8.2	8.2
73	654.5			Plug									
74	663.5	36	18.0	35	Dk Green/Notch	R3030	D8 - Orange	132	All Flo ACME 15A	18.4	15.0	8.4	8.2
75	672.5			Plug									
76	681.4	37	17.9	36	Purple	R3030	D8 - Orange	125	All Flo ACME 15A	18.5	14.9	8.7	8.6
77	690.4			Plug									
78	699.4	38	18.0	37	Purple/Notch	R3030	D8 - Orange	114	All Flo ACME 15A	18.8	14.9	8.9	9.2
79	708.4			Plug									
80	717.4	39	18.0	37	Purple/Notch	R3030	D8 - Orange	101	All Flo ACME 15A	19.2	14.9	9.2	9.2
722.0		Tower Number : 4		Span Length(ft) : 180.1									
81	726.7			Plug									
82	735.7	40	18.3	37	Purple/Notch	R3030	D8 - Orange	108	All Flo ACME 15A	18.9	14.8	9.5	9.2
83	744.7			Plug									
84	753.7	41	18.0	38	Black	R3030	D8 - Orange	120	All Flo ACME 15A	18.3	14.8	9.6	9.7
85	762.7			Plug									
86	771.7	42	18.0	38	Black	R3030	D8 - Orange	129	All Flo ACME 15A	17.9	14.8	9.8	9.7
87	780.7			Plug									
88	789.7	43	18.0	39	Black/Notch	R3030	D8 - Orange	134	All Flo ACME 15A	17.7	14.7	10.1	10.2
89	798.7			Plug									
90	807.7	44	18.0	39	Black/Notch	R3030	D8 - Orange	137	All Flo ACME 15A	17.5	14.7	10.3	10.2
91	816.6			Plug									

Customer Larry Handy

Field Name Larry Handy #2

Valley Standard Pivot 7000 Machine Sprinkler Chart

Cpl No	Dist From Pivot (ft)	Spk No	Dist Last Spk (ft)	Nozzle Size	Color	Spk Model	Wear Pad	Drop Length (in)	Regulator	Line (PSI)	Spk (PSI)	Rqd (GPM)	Act (GPM)
92	825.6	45	17.9	34	Dark Green	R3030	D8 - Orange	136	All Flo ACME 15A	17.4	15.1	7.8	7.8
93	834.6	46	9.0	28	Blue	R3030	D8 - Orange	134	All Flo ACME 15A	17.5	15.5	5.3	5.4
94	843.6	47	9.0	28	Blue	R3030	D8 - Orange	132	All Flo ACME 15A	17.5	15.4	5.4	5.4
95	852.6	48	9.0	28	Blue	R3030	D8 - Orange	129	All Flo ACME 15A	17.6	15.4	5.4	5.4
96	861.5	49	8.9	28	Blue	R3030	D8 - Orange	125	All Flo ACME 15A	17.7	15.4	5.5	5.4
97	870.5	50	9.0	29	Blue/Notch	R3030	D8 - Orange	120	All Flo ACME 15A	17.8	15.4	5.5	5.7
98	879.5	51	9.0	29	Blue/Notch	R3030	D8 - Orange	114	All Flo ACME 15A	18.0	15.4	5.6	5.7
99	888.5	52	9.0	29	Blue/Notch	R3030	D8 - Orange	108	All Flo ACME 15A	18.2	15.4	5.7	5.7
100	897.5	53	9.0	29	Blue/Notch	R3030	D8 - Orange	101	All Flo ACME 15A	18.4	15.4	5.8	5.7
902.1		Tower Number : 5 Span Length(ft) : 180.1											
101	906.8	54	9.3	29	Blue/Notch	R3030	D8 - Orange	101	All Flo ACME 15A	18.4	15.4	5.9	5.7
102	915.8	55	9.0	29	Blue/Notch	R3030	D8 - Orange	108	All Flo ACME 15A	18.1	15.4	5.8	5.7
103	924.8	56	9.0	30	Dark Brown	R3030	D8 - Orange	114	All Flo ACME 15A	17.9	15.4	5.9	6.1
104	933.8	57	9.0	30	Dark Brown	R3030	D8 - Orange	120	All Flo ACME 15A	17.6	15.4	6.0	6.1
105	942.8	58	9.0	29	Blue/Notch	R3030	D8 - Orange	125	All Flo ACME 15A	17.4	15.4	6.0	5.7
106	951.8	59	9.0	30	Dark Brown	R3030	D8 - Orange	129	All Flo ACME 15A	17.3	15.3	6.1	6.1
107	960.8	60	9.0	30	Dark Brown	R3030	D8 - Orange	132	All Flo ACME 15A	17.1	15.3	6.1	6.1
108	969.8	61	9.0	30	Dark Brown	R3030	D8 - Orange	134	All Flo ACME 15A	17.0	15.3	6.2	6.1
109	978.8	62	9.0	30	Dark Brown	R3030	D8 - Orange	136	All Flo ACME 15A	16.9	15.3	6.2	6.1
110	987.8	63	9.0	31	Dk Brown/Notch	R3030	D8 - Orange	137	All Flo ACME 15A	16.9	15.3	6.3	6.5
111	996.7	64	8.9	30	Dark Brown	R3030	D8 - Orange	137	All Flo ACME 15A	16.8	15.3	6.3	6.1
112	1005.7	65	9.0	31	Dk Brown/Notch	R3030	D8 - Orange	136	All Flo ACME 15A	16.8	15.3	6.4	6.5
113	1014.7	66	9.0	31	Dk Brown/Notch	R3030	D8 - Orange	134	All Flo ACME 15A	16.9	15.3	6.5	6.5
114	1023.7	67	9.0	31	Dk Brown/Notch	R3030	D8 - Orange	132	All Flo ACME 15A	17.0	15.3	6.5	6.5
115	1032.7	68	9.0	31	Dk Brown/Notch	R3030	D8 - Orange	129	All Flo ACME 15A	17.0	15.3	6.5	6.5
116	1041.6	69	8.9	31	Dk Brown/Notch	R3030	D8 - Orange	125	All Flo ACME 15A	17.2	15.2	6.6	6.5
117	1050.6	70	9.0	32	Orange	R3030	D8 - Orange	120	All Flo ACME 15A	17.3	15.2	6.7	6.9
118	1059.6	71	9.0	32	Orange	R3030	D8 - Orange	114	All Flo ACME 15A	17.5	15.2	6.8	6.9
119	1068.6	72	9.0	32	Orange	R3030	D8 - Orange	108	All Flo ACME 15A	17.7	15.2	6.8	6.9
120	1077.6	73	9.0	32	Orange	R3030	D8 - Orange	101	All Flo ACME 15A	18.0	15.2	7.0	6.9
1082.2		Tower Number : 6 Span Length(ft) : 180.1											
121	1086.9	74	9.3	32	Orange	R3030	D8 - Orange	101	All Flo ACME 15A	17.9	15.2	7.0	6.9
122	1095.9	75	9.0	32	Orange	R3030	D8 - Orange	108	All Flo ACME 15A	17.7	15.2	7.0	6.9

Customer Larry Handy

Field Name Larry Handy #2

Valley Standard Pivot 7000 Machine Sprinkler Chart

Cpl No	Dist From Pivot (ft)	Spk No	Dist Last Spk (ft)	Nozzle Size	Color	Spk Model	Wear Pad	Drop Length (in)	Regulator	Line (PSI)	Spk (PSI)	Rqd (GPM)	Act (GPM)
123	1104.9	76	9.0	32	Orange	R3030	D8 - Orange	114	All Flo ACME 15A	17.4	15.2	7.0	6.9
124	1113.9	77	9.0	32	Orange	R3030	D8 - Orange	120	All Flo ACME 15A	17.2	15.2	7.1	6.9
125	1122.9	78	9.0	33	Orange/Notch	R3030	D8 - Orange	125	All Flo ACME 15A	17.0	15.2	7.2	7.4
126	1131.9	79	9.0	33	Orange/Notch	R3030	D8 - Orange	129	All Flo ACME 15A	16.9	15.2	7.2	7.4
127	1140.9	80	9.0	33	Orange/Notch	R3030	D8 - Orange	132	All Flo ACME 15A	16.7	15.2	7.3	7.4
128	1149.9	81	9.0	33	Orange/Notch	R3030	D8 - Orange	134	All Flo ACME 15A	16.6	15.2	7.3	7.4
129	1158.9	82	9.0	33	Orange/Notch	R3030	D8 - Orange	136	All Flo ACME 15A	16.6	15.2	7.4	7.4
130	1167.9	83	9.0	33	Orange/Notch	R3030	D8 - Orange	137	All Flo ACME 15A	16.5	15.2	7.4	7.4
131	1176.8	84	8.9	33	Orange/Notch	R3030	D8 - Orange	137	All Flo ACME 15A	16.5	15.2	7.5	7.4
132	1185.8	85	9.0	33	Orange/Notch	R3030	D8 - Orange	136	All Flo ACME 15A	16.6	15.1	7.6	7.4
133	1194.8	86	9.0	33	Orange/Notch	R3030	D8 - Orange	134	All Flo ACME 15A	16.6	15.1	7.6	7.4
134	1203.8	87	9.0	34	Dark Green	R3030	D8 - Orange	132	All Flo ACME 15A	16.7	15.1	7.7	7.8
135	1212.8	88	9.0	34	Dark Green	R3030	D8 - Orange	129	All Flo ACME 15A	16.8	15.1	7.7	7.8
136	1221.7	89	8.9	34	Dark Green	R3030	D8 - Orange	125	All Flo ACME 15A	16.9	15.1	7.7	7.8
137	1230.7	90	9.0	34	Dark Green	R3030	D8 - Orange	120	All Flo ACME 15A	17.1	15.1	7.8	7.8
138	1239.7	91	9.0	34	Dark Green	R3030	D8 - Orange	114	All Flo ACME 15A	17.3	15.1	7.9	7.8
139	1248.7	92	9.0	34	Dark Green	R3030	D8 - Orange	108	All Flo ACME 15A	17.5	15.1	8.0	7.8
140	1257.7	93	9.0	34	Dark Green	R3030	D8 - Orange	101	All Flo ACME 15A	17.8	15.1	7.9	7.8
141	1261.5				B.P.								
	1262.1				Tower Number : 7								
					Span Length(ft) : 179.8								
142	1266.5	94	8.8	35	Dk Green/Notch	R3030	D8 - Orange	99	All Flo ACME 15A	17.8	15.0	8.1	8.2
143	1275.6	95	9.2	35	Dk Green/Notch	R3030	D8 - Orange	103	All Flo ACME 15A	17.7	15.0	8.2	8.2
144	1279.2				Plug								
145	1284.6	96	8.9	35	Dk Green/Notch	R3030	D8 - Orange	107	All Flo ACME 15A	17.5	15.0	8.2	8.2
146	1293.7	97	9.2	37	Purple/Notch	R3030	D8 - Orange	112	All Flo ACME 15A	17.3	14.9	9.3	9.2
					Sprinkler : Senninger Spray								
147	1297.3	98		17	Dark Green	Directional				17.0	17.0	8.7	8.2
	1298.3				Overhang								
					Span Length(ft) : 36.2								
					Sprinkler : Nelson End Of Pivot Sprinkler								



Sprinkler Order No 15100163

Valley Standard Pivot 7000 Machine Sprinkler Chart

702.2

6

Dealer AGRI INDUSTRIES - WILLISTON
Customer Larry Handy
Field Name Larry Handy #2



Sprinkler Order No 15100163

Parent Order No 15099627

Valley Standard Pivot 7000 Percent Timer Data

Setup Information - Valley Computer Control Panel Water Application Constants: Minimum Application = 0.157 (in) Hours/360° = 14

Based on IN

<u>IN Per</u>	<u>Pivot</u>	<u>Hours Per</u>
<u>360 degrees</u>	<u>% Timer</u>	<u>360 degrees</u>
0.157	100.0	14.0
0.20	78.3	17.9
0.30	52.2	26.8
0.40	39.1	35.8
0.50	31.3	44.7
0.60	26.1	53.6
0.70	22.4	62.5
0.80	19.6	71.4
0.90	17.4	80.5
1.00	15.7	89.2
1.25	12.5	112.0
1.50	10.4	134.6
1.75	8.9	157.3
2.00	7.8	179.5
2.50	6.3	222.2
3.00	5.2	269.2

Based on % Timer

<u>Pivot</u>	<u>IN Per</u>	<u>Hours Per</u>
<u>% Timer</u>	<u>360 degrees</u>	<u>360 degrees</u>
100.0	0.157	14.0
90.0	0.17	15.6
80.0	0.20	17.5
70.0	0.22	20.0
60.0	0.26	23.3
50.0	0.31	28.0
45.0	0.35	31.1
40.0	0.39	35.0
35.0	0.45	40.0
30.0	0.52	46.7
25.0	0.63	56.0
20.0	0.78	70.0
17.5	0.89	80.0
15.0	1.04	93.3
12.5	1.25	112.0
10.0	1.57	140.0
7.5	2.09	186.7
5.0	3.13	280.0

Field Area

138.3 (Ac) Total
121.6 (Ac) Pivot 360°
16.7 (Ac) EG on 100%
1298.3 (ft) Machine Length
86.6 (ft) End Gun Radius

Flow

700 (GPM)
5.06 (GPM per Acre)
0.27 (in per day) App Rate
0.157 (in) App Depth @ 100%
94.1 (GPM) End Gun

Pressure

25 (PSI) Pivot Pressure
Calculated Pressure
0.0 (ft) Highest Elevation
0.0 (ft) Lowest Elevation

LRDU Drive Train

34 RPM Center Drive @ 60 Hz freq.
11.2 x 38 Tire
52:1 Wheel GB Ratio, LRDU Dist 1262.1 (ft)
14.0 Hrs/360° @ 100% (9.45) (Ft per Min)
14 Hrs/360° @ 100%

Disclaimer

The information presented in the attached Percent Timer Report is based on variables which cannot be totally controlled by Valmont (including, but not limited to; pivot pressure, inside pipeline surface, end gun throw, end gun arc setting, tire slippage, tire pressure, field slopes, soil variations, sprinkler package installation, well capacity, center drive motor voltage, center drive motor frequency, climatic conditions and other elements and circumstances beyond Valmont's reasonable control). Valmont recommends monitoring the machine for at least one pass through field to obtain an accurate rotation time.

CONSERVATION DISTRICT RESERVED WATER USE AUTHORIZATION

585-2-316, MCA

Form No. 102 (Revised 02/2024)

When to use this form:

This form is for the issuance of a Reserved Water Use Authorization.

Conservation District Name: Richland County Conservation District

CD Water Reservation No: 40S 84500-00

Upon determination that the criteria for issuance of a reserved water use authorization have been met, this Authorization is hereby issued to:

1. Applicant Name: The Larry and Lauri Handy Trust (Larry and Lauri Handy Trustees)

Mailing Address: 30467 County Rd 149 City Poplar State MT Zip 59255

Phone Numbers: 406-774-3769 Cell 406-768-7351

Email Address: _____

2. Authorization Number: RI-036M Internal Priority Date: 04-03-2024 10:28am

3. Source of Water Supply: Missouri River

A tributary of _____

4. Total Amount: 1200 gpm (2.7 cfs) up to 368 acre-ft per Annum

5. Period of Use: 4/1 Month/Day to 10/31 Month/Day

6. Point of Diversion:

LOT	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	SEC	TWP N/S	RGE E/W	COUNTY
	NE	SE	SW	27	27N	51E	Richland

7. Place of Use: See Page 3 below signatures

N = New S = Supplemental

ACRES	LOT	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	SEC	TWP N/S	RGE E/W	COUNTY	N/S

8. Means of Diversion: Pump

9. Means of Flow Measurement: Operation records such as electricity use, crop use requirements, or water measuring device

10. Standard and Special Terms, Conditions, Restrictions, and Limitations:

STANDARD TERMS:

Completion:

The diversion and distribution work for this use shall be completed, and water shall be applied to a beneficial use as specified above, on or before January 10th, 20 28, or within any authorized extension of time. The Notice of Completion of Water Development, Form 106, shall be filed on or before January 10th, 20 28.

Compliance with Board and Conservation District Rules, Regulations, and Requirements:

Authorization is subject to the order, rules, regulations, and requirements governing the water reservation and the laws of the State of Montana. Further, this Authorization is subject to the administrative rules, regulations, and procedures adopted by the Conservation District governing the water reservations, which by the reference is made a condition of the Authorization.

Control:

The Conservation District has exclusive control over the reservation by the Board. The authorization holder receives no right, title, ownership, control, or interest in the water reservation.

Revocations:

Failure to comply with the provisions of the Authorization including submission of the annual water user report, may result in revocation of the Authorization.

Senior Rights:

This Authorization is subject to all prior existing water rights in the source of supply. Further, this Authorization is subject to any final determination of existing water rights, as provided by Montana law.

Transfer of Authorization:

Upon a change in ownership of all or any portion of land associated with this Authorization, the person receiving the interest shall file a Notice of Transfer of Reserved Water Use Authorization, Form 109, with the Conservation District.

Water Status Annual Report

Notify the Conservation District whether any water had been used under the authorization or not. Complete and submit Water User Annual Status Report, Form 103, by November 1 annually. If the infrastructure for the use of the water have not been completed, give details of progress toward completion and if an extension of time is required, fill out and submit Application for Extension of Time, Form 108, to the Conservation District.

SPECIAL TERMS:

This Authorization is subject to the type of water use measuring device or water use estimation technique required by the Conservation District. The water user shall maintain the measuring device, so it always operates properly and measures flow rate and volume accurately. The water user shall keep written records of the flow rate and volume of water used. Records shall be submitted by November 15 of each year and upon request at

other times during the year. Failure to submit the *Water Use Annual Status Report* (Form 103) may be cause for revocation of this Authorization. The annual status report must be sent to the Conservation District Office.

Others:

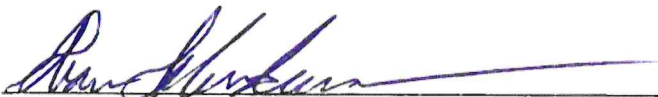
The diversion is shared with authorization RI-009 (40S 104484-00) which was issued with an inaccurate legal land description. The CD and CDB will work to correct the DNRC and CD records so they match.

Additionally, an associated remark shall be added to the DNRC record for both authorizations.

APPROVAL:

Shawn Conradsen
Chairman Printed Name

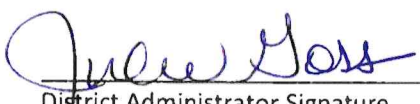
1-10-2025
Date


Chairman Signature

1-10-2025
Date

Julie Goss
District Administrator Printed Contact Name

1-10-2025
Date


District Administrator Signature

1-10-2025
Date

PLACE OF USE:

Half Pivot:

Acres	QtrSec	Sec	Twp	Rge	County
28	NWSE	28	27N	51E	Richland
32	SWSE	28	27N	51E	Richland

60 Acres

Three quarter pivot:

Acres	Govt Lot	QtrSec	Sec	Twp	Rge	County
4.5	L1		21	27N	51E	Richland
4	L5		22	27N	51E	Richland
34	L1		27	27N	51E	Richland
35.5		NENE	28	27N	51E	Richland
4		N2SWNW	27	27N	51E	Richland
16		SENE	28	27N	51E	Richland

98 Acres

Total 158 acres new irrigation



Richland County Conservation District
Pre Application Map
Larry & Lauri Handy Trust Application RI-036M

Water will be pumped with a Cornell 5RB Frame pump, powered by a John Deere 4045T-100 diesel motor. The motor and pump will be mounted on a trailer with an A frame that will support the suction pipe and self cleaning screen. The water will be pumped into 100' of 10" aluminum pipe. The aluminum pipe will hook into 10" 80 psi PIP pipe that will feed the 3/4 pivot. 10" hose line will feed the half pivot.

The system will be automated and a control wire from the pivots to the pump will provide a reliable safety system in the event of a malfunction.

Existing and new pivots may be operated at the same time or individually; depending on field needs and to prevent over-saturation.

98 Acre
Pivot with
Endguns

60 Acre
Half Pivot

POD ID #1
Cornell 75 HP 5 RB Pump

0 0.13 0.25 0.5 Miles

1:20,000



HydroSolutions

LOCATION: 27N 51E SECS 27, 28, Richland County
BASEMAP: ESRI/Maxar World Imagery
FILE LOCATION S:\Projects\DNRC_WaterReservation_
Assist_CD\CD_Projects_ByCounty\RichlandCD\Handy\GIS_ArcPro.aprx
MAPPED BY: TERESA E. OLSON 1/2025 upd: 2/19/2025

Legend

- Point of Diversion
- Pipeline
- ▭ Proposed Place of Use
- 405 104484-00

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: 40S 30165163 CONSERVATION DISTRICT RECORD **CD Number:** RI-036 M
Version: 1 -- ORIGINAL RIGHT
Version Status: ACTIVE

Owners: HANDY, LARRY & LAURI TRUST
HANDY, LARRY & LAURI TRUSTEES
30467 COUNTY ROAD 149
POPLAR, MT 59255-9509
RICHLAND COUNTY CONSERVATION DISTRICT
2745 W HOLLY
SIDNEY, MT 59270

Priority Date: JULY 1, 1985 at 08:00 A.M.
Enforceable Priority Date: JULY 1, 1985 at 08:00 A.M.
Internal Priority Date: APRIL 3, 2024 AT 10:28 A.M.

Purpose (Use): IRRIGATION
Maximum Flow Rate: 2.70 CFS
Maximum Volume: 368.00 AC-FT
Maximum Acres: 158.00
Source Name: MISSOURI RIVER
Source Type: SURFACE WATER

Point of Diversion and Means of Diversion:

<u>ID</u>	<u>Govt Lot</u>	<u>Qtr Sec</u>	<u>Sec</u>	<u>Twp</u>	<u>Rge</u>	<u>County</u>
1		NESESW	27	27N	51E	RICHLAND

Period of Diversion: APRIL 1 TO OCTOBER 31 **Flow Rate:** 2.70 CFS

Diversion Means: PUMP

Purpose (Use): IRRIGATION
Irrigation Type: SPRINKLER
Climatic Area: 2 - MODERATELY HIGH

Volume:
Perfected Flow Rate:
Perfected Volume:

Period of Use: APRIL 1 to OCTOBER 31

Place of Use:

<u>ID</u>	<u>Acres</u>	<u>Govt Lot</u>	<u>Qtr Sec</u>	<u>Sec</u>	<u>Twp</u>	<u>Rge</u>	<u>County</u>
1	28.00		NWSE	28	27N	51E	RICHLAND
2	32.00		SWSE	28	27N	51E	RICHLAND
3	4.50	1		21	27N	51E	RICHLAND
4	4.00	5		22	27N	51E	RICHLAND

5	34.00	1		27	27N	51E	RICHLAND
6	35.50		NENE	28	27N	51E	RICHLAND
7	4.00		N2SWNW	27	27N	51E	RICHLAND
8	16.00		SENE	28	27N	51E	RICHLAND
Total:	158.00						

Geocodes/Valid: -- NO VALID GEOCODES --

Remarks:

ASSOCIATED RIGHT

THE DIVERSION IS SHARED WITH 40S 104484-00 (RI-009M)

CONSERVATION DISTRICT REMARK

THE SHARED DIVERSION WAS ISSUED WITH AN INACCURATE LEGAL LAND DESCRIPTION. THIS WILL BE CORRECTED BY THE CD AND CONSERVATION DISTRICTS BUREAU. - MH 1/13/2025

CONSERVATION DISTRICT WATER MEASUREMENT

METHOD OF WATER USE MEASUREMENT WILL BE BY FLOWMETER. THE MEASUREMENT OF WATER USED WILL BE RECORDED AND REPORTED TO THE CONSERVATION DISTRICT ANNUALLY BY NOVEMBER 15.

PUBLIC NOTICE
Notice to Water Users

THE FOLLOWING APPLICATION HAS BEEN SUBMITTED FOR RESERVED WATER USE TO THE **RICHLAND COUNTY CONSERVAITON DISTRICT**.

Remarks

Important Information:

- During the Public Notice of a new Reserved Water Use Authorization application, objections may be submitted for a 30-day period to the Conservation District using Objection to Application for Reserved Water Use Authorization, Form 107. Objections received outside this period will not be accepted or considered valid.

NAME:	The Lauri & Larry Handy Trust c/o Lauri & Larry Handy, Trustees
APPLICATION NO:	RI-036M
DATE FILED:	4/3/2024
INTERNAL PRIORITY DATE:	7/1/1985
WATER SOURCE:	Missouri River
TOTAL AMOUNT:	368 AF
PERIOD OF APPROPRIATION:	4/1/ to 10/31
DIVERSION POINT:	SESW SEC 27, 27N 51E Richland County
DIVERSION MEANS:	Cornell 5RB Pump
USE:	Irrigation
PLACE OF USE:	158 acres in the E2 SEC 28, NW SEC 27, L1 SEC 21, L5 SEC 22, all in TWP 27N RGE 51E

COMMENTS OR OBJECTIONS to the issuance of an authorization under this application must be received by the Richland County Conservation District ,
2745 W Holly ST, Sidney, MT 59270 (address), 406-433-2103 x 3 (phone number), on or

Before January 10, 2025 (date). Objection forms are available from the Richland County Conservation District. The Conservation District will review this application and any objections at their January 10, 2025, (date) meeting at 4:00 PM (time), at the district office.

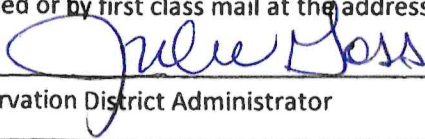
Assistance or questions regarding this application should be directed to the Richland County Conservation District, 2745 W Holly ST, Sidney, MT 59270 , (address), 406-433-2103 (phone number).

PUBLISHED IN THE Roundup (publication name) on December 11, 2024 (date).

MNAXLP
(Publish December 11, 2024)

CERTIFICATE OF SERVICE – MISSOURI

This certifies a true and correct copy of the public notice for the Conservation District Reserved Water Use Application number RI-036M was served upon all individuals listed below. Notices were served as specified or by first class mail at the addresses shown.


Conservation District Administrator

12-9-2024
Date

MT Department of Environmental Quality DEQ Headquarters ATTN: Water Quality Division 1520 East Sixth Avenue Helena, MT 59601	Bureau of Indian Affairs Rocky Mountain Regional Office ATTN: Water Rights and Resources 2021 4 th Avenue North Billings, MT 59101
US Fish & Wildlife Service Montana Fish and Wildlife Conservation Office 4052 Bridger Canyon Road Bozeman, MT 59715	Bureau of Reclamation Montana Area Office PO Box 30137 Billings, MT 59107-0137
MT Department of Fish, Wildlife and Parks ATTN: Fisheries Division 1420 East Sixth Avenue PO Box 200701 Helena, MT 59620-0701	US Department of the Interior Billings Field Office ATTN: Office of the Solicitor 2021 4 th Avenue North, Suite 112 Billings, MT 59101-1405
MT Department of Fish, Wildlife and Parks Region 6 ATTN: Fisheries Division 1 Airport Road Glasgow, MT 59230	Fort Peck Tribes ATTN: Water Resources Office PO Box 1027 Poplar, MT 59255
MT Department of Natural Resources and Conservation Glasgow Regional Office PO Box 1269 Glasgow, MT 59230-1269	Roosevelt County Conservation District PO Box 517 Culbertson, MT 59218
Montana-Dakota Utilities Co 5181 Southgate Dr. Billings, MT 59101	Richland County Conservation District 2745 West Holly ST Sidney, MT 59270
US Army Corps of Engineers Fort Peck, MT 59223	Larry and Lauri Handy 30467 CR 149 Poplar MT 59255

INDIVIDUAL NOTICES – sent to all water right owners in the notice area (list names and addresses)	
MARQUIETA M COLGAN 30761 COUNTY RD 149 POPLAR, MT 59255	
THOMAS F COLGAN 30761 COUNTY RD 149 POPLAR, MT 59255	
PATRICK W COLGAN 30678 COUNTY RD 149 POPLAR, MT 59255	

Technical Analyses Report/ Scientific Credibility Review

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

Technical Analyses
Report /
Scientific Credibility
Review

THE MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

DIRECTOR'S OFFICE: (406) 444-2074
PO BOX 201601



1539 ELEVENTH AVENUE
HELENA, MONTANA 59620-1601

GOVERNOR GREG GIANFORTE

DNRC DIRECTOR AMANDA KASTER

May 1st, 2025

Richland County Conservation District
2745 West Holly St.
Sidney, MT 59270

Subject: Completed Technical Analyses Report for Conservation District Water
Reservation Based Change Preapplication No. 40S 30165372

Dear Applicant,

As designated on the submitted Preapplication Meeting Form per §85-2-302(3)(b), MCA, the Department of Natural Resources and Conservation (DNRC or Department) has completed the technical analyses for Beneficial Water Use Change Preapplication No. 40S 30165372 based on the information provided in your Preapplication Meeting Form accepted by the Department on March 21st, 2025. The technical analyses can be found in the attached report.

This Technical Analyses Report **IS**: A collection of facts that the DNRC has gathered, including content provided in the Preapplication Meeting Form materials. The Department will use this data to analyze the criteria in §85-2-316, MCA if you submit an application for the project described in the completed Preapplication Meeting Form.

This Technical Analyses Report **IS NOT**: An analysis or discussion of whether the Preapplication Meeting Form as filed meets the criteria (§85-2-316, MCA).



You have 180 days to submit the Conservation District Application to Change Water Reservation Application Form 606-CD considering the information provided in the technical analyses and Preapplication Meeting Form. If the Application Form is not submitted to the Havre Regional Office by October 28th, 2025, a new preapplication meeting will be required to process the Application with expedited timelines (ARM 36.12.1302(6)(b)). If any details described in the submitted Application are changed from that of the submitted Preapplication Meeting Form, the discounted filing fee and expedited timelines will not apply (ARM 36.12.1302(6)(a)). Please note that the technical analyses will expire one year from the date of this letter (ARM 36.12.1302(8)).

Please let me know if you have any questions.

Best,

Kailee Ingalls



Kailee Ingalls | Water Resource Specialist
Water Resources Division, Havre Regional Office
Montana Department of Natural Resources and Conservation
Physical| 210 6th Ave | Havre MT 59501
Mailing| PO Box 1828 | Havre MT 59501
DESK: 406-808-7126 **EMAIL:** kailee.ingalls@mt.gov

CC: Teresa Olson <tolson@hydrosi.com>

2912 7th Ave. N.

Billings, MT 59101-0906





Conservation District Application to Change Water Reservation Technical Analyses Report

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

Kailee Ingalls, Water Resource Specialist, Havre Regional Office

Application No.	40S 30165372	Proposed Point of Diversion	NESESW, Section 27, T27N, R51E, Richland County.
Applicant	Richland County Conservation District		

Overview

This report analyzes data submitted by the Applicant in support of the above-mentioned water right application. This report provides technical analyses as required under the Administrative Rules of Montana (ARM) 36.12.1303 in support of the water rights criteria assessment as required in §85-2-311, Montana Code Annotated (MCA). This report was completed by regional office staff.

This Conservation District Application to Change Water Reservation Technical Analyses Report contains the following sections:

Overview	1
1.0 Application Details	2
2.0 Historical Use Analysis.....	3
2.1 Historical Field Consumed and Applied Volumes.....	3
2.2 Historical Conveyance Losses	4
2.3 Historical Diverted Volume	4
2.4 Summary of Historical Use	4
3.0 Surface Water Analysis.....	4
3.1 Summary of Proposed Use.....	4
3.2 Source Description	5
3.3 Method of Estimation.....	5
3.4 Monthly Flow Rate and Volume.....	5
4.0 Area of Potential Impact Analysis	7



Review	8
References	8
Appendix A: Water Rights within the Area of Potential Impact	9

1.0 Application Details

This application adds a point of diversion and places of use to the Richland County Conservation District Water Reservation (40S 84500-00) that was not included in the original water reservation public notice. The Applicant proposes to divert water from the Missouri River, by means of a pump, from April 1 through October 31 at 2.7 CFS up to 368 AF, from a point in the NESESW, Section 27, T27N, R51E, Richland County, for Sprinkler Irrigation use from April 1 through October 31. The place of use includes:

Table 1: Proposed Place of Use							
Pivot Description	Acres	Lot	Quarter Section	Section	Twp.	Range	County
98 AC	4.5	1		21	27N	51E	Richland
	4	5		22	27N	51E	Richland
	34	1		27	27N	51E	Richland
	35.5		NENE	28	27N	51E	Richland
	4		N2SWNW	27	27N	51E	Richland
	16		SENE	28	27N	51E	Richland
60 AC	28		NWSE	28	27N	51E	Richland
	32		SWSE	28	27N	51E	Richland

The Richland County Conservation District Water Reservation (40S 84500-00) has a flow rate of 58.85 CFS and a volume of 14,435.55 AF remaining in their water reservation prior to this application.

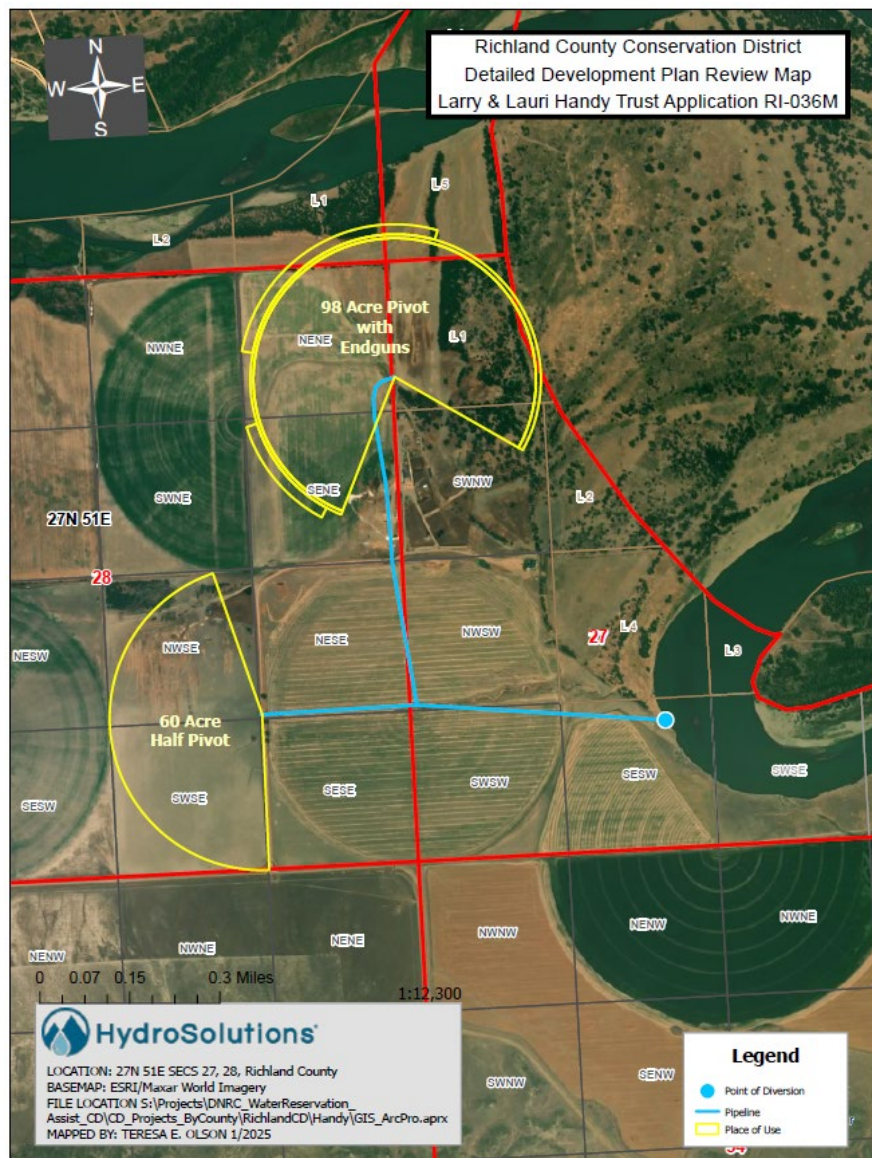


Figure 1: Applicant Provided Map of Proposed Point of Diversion and Place of Use for CD Change Pre-Application No. 40S 30165372

2.0 Historical Use Analysis

2.1 Historical Field Consumed and Applied Volumes

This water right is not supplemental to any other water rights.

Historical place of use, historical acres irrigated, method of irrigation, and historical storage are not considered in this change authorization. This is a new use under the Richland County Conservation District's water reservation, and this section does not apply.



2.2 Historical Conveyance Losses

No historical conveyance losses are considered for the historical use pertaining to this change authorization because this is a new use under the Richland County Conservation District's water reservation, and this section does not apply.

2.3 Historical Diverted Volume

There is no historical diverted volume associated with this change authorization because this is a new use under the Richland County Conservation District's water reservation, and this section does not apply.

2.4 Summary of Historical Use

This application is to change a portion of the water reservation not yet put to use and therefore no historical use for the amount of water being changed exists.

The Department will consider the following values when evaluating the historical use of Richland County Conservation District for the adverse effect criterion: None.

3.0 Surface Water Analysis

3.1 Summary of Proposed Use

The Applicant proposes to use a non-perfected portion of Water Reservation No. 40S 84500-00. The proposed consumed and field applied volumes have been calculated with the inputs shown in Table 2 following the methods described below in ARM 36.12.115 and ARM 36.12.1902.

Proposed Consumptive Volume ((without Irrecoverable Losses (IL)) (AF) =

$$\frac{\text{Wolf Point Seasonal Evapotranspiration } \left(\frac{\text{in}}{\text{acre}}\right)}{\text{Roosevelt County Management Factor} \times \text{Proposed Acres} \times 12 \left(\frac{\text{in}}{\text{ft}}\right)}$$

$$\text{Applied Field Volume} = \frac{\text{Proposed Consumptive Volume (without Irrecoverable Losses)}}{\text{On-Farm Efficiency}}$$

$$\text{Proposed Irrecoverable Losses} = \frac{\text{Volume proposed consumptive use}}{\text{On Farm Efficiency}} \times (5\% \text{ Flood Irrigation or } 10\% \text{ Sprinkler Irrigation})$$

Table 2: Proposed Irrigation POU that's located outside the project area identified in the original water reservation application public notice.

Irrigation Method	Acres	IWR (in) ¹	Mgmt. Factor ²	Field Efficiency	Crop Consumption (AF)	Applied Field Volume (AF)	Irrecoverable Losses (AF)	Total Consumptive Volume (AF)	Non-Consumptive Volume (AF)
Sprinkler	60	27.03	74.60	70%	100.82	144.03	14.4	115.23	28.81
Sprinkler	98	27.03	74.60	70%	164.68	235.25	23.53	188.2	47.05
Total	158	-	-	-	265.5	379.28	37.93	303.43	75.86

¹Wolf Point IWR Weather Station

² Roosevelt County Proposed Use Management Factor 1997-2006



Total Diverted Volume: 379.28 AF

Total Consumptive Volume: 303.43 AF

The following are hydraulically connected surface waters for the purpose of evaluating return flows: There are no return flows to evaluate for this change because this application is to irrigate new acres under a water reservation.

3.2 Source Description

Proposed Source of Water: Missouri River

Proposed Source Type: Perennial

Proposed Point of Diversion: NESESW, Section 27, T27N, R51E, Richland County.

3.3 Method of Estimation

Gage Name: USGS Missouri River near Culbertson

Gage Number: #06185500

Period of Record: 1958-2024

Why this gage is considered an appropriate data source: According to ARM 6.12.1702, available stream gage records will be used to quantify physical availability using the median of the mean monthly flow rate and volume during the proposed months of diversion. USGS Gage #06185500, Missouri River near Culbertson, is the nearest gage to the proposed POD and is approximately 49.4 river miles downstream of the POD. The date range includes the entire period of record for this gage.

3.4 Monthly Flow Rate and Volume

Methodology: The physical availability of the Missouri River water at the POD will be quantified monthly. Department practice for physical availability analyses where the gage used is downstream of the POD is to add the monthly flow rates of existing water rights between the gage and the POD to the median of the mean monthly flows at the gage. The DNRC used the method below to quantify physically available monthly flows and volumes at the POD during the proposed period of diversion:

1. The Department calculated the median of the mean monthly flow rates in cubic feet per second (CFS) for the Missouri River using USGS Gage #06185500 records for each month of the proposed period of diversion (Table 3, column B). Those flows were converted to monthly volumes in AF (Table 3, column C) using the following equation found on DNRC Form 615: median of the mean monthly flow (CFS) $\times$ 1.98 (AF/day/1 CFS) $\times$ days per month = AF/month.



2. The Department calculated the monthly flows appropriated by existing users upstream of the gage on the source (Table 3, column D) by:
 - i. Generating a list of existing water rights from the Missouri River POD to USGS Gage #06185500 (list is included in the application file and available upon request);
 - ii. Calculating the flow rate of all livestock direct from source water rights drinking from the reach of interest using either 30 GPD/AU for Statements of Claim or 15 GPD/AU for all other water rights and adding 35 GPM.
 - iii. Calculating a volume for all livestock direct from source rights without a designated volume by multiplying the number of AU by 30 GPD/AU for Statements of Claim or 15 GPD/AU for all other water rights.
 - iv. Calculating a volume for all irrigation rights without a designated volume by multiplying the number of acres by 2.5 AF/AC per Department water use standards for a moderate consumptive use climatic area.
 - v. Assuming that the flow rate of each existing right is continuously diverted throughout each month of the period of diversion. This assumption is necessary due to the difficulty of differentiating the distribution of appropriated volume over the period of diversion. The Department has determined that this leads to an overestimation of existing uses from the source.
3. Since the gage used is downstream of the POD, the Department added in the flow rates of the existing rights between USGS Gage #06185500 and the POD on the Missouri River (Table 3, column D) to the median of the mean monthly gage values (Table 3, column B) to determine physical availability at the POD (Table 3, column F). Physically available monthly flows were then converted to monthly volumes (Table 3, column G).

Table 3: Physical Availability at the Point of Diversion on the Missouri River						
A	B	C	D	E	F	G
Month	Median of the Mean Monthly Flow at Gage 06185500 (CFS)	Median of the Mean Monthly Volume at Gage 06185500 (AF)	Existing Rights from Gage 06185500 to POD (CFS)	Existing Rights from the POD to Gage 06185500 (AF)	Physically Available Water at POD (CFS)	Physically Available Water at POD (AF)
April	8,000	475,200	244.64	3,925.74	8,244.64	479,125.74
May	8,656	531,305	307.90	4,871.09	8,963.90	536,176.37
June	9,547	567,092	326.18	5,161.16	9,873.18	572,252.96
July	9,371	575,192	326.18	5,161.16	9,697.18	580,353.14
August	8,973	550,763	326.18	5,161.16	9,299.18	555,923.90
September	7,836	465,458	320.38	4,989.89	8,156.38	470,448.29
October	6,976	428,187	258.76	4,210.33	7,234.76	432,397.21



4.0 Area of Potential Impact Analysis

The Area of Potential Impact for this application is: The area of potential impact is approximately 49.4 river miles downstream of the proposed point of diversion. A total of 96 surface water rights exists within the reach. A list of rights can be found in Appendix A.

Why this is an appropriate Area of Potential Impact: The proposed point of diversion is located approximately 49.4 river miles upstream of the USGS Missouri River near Culbertson. A total of 96 surface water rights exists within the reach, which includes the Montana Fish Wildlife & Parks instream flow right (40S 30017671), and the Fort Peck Tribal Reserved Claim (Fort Peck-Montana Compact, MCA §85-20-201, Article III F.1) (Table 4). A list of rights can be found in Appendix A.

Methodology: A list of water rights that divert from the Missouri River in the location between the point of diversion (NESESW, Section 27, T27N, R51E, Richland County) and the USGS Missouri River near Culbertson (Section 03, T27N, R56E, Richland County) were compiled using the DNRC GIS web application Converge. Water rights could include all active claims, exempt notices, permits, perfected conservation district reservations, instream flow, tribal rights, and hydropower water rights.



Review

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

References

Department Standard Practice for Determining Physical Availability of Surface Water
Department Standard Practice for Determining Area of Potential Impact



Appendix A: Water Rights within the Area of Potential Impact



APPENDIX A				
Water Right #	Flow (CFS)	Volume (AF)	Period of Diversion	Water Right Type
MCA 85-20-201	See Table 4	See Table 4	01/01 to 12/31	Reserved Claim
40S 30017671	5,178	3,748,500	01/01 to 12/31	Water Reservation
40S 184965 00*	0.1	7	01/01 to 12/31	Statement of Claim
40S 30142616*	0.1	2	01/01 to 12/31	Statement of Claim
40S 30073870	0.1	1	01/01 to 12/31	Reserved Claim
40S 30142619*	0.1	0	01/01 to 12/31	Statement of Claim
40S 1549 00	1.8	257	01/01 to 12/31	Statement of Claim
40S 30073871	0	304	01/01 to 12/31	Reserved Claim
40S 142790 00	0.5	135	01/01 to 12/31	Statement of Claim
40S 30142621*	0.1	0.03	01/01 to 12/31	Statement of Claim
40S 30051664	2.25	270.6	01/01 to 12/31	Provisional Permit
40S 30142621*	0.08	0.03	01/01 to 12/31	Statement of Claim
40S 30142628*	0.08	0.54	01/01 to 12/31	Statement of Claim
40S 214733 00	0.17	2.5	01/01 to 12/31	Statement of Claim
40S 30142617*	0.08	0.88	01/01 to 12/31	Statement of Claim
40S 30142620*	0.08	1.6	01/01 to 12/31	Statement of Claim
40S 30148233	4.9	3	01/01 to 12/31	Provisional Permit
40S 1508 00**	3.8	348	03/01 to 12/04	Statement of Claim
40S 30046592**	7.4	685	03/01 to 12/04	Statement of Claim
40S 5257 00	3.34	600	03/15 to 11/15	Provisional Permit
40S 101303 00**	1.2	80	04/01 to 09/30	Statement of Claim
40S 2400 00**	4.23	230	04/01 to 09/30	Statement of Claim
40S 30025552	2.8	228	04/01 to 10/01	Conservation District Record
40S 80553 00	4.46	741	04/01 to 10/01	Provisional Permit
40S 46549 00**	3.34	465	04/01 to 10/04	Statement of Claim
40S 30150186	0.8	69	04/01 to 10/15	Conservation District Record
40S 30012791	6	414	04/01 to 10/15	Conservation District Record



Water Right #	Flow (CFS)	Volume (AF)	Period of Diversion	Water Right Type
40S 30027588	3.9	273	04/01 to 10/15	Conservation District Record
40S 30044041	1.8	177	04/01 to 10/15	Conservation District Record
40S 114741 00	6.55	312.5	04/01 to 10/15	Conservation District Record
40S 116904 ³⁴	6.7	68	04/01 to 10/15	Conservation District Record
40S 30002059	4.9	569	04/01 to 10/15	Conservation District Record
40S 30027595	4.1	283.6	04/01 to 10/15	Conservation District Record
40S 30072073	1.73	224	04/01 to 10/15	Conservation District Record
40S 30104412	1.1	161	04/01 to 10/15	Conservation District Record
40S 30104519	5.08	242.5	04/01 to 10/15	Conservation District Record
40S 30104520	1.57	75	04/01 to 10/15	Conservation District Record
40S 30001844	2.6	364	04/01 to 10/15	Conservation District Record
40S 30030883	6.2	0	04/01 to 10/31	Provisional Permit
40S 178507 00**	1.1	70	04/01 to 10/31	Statement of Claim
40S 10761 00	2.2	640	04/01 to 10/31	Provisional Permit
40S 130506 00**	2.89	200	04/01 to 10/31	Statement of Claim
40S 130507 00**	5.67	392.5	04/01 to 10/31	Statement of Claim
40S 182909 00**	3.6	237.5	04/01 to 10/31	Statement of Claim
40S 30151578**	11.49	795	04/01 to 10/31	Statement of Claim
40S 30159245	2.23	220	04/01 to 10/31	Conservation District Record
40S 38071 00	1.07	162	04/01 to 10/31	Provisional Permit
40S 163084 00**	1.9	104	04/01 to 10/31	Statement of Claim
40S 30030881	2.7	0	04/01 to 10/31	Provisional Permit
40S 78203 00	4.5	1202	04/01 to 10/31	Provisional Permit
40S 168965 00**	9.36	682.5	04/01 to 10/31	Statement of Claim
40S 70237 00	7.8	454	04/01 to 10/31	Provisional Permit
40S 89101 00**	3.34	358.78	04/01 to 10/31	Provisional Permit
40S 178504 00**	1.8	400	04/01 to 11/01	Statement of Claim
40S 125402 00** ³	x	275	04/01 to 11/19	Statement of Claim
40S 214734 00*	0.17	6.868	04/01 to 11/30	Statement of Claim



Water Right #	Flow (CFS)	Volume (AF)	Period of Diversion	Water Right Type
40S 30043641	0.5	60	04/11 to 11/01	Conservation District Record
40S 57404 00	2.79	486	04/11 to 11/01	Provisional Permit
40S 104484 00	2.70	264	04/15 to 10/15	Conservation District Record
40S 172266 00	9	1095	04/15 to 10/04	Statement of Claim
40S 101074 00	5.8	927	04/15 to 10/15	Conservation District Record
40S 106990 00	4.2	636	04/15 to 10/15	Conservation District Record
40S 103671 00	2.5	360	04/15 to 10/15	Conservation District Record
40S 101055 00 ⁵	3.6	560	04/15 to 10/15	Conservation District Record
40S 101076 00	7.35	1272	04/15 to 10/15	Provisional Permit
40S 101092 00	3.6	636	04/15 to 10/15	Conservation District Record
40S 1666 00	4.46	99	04/15 to 10/15	Provisional Permit
40S 30005493	6	768	04/15 to 10/15	Conservation District Record
40S 30024907	2.2	272	04/15 to 10/15	Conservation District Record
40S 30152290	8.91	120	04/15 to 10/15	Provisional Permit
40S 66284 00	4.46	700	04/15 to 10/15	Provisional Permit
40S 106984 00	2.93	284	04/15 to 10/15	Conservation District Record
40S 30006748	1.6	125.95	04/15 to 10/15	Conservation District Record
40S 30063091	1.45	92	04/15 to 10/15	Conservation District Record
40S 91841 00	4.34	139.5	04/15 to 10/15	Provisional Permit
40S 42905 00**	1	68	04/15 to 10/19	Statement of Claim
40S 42906 00**	3.6	238	04/15 to 10/19	Statement of Claim
40S 96357 00	5.8	795	04/15 to 10/31	Provisional Permit
40S 11957 00**	1	100	05/01 to 09/19	Statement of Claim
40S 5134 00**	1.4	150	05/01 to 09/30	Statement of Claim
40S 13878 00	13.37	189	05/01 to 09/30	Provisional Permit
40S 5421 00	7.2	1290	05/01 to 09/30	Provisional Permit
40S 130565 00** ⁵	x	145	05/01 to 09/30	Statement of Claim
40S 101292 00**	6.2	1738	05/01 to 10/19	Statement of Claim
40S 137 00	5.57	500	05/01 to 10/31	Provisional Permit
40S 89100 00	3.9	292.5	05/01 to 10/31	Provisional Permit
40S 17166 00 ³	x	x	05/01 to 11/01	Provisional Permit
40S 171797 00**	13.37	851.6	05/10 to 09/24	Statement of Claim
40S 46465 00**	11.14	473.25	05/10 to 10/19	Statement of Claim
40S 3215 00 ³⁴	0.11	x	05/15 to 09/19	Statement of Claim



Water Right #	Flow (CFS)	Volume (AF)	Period of Diversion	Water Right Type
40S 17844 00	1.3	216	06/01 to 08/15	Provisional Permit
40S 30022924	1.3	232	06/01 to 09/01	Provisional Permit
40S 4947 00	1.9	350	06/01 to 09/01	Provisional Permit
40S 30022935	1.3	240	06/01 to 09/01	Provisional Permit
40S 171834 00**	6.68	337.5	06/01 to 09/19	Statement of Claim
40S 171835 00**	5.8	382.5	06/01 to 09/19	Statement of Claim

* These statements of claims were issued for livestock drinking directly from source. Flow rate and volume were not given; rather, these rights were assigned a consumptive rate of 30 gallons per day per animal unit. For legal availability purpose, volume is calculated by multiplying the number of animal units by 30 gallons by the number of days in the claimed period of use. Flow rate is then converted from the volume.

** These statements of claims were issued for irrigation in which a volume was not given. For legal availability purpose, volume is calculated by multiplying the number of acres by 2.5 AF/ac, an irrigation standard within those set by ARM 36.12.115(2)(e).

3 This water use authorization is issued in conjunction with water rights 40S W125402 and 40S P17166. The combined appropriation shall not exceed 6.7 CFS (3000 GPM). Use under this authorization if used alone is 6.7 CFS.

4 This water use authorization is issued supplemental to water right 40S W3215. They have overlapping places of use. If both rights are used to irrigate the overlapping acres, the total volume appropriated shall not exceed 68 acre-feet. This authorization used alone limits the volume appropriated to 68 acre-feet for the overlapping acres.

5 This authorization is used in conjunction with existing claim W130565. All waters are diverted by means of a shared diversion and shall not exceed 3.6 CFS (1600 GPM).

Table 4: Fort Peck-Montana Compact, MCA §85-20-201, Article III F.1 Volumes

Month	Fort Peck Tribal Right (AF)	Fort Peck Tribal Right (CFS)**
April	50,000	840
May	105,000	1708
June	145,000	2437
July	215,000	3497
August	180,000	2927
September	105,000	1765
October	50,000	813

** Flow rate in CFS is calculated by dividing monthly volume in AF by the number of days in the month by 1.98 AF/day.

Preapplication Materials

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

Preapplication Materials



PREAPPLICATION MEETING FORM CHANGE

§ 85-2-302(3)(b)
Form No. 606P (Revised 4/2024)

PREAPPLICATION MEETING FEE

\$ 500

FILING FEE REDUCTION & EXPEDITED TIMELINE

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

For Department Use Only

Application # 40S 30165372 Basin _____
Meeting Date _____ Time _____ AM/PM
Completed Form Deadline _____

RECEIVED

By Havre RO at 9:35 am, Mar 21, 2025

Completed Form Received _____
Fee Rec'd \$ _____ Check # _____
Deposit Receipt # _____
Payor _____
Refund \$ _____ Date _____

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

Applicant Information: Add more as necessary.

Applicant Name _____
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 (describe) _____
Contact/Representative Name _____
Mailing Address _____ City _____ State _____ Zip _____
Phone Numbers: Home _____ Work _____ Cell _____
Email Address _____

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

Meeting Attendees: Add more as necessary.

Name	Organization	Position

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Application Details

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

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

Water Right Number	Current Flow Rate (GPM or CFS)	Flow Rate Needed for Project (GPM or CFS)

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

N/A



ii. Describe the legal land description of the proposed place of use and, if the water rights being changed will have an irrigation or lawn and garden purpose, list the number of irrigated acres.								☐ A	☐ F
Acres	Gov't Lot	¼	¼	¼	Sec	Twp	Rge	County	
Total									

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

N/A

N/A

N/A



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



Historical Use

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

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



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

24. In the table below, write the water right number for each water right with another type proposed for change, the type of water right, and the date of issuance.					☐ A	☐ F
Other Water Right Type Number	Other Water Right Type Description			Date of Issuance		

25. Are there previous Montana Water Court approved stipulations, Water Master reports, or prior Montana Water Court or Department decisions related to the water right(s) being changed?					☐ Y ☐ N	☐ F
a. If yes, explain. 					☐ A	☐ F



26. Fill in the table below based on ARM 36.12.1902(1) and the information provided in questions 21 to 25. In column “Water Right Number” list all water rights proposed for change. Select one of the three options from column “Historical Use Analysis Options” and fill in the “Information Required for Historical Use” associated with that option. Select “Full Historical Use Analysis NA” only if an unperfected Provisional Permit will be used to serve as historical use in lieu of analysis. If the “Existing Historical Use Analysis” or “Full Historical Use Analysis NA” option is selected, skip to question 42 because this section is complete.	☐ A	☐ F	N/A
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Water Right No. Proposed for Change	Historical Use Analysis Option and Information Required for Historical Use
	☐ New Historical Use Analysis. Date for new Historical Use Analysis: _____
	☐ Existing Historical Use Analysis. Change authorization number with existing Historical Use Analysis: _____
	☐ Full Historical Use Analysis NA. Water right number serving as historical use in lieu of analysis: _____
	☐ New Historical Use Analysis. Date for new Historical Use Analysis: _____
	☐ Existing Historical Use Analysis. Change authorization number with existing Historical Use Analysis: _____
	☐ Full Historical Use Analysis NA. Water right number serving as historical use in lieu of analysis: _____
	☐ New Historical Use Analysis. Date for new Historical Use Analysis: _____
	☐ Existing Historical Use Analysis. Change authorization number with existing Historical Use Analysis: _____
	☐ Full Historical Use Analysis NA. Water right number serving as historical use in lieu of analysis: _____



	☐ New Historical Use Analysis. Date for new Historical Use Analysis: _____			
	☐ Existing Historical Use Analysis. Change authorization number with existing Historical Use Analysis: _____			
	☐ Full Historical Use Analysis NA. Water right number serving as historical use in lieu of analysis: _____			
	☐ New Historical Use Analysis. Date for new Historical Use Analysis: _____			
	☐ Existing Historical Use Analysis. Change authorization number with existing Historical Use Analysis: _____			
	☐ Full Historical Use Analysis NA. Water right number serving as historical use in lieu of analysis: _____			
	☐ New Historical Use Analysis. Date for new Historical Use Analysis: _____			
	☐ Existing Historical Use Analysis. Change authorization number with existing Historical Use Analysis: _____			
	☐ Full Historical Use Analysis NA. Water right number serving as historical use in lieu of analysis: _____			
27. Do you have actual knowledge of historical use?		☐ Y ☐ N	☐ F	N/A
a. If yes,				
i. Is this firsthand knowledge?		☐ Y ☐ N	☐ F	N/A
ii. Who has this knowledge and what was their role? _____		☐ A	☐ F	



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

Historical Use: Place of Use

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

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



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

Historical Use: Point of Diversion

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

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



POD ID	Dimensions (FT)	Slope (%)	Material	Estimated Capacity (GPM or CFS)	Method

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

N/A

POD ID	Estimated Capacity (GPM or CFS)	Method

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

N/A

POD ID	Estimated Capacity (GPM or CFS)	Method

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



POD ID	Water Right No.	Flow (GPM or CFS)	Relationship

Historical Use: Period of Diversion

35. Are the period of diversion and the period of use the same?	☐ Y ☐ N	☐ F
a. If no,		
i. Why are they different?	☐ A	☐ F

ii. Is there a place of storage?	☐ Y ☐ N	☐ F
36. When was water diverted for the purpose(s) of the water right(s) being changed?	☐ A	☐ F
Start Date (Month (MM)/Day (DD))	End Date (MM/DD)	
_____	_____	

37. Does the Department have a standard, found in ARM 36.12.112, for the period of diversion for the purposes for which water is used?	☐ Y ☐ N	☐ F
04/01 - 10/31 Climatic Area II		
a. If yes, does the period of diversion fall within Department standards?	☐ Y ☐ N	☐ F
The original reservation; yes. See 37b.		
b. If no or if the period of diversion falls outside Department standards, explain how the period of diversion is reasonable for the purpose.	☐ A	☐ F

38. If the water right(s) being changed have an irrigation purpose, answer the following questions.		
a. What were the crop(s) grown? _____		☐ F

N/A



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

Historical Use: Historical Diverted Volume

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



1. If yes, how much of the diverted volume served each purpose of use and how did you determine this? _____ _____ _____ _____	☐ A	☐ F	N/A
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Historical Use: Historical Consumed Volume

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



completed.					
d. Based on answers to the above questions, what is the percent efficiency of irrigation? _____					☐ F N/A
e. What is the County Management Factor? _____					☐ F N/A
f. What is evapotranspiration (ET) based on the irrigation method and county? _____					☐ F N/A
g. What percent of applied water are irrecoverable losses per ARM 36.12.1902(17)? _____					☐ F N/A
h. Do other water rights supplement or overlap the historical place of use that contribute to the irrigation water demand?				☐ Y ☐ N	☐ F
i. If yes,					
1. How were the water rights operated to serve the irrigation purpose? _____ _____ _____ _____ _____ _____ _____				☐ A	☐ F
2. For each supplemental or overlapping water right, please list the average period of diversion and use (MM/DD-MM/DD), flow rate (GPM or CFS), and the volume of water (AF) contributed to the total irrigation water demand.				☐ A	☐ F
Water Right No.	Avg. Period of Diversion (MM/DD-MM/DD)	Avg. Period of Use (MM/DD-MM/DD)	Flow Rate (GPM or CFS)	Volume Contributed (AF)	



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



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

Historical Use: Historical Places of Storage

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



Surface Water

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

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

Surface Water: Return Flow Analysis

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



ii.	What is the proposed irrigation method type (e.g., flood or sprinkler) and subtype (e.g., level border, graded border, furrow, contour ditch, wild flood, center pivot, or wheel line) for the new acres? _____		☐ F	
iii.	What is the slope of the new place of use? _____		☐ F	
iv.	Based on 47.a.ii to 47.a.iii, what is the percent efficiency of irrigation for the new acres? _____		☐ F	
v.	What is the County Management Factor for the new acres? _____		☐ F	
vi.	What is the ET based on the irrigation method and county for the new acres? _____		☐ F	
vii.	What percent of applied water are irrecoverable losses for new acres per ARM 36.12.1902(17)? _____		☐ F	
viii.	Do other water rights supplement or overlap the new place of use that contribute to the irrigation water demand?	☐ Y ☐ N	☐ F	
1. If yes,				
a. How will the water rights be operated to serve the irrigation purpose? _____ _____ _____ _____		☐ A	☐ F	
b. For each supplemental or overlapping water right, please list the average period of diversion and use (MM/DD-MM/DD), flow rate (GPM or CFS), and the volume of water (AF) contributed to the total irrigation water demand.		☐ A	☐ F	
Water Right No.	Avg. Period of Diversion (MM/DD-MM/DD)	Avg. Period of Use (MM/DD-MM/DD)	Flow Rate (GPM or CFS)	Volume Contributed (AF)



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

Surface Water: Mitigation Analysis

51. Are you changing the purpose to mitigation to meet the criteria of issuance for another application? If yes, answer the questions in this section (questions 52 to 60). If no, this section is complete, and you can skip to question 61.	☐ Y ☐ N	☐ F
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52. Identify the water right(s) proposed for change to a mitigation purpose, the water right(s) identified as needing mitigation and the application number for the water right(s) identified as needing mitigation. 	☐ A	☐ F																																																								
53. What source(s) have been identified as needing mitigation water? 		☐ F																																																								
54. By what means will mitigation water be made available (e.g., infiltration gallery, water left instream)? You must provide a copy of all relevant discharge permits at application submittal (§85-2-364, MCA). 	☐ A	☐ F																																																								
55. What is the location (¼ ¼ ¼ section of start and end of reach) and length (FT) of the mitigation reach? 		☐ F																																																								
56. What is the amount, timing, and location (¼ ¼ ¼ section) of water needed for mitigation? 	☐ A	☐ F																																																								
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 12.5%;">Month</th> <th style="width: 12.5%;">Days</th> <th style="width: 12.5%;">Amount</th> <th style="width: 12.5%;">Location</th> <th style="width: 12.5%;">Month</th> <th style="width: 12.5%;">Days</th> <th style="width: 12.5%;">Amount</th> <th style="width: 12.5%;">Location</th> </tr> </thead> <tbody> <tr><td>January</td><td></td><td></td><td></td><td>July</td><td></td><td></td><td></td></tr> <tr><td>February</td><td></td><td></td><td></td><td>August</td><td></td><td></td><td></td></tr> <tr><td>March</td><td></td><td></td><td></td><td>September</td><td></td><td></td><td></td></tr> <tr><td>April</td><td></td><td></td><td></td><td>October</td><td></td><td></td><td></td></tr> <tr><td>May</td><td></td><td></td><td></td><td>November</td><td></td><td></td><td></td></tr> <tr><td>June</td><td></td><td></td><td></td><td>December</td><td></td><td></td><td></td></tr> </tbody> </table>			Month	Days	Amount	Location	Month	Days	Amount	Location	January				July				February				August				March				September				April				October				May				November				June				December			
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May				November																																																						
June				December																																																						
57. How do the priority dates of the water rights proposed for change to mitigation compare to other water rights on the source? 	☐ A	☐ F																																																								
58. Do you have measurement records or Water Commissioner records that show the reliability of the water right(s) proposed for change to a mitigation purpose?	☐ Y ☐ N	☐ F																																																								



a. If yes, describe and submit them to the Department.				☐ S		☐ F	
59. Do the water rights proposed for change to mitigation have a period of use that is greater than or equal to the period when mitigation is necessary?				☐ Y ☐ N		☐ F	
a. If no, how will mitigation water be made available during the entire period when mitigation is necessary?				☐ A		☐ F	
60. Will other water rights contribute to mitigation water?				☐ Y ☐ N		☐ F	
a. If yes, what amount, at what timing, and at which location (¼ ¼ ¼ section) will they contribute?				☐ A		☐ F	
Month	Days	Amount	Location	Month	Days	Amount	Location
January				July			
February				August			
March				September			
April				October			
May				November			
June				December			

Surface Water: Aquifer Recharge Analysis

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



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



Groundwater

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

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

Groundwater: Adequacy of Diversion

Questions, Narrative Responses, and Tables				Check-boxes	Follow-Up
67. What is the flow rate (GPM or CFS), volume (AF), and period of diversion (MM/DD-MM/DD) required at each new groundwater point of diversion? Label using the same POD ID number as the Proposed Use Map (question 6) to match this information with the location information.				☐ A	☐ F
POD #	Flow Rate (GPM or CFS)	Volume (AF)	Period of Diversion (MM/DD-MM/DD)		
68. Will the monthly pumping schedule differ from an allocation of diverted volume by the number of days in the month for year-round uses or the IWR 80% net irrigation requirements for irrigation/lawn & garden uses (IWR, NRCS 2003)?				☐ Y ☐ N	☐ F
a. If yes, provide the monthly pumping schedule in the table below. Label using the same POD ID number as the Proposed Use Map (question 6).				☐ A	☐ F
Month	POD #	Volume (AF)	Month	POD #	Volume (AF)
January			July		
February			August		
March			September		
April			October		
May			November		
June			December		
69. Answer the following questions specific to the means of groundwater diversion.					
Well/Pit	Questions 70 to 71	Developed Spring	Question 72	Pond	Questions 73 to 76



Groundwater: Adequacy of Diversion: Well/Pit

☐ Applicable ☐ Not Applicable

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



Groundwater: Adequacy of Diversion: Developed Spring

☐ Applicable ☐ Not Applicable

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

Groundwater: Adequacy of Diversion: Pond

☐ Applicable ☐ Not Applicable

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



Groundwater: Adverse Effect to Existing Groundwater Rights

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

Groundwater: Adverse Effect to Surface Water Rights

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

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



Groundwater: Adverse Effect to Surface Water Rights: Return Flow Analysis

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

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

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

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

Groundwater: Mitigation

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



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

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

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



a. If no, how will mitigation water be made available during the entire period when mitigation is necessary?				☐ A		☐ F	
98. Will other water rights contribute to mitigation water?				☐ Y ☐ N		☐ F	
a. If yes, what amount, at what timing, and at which location (¼ ¼ ¼ section) will they contribute?				☐ A		☐ F	
Month	Days	Amount	Location (¼ ¼ ¼ Section)	Month	Days	Amount	Location (¼ ¼ ¼ Section)
January				July			
February				August			
March				September			
April				October			
May				November			
June				December			

Project-Specific Questions

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

Temporary Change

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



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

Change in Purpose

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

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

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



Change in Place of Storage

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



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

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

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

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



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

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



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



Water Marketing

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

Instream Flow Change

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



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



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

Salvage Water

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



Non-Mandatory Questions for Criteria Analysis

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

Adverse Effect

<u>Questions, Narrative Responses, and Tables</u>	<u>Check-boxes</u>	
151. Once the historical use analysis is complete for the application, be ready to compare the historical use with the proposed use. Do you have evidence the proposed use exceeds the historical use for flow rate, consumed volume, or diverted volume?	☐ Y ☐ N	N/A
a. If yes, what is your plan to address this with the permitting process? _____ _____	☐ A	
152. Describe your plan to ensure that existing water rights will be satisfied during times of water shortage. _____ _____ _____	☐ A	
153. Explain how you can control your diversion in response to call being made. _____ _____ _____	☐ A	
154. Are you aware of any calls that have been made on the source of supply or depleted surface water source?	☐ Y ☐ N	
a. If yes, explain. _____ _____	☐ A	
155. Does a water commissioner distribute water or oversee water distribution on your proposed source or depleted surface water source?	☐ Y ☐ N	
156. Will the proposed use change the ability for you to make call?	☐ Y ☐ N	



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

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

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



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



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



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



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

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

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



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



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



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



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

Adequate Means of Diversion and Operation

170. Provide a diagram of how you will operate your system from the point of diversion to the place of use.	☐ S
171. Describe specific information about the capacity of the diversionary structure(s). This may include, where applicable: pump curves and total dynamic head calculations, headgate design specifications, and dike or dam height and length. _____ _____ _____	☐ A
172. Is the diversion capable of providing the full amount requested through the period of diversion?	☐ Y ☐ N



173. Describe the size and configuration of infrastructure to convey water from point of diversion to place of use. This may include, where applicable: ditch capacity and/or pipeline size and configuration. _____ _____ _____	☐ A
174. Describe any losses related to conveyance. _____ _____	☐ A
175. Is the conveyance infrastructure capable of providing the required flow and volume and any losses?	☐ Y ☐ N
176. Does the proposed conveyance require easements?	☐ Y ☐ N
a. If yes, explain. _____	☐ A
177. Describe any places of storage, including whether drainage devices will be installed, and provide preliminary designs, if available. Preliminary designs will be required at application submittal. _____ _____ _____	☐ A
178. Describe specific information about how water is delivered within the place of use. This may include, where applicable, the range of flow rates needed for a pivot and output and configuration of sprinkler heads. _____ _____ _____	☐ A
179. Is the water delivery system capable of providing the requested beneficial use?	☐ Y ☐ N
180. Will your system be designed to discharge water from the project?	☐ Y ☐ N
a. If yes, explain the way water will be discharged and the wastewater disposal method. _____ _____	☐ A



181.	Provide a plan of operations. _____ _____ _____	☐ A
182.	Can the plan of operations deliver the flow rate and volume for the beneficial use being requested?	☐ Y ☐ N
183.	Do you have any plans to measure your diversion and use?	☐ Y ☐ N
	a. If yes, describe the plan and the type of measurements you will take. _____ _____	☐ A
184.	Is the means of diversion a well?	☐ Y ☐ N
	a. If yes, are well log(s) available?	☐ Y ☐ N
	i. If yes, submit well log(s) to DNRC	☐ S
	ii. If no, who drilled the well? _____	

Beneficial Use

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

N/A



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

Possessory Interest

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



FOLLOW-UP PAGE AFFIDAVIT & CERTIFICATION

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

 Chairman Richland Cty Conservation District 2-26-2025
Applicant Signature Date

Applicant Signature Date

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

 02/27/2025
Department Signature Date

Department Signature Date



FOLLOW-UP PAGE

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

Questions marked for follow-up

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AMENDED RESPONSES PAGE

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

Questions with amended responses

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FOLLOW-UP PAGE AFFIDAVIT & CERTIFICATION

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



Applicant Signature

Richland County Conservation District

3-13-2025

Date

Applicant Signature

Date

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



Department Signature

3/21/2025

Date

Department Signature

Date



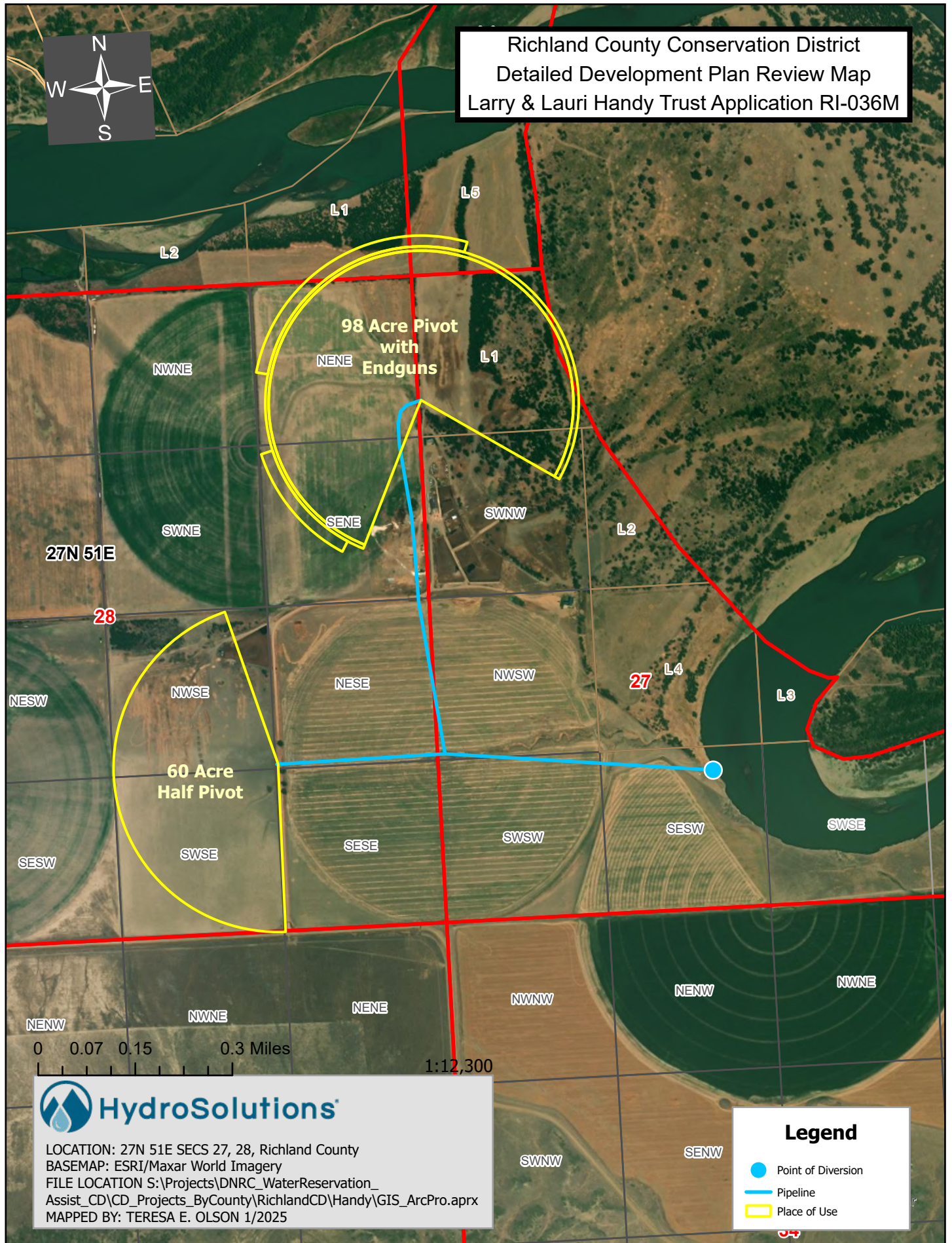
Table 1: Proposed Place of Use

Pre Application Meeting Request Form Place of Use Addendum

Acres	QtrSec	Sec	Twtp	Rge	County
28	NWSE	28	27N	51E	Richland
<u>32</u>	SWSE	28	27N	51E	Richland
60 Acres					

Acres	Govt Lot	QtrSec	Sec	Twp	Rge	County
4.5	L1		21	27N	51E	Richland
4	L5		22	27N	51E	Richland
34	L1		27	27N	51E	Richland
35.5		NENE	28	27N	51E	Richland
4		N2SWNW	27	27N	51E	Richland
<u>16</u>		SENE	28	27N	51E	Richland
98 Acres						

Richland County Conservation District
Detailed Development Plan Review Map
Larry & Lauri Handy Trust Application RI-036M



HydroSolutions

LOCATION: 27N 51E SECS 27, 28, Richland County
BASEMAP: ESRI/Maxar World Imagery
FILE LOCATION S:\Projects\DNRC_WaterReservation_
Assist_CD\CD_Projects_ByCounty\RichlandCD\Handy\GIS_ArcPro.aprx
MAPPED BY: TERESA E. OLSON 1/2025

Legend

- Point of Diversion
- Pipeline
- Place of Use



Richland County Conservation District
Pre Application Map
Larry & Lauri Handy Trust Application RI-036M

Water will be pumped with a Cornell 5RB Frame pump, powered by a John Deere 4045T-100 diesel motor. The motor and pump will be mounted on a trailer with an A frame that will support the suction pipe and self cleaning screen. The water will be pumped into 100' of 10" aluminum pipe. The aluminum pipe will hook into 10" 80 psi PIP pipe that will feed the 3/4 pivot. 10" hose line will feed the half pivot.

The system will be automated and a control wire from the pivots to the pump will provide a reliable safety system in the event of a malfunction.

Existing and new pivots may be operated at the same time or individually; depending on field needs and to prevent over-saturation.

98 Acre
Pivot with
Endguns

60 Acre
Half Pivot

10" PIP

10" Hose

100' 10" aluminum then 10" PIP

POD ID #1
Cornell 75 HP 5 RB Pump

0 0.075 0.15 0.3 Miles

33

1:20,000



HydroSolutions®

LOCATION: 27N 51E SECS 27, 28, Richland County
BASEMAP: ESRI/Maxar World Imagery
FILE LOCATION S:\Projects\DNRC_WaterReservation_
Assist_CD\CD_Projects_ByCounty\RichlandCD\Handy\GIS_ArcPro.aprx
MAPPED BY: TERESA E. OLSON 1/2025 upd: 2/19/2025

Legend

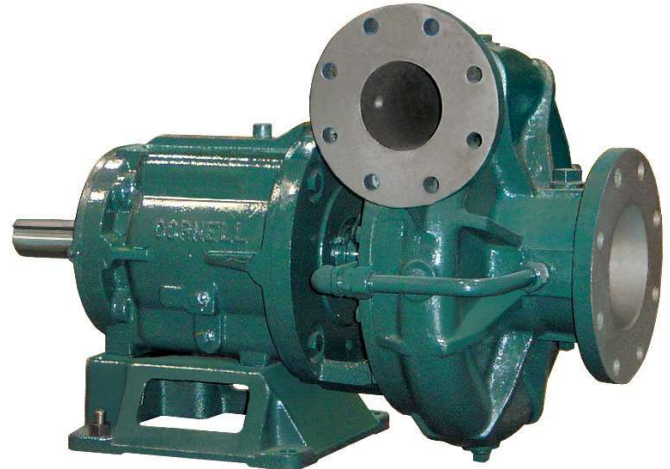
- Point of Diversion
- Pipeline
- Proposed Place of Use
- 40S 104484-00

AVAILABLE MOUNTING CONFIGURATIONS

5RB-F FRAME MOUNT
5RB-RP-F REDI-PRIME FRAME MOUNT
5RB-EM ENGINE MOUNT
5RB-RP-EM REDI-PRIME ENGINE MOUNT
5RB-VF VERTICAL FRAME MOUNT
5RB-VC VERTICAL COUPLED

OPERATING LEVELS

MIN FLOW	265 GPM	60.1 m ³ /h
MAX FLOW	3000 GPM	681 m ³ /h
DISCHARGE SIZE	5"	127 mm
SUCTION SIZE	8"	203 mm
SOLIDS HANDLING	1"	25.4 mm
MAX SPEED	2400 RPM	2400 RPM
SHUT-OFF HEAD	370'	113 m
MAX WORKING PRESSURE	155 PSI	1069 kPa
BEP HEAD	285'	86.9 m
BEP FLOW	2200 GPM	500 m ³ /h
BEP PERCENT	86%	86%



A typical picture of the pump is shown. Please contact Cornell Pump Company for further details. All information is approximate and for general guidance only.

The 5RB general purpose pump is designed with Cornell's renowned quality and durability. It features a 5" discharge and a 8" suction, enclosed multi-vane impeller and flanged tangential double volute. The pump end mounts to F16, F18, EM16, EM18, VC16, VC18, VF16 and VF18 bearing frames. Optional Redi-Prime or Venturi Prime priming system is available. Bearings are heavy-duty, grease lubricated, single ball bearings with a minimum of 20,000 hours bearing life.

- External hydraulic balance line
- Back pullout design
- Replaceable hub & suction wear rings
- Replaceable shaft sleeve
- High efficiency hydraulics
- Low operating costs
- Modular bearing frame
- Long B-10 bearing life (20,000 hour min.)
- Two year warranty
- Optional Cycloseal® with type 1 mechanical seal
- Optional Run-Dry™ lubrication system
- Grease lubrication standard - oil lubrication optional
- SAE #1, 2, 3 & 4 engine mount available to fit
- Oversized shaft and bearings
- Double volute

PARTS	STANDARD MATERIAL (CAST IRON BRONZE FITTED)
WEAR RINGS	Bronze SAE 660
IMPELLER	Bronze SAE 40
VOLUTE	Cast Iron ASTM A48 CL30
SHAFT	SAE 1144 Stressproof Steel
SHAFT SLEEVE	Bronze SAE 660
BACKPLATE	Cast Iron ASTM A48 CL30
PACKING (STANDARD)	Graphited Acrylic
MECHANICAL SEAL (OPTIONAL)	Single T-1, Buna, Carbon/ Ceramic
BEARING FRAME	Cast Iron ASTM A48 CL30



AGRICULTURE



FOOD



INDUSTRIAL



MINING



MUNICIPAL



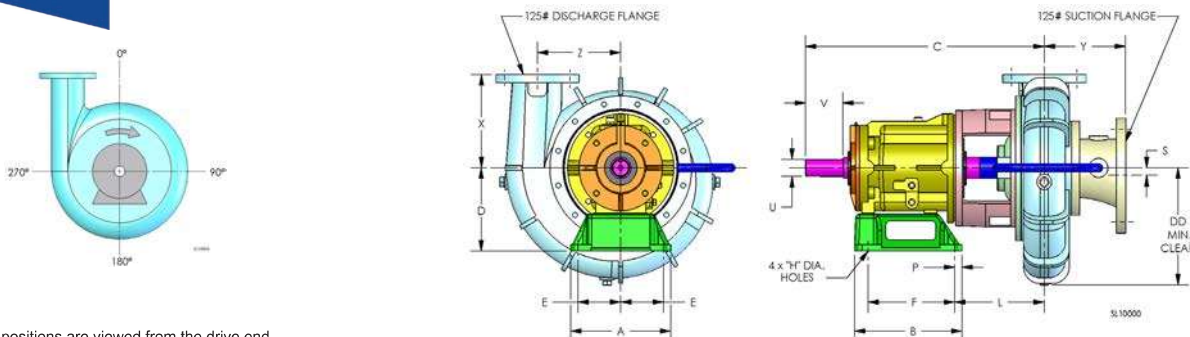
OIL & GAS



REFRIGERATION



RENTAL

**NOTES:**

Discharge positions are viewed from the drive end.
Standard increments of discharge position are shown
in the chart below (DISCH INCR). Consult factory for
other discharge positions.

PUMP DIMENSIONS

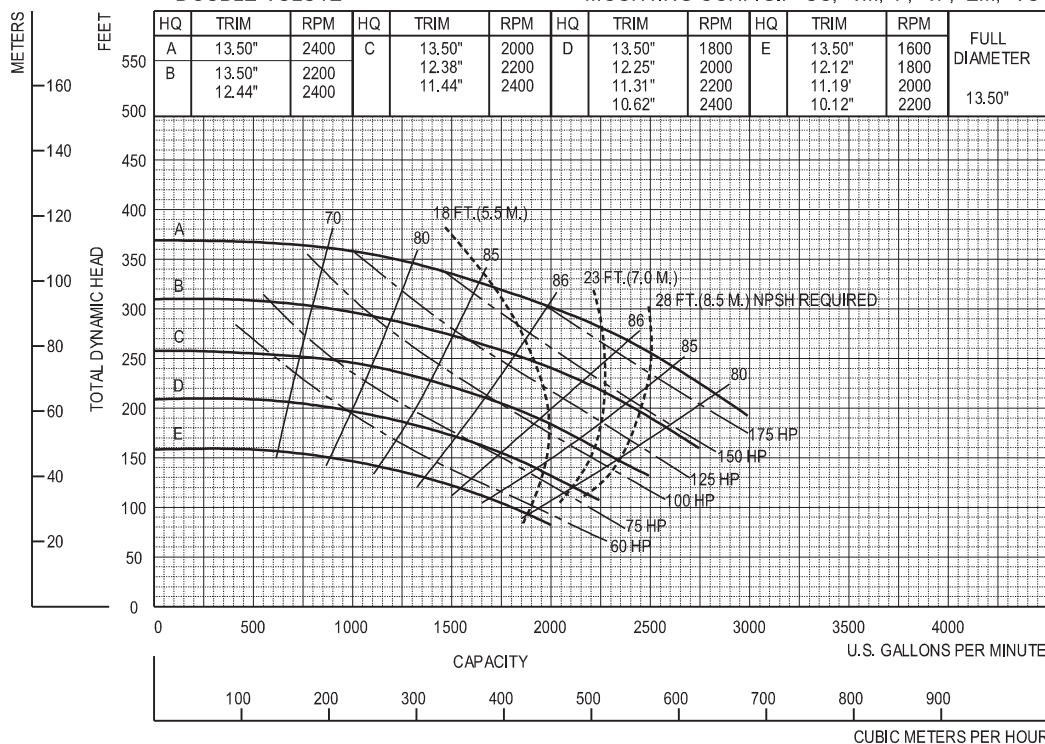
MODEL	FRAME	CONNECTION		DISCH. INC.	A	B	C	D	DD	E	F	H	L	P	S	U	V	X	Y	Z	KEYWAY
		DISCH.	SUCT.																		
5RB	F16	5	8	90°	12	12.88	28.62	9.75	14.25	5.12	10.38	0.81	10.77	0.88	0.88	2	4.5	11	9.78	10	.50X.25

Feet x .305 = Meters
Inches x 25.4 = Millimeters
GPM x .227 = Cubic Meters/Hour
GPM x 3.785 = Liters/Minute
HP x .746 = KW

Speed	Impeller Dia.	Style	Solids Dia.	N _S	Suction	Discharge	No. vanes
VARIOUS	VARIOUS	ENCLOSED	1"	1654	8"	5"	6

DOUBLE VOLUTE

MOUNTING CONFIG.: CC, VM, F, VF, EM, VC



Performances shown are for cool water, close-coupled electric configuration with Cyclo Seal.® Other mounting configurations, seal arrangements or liquids may require horsepower and/or performance adjustments.



Cornell Pump Company • Portland, Oregon

5RB - VARIOUS RPM

12/11/12

NEW PAGE

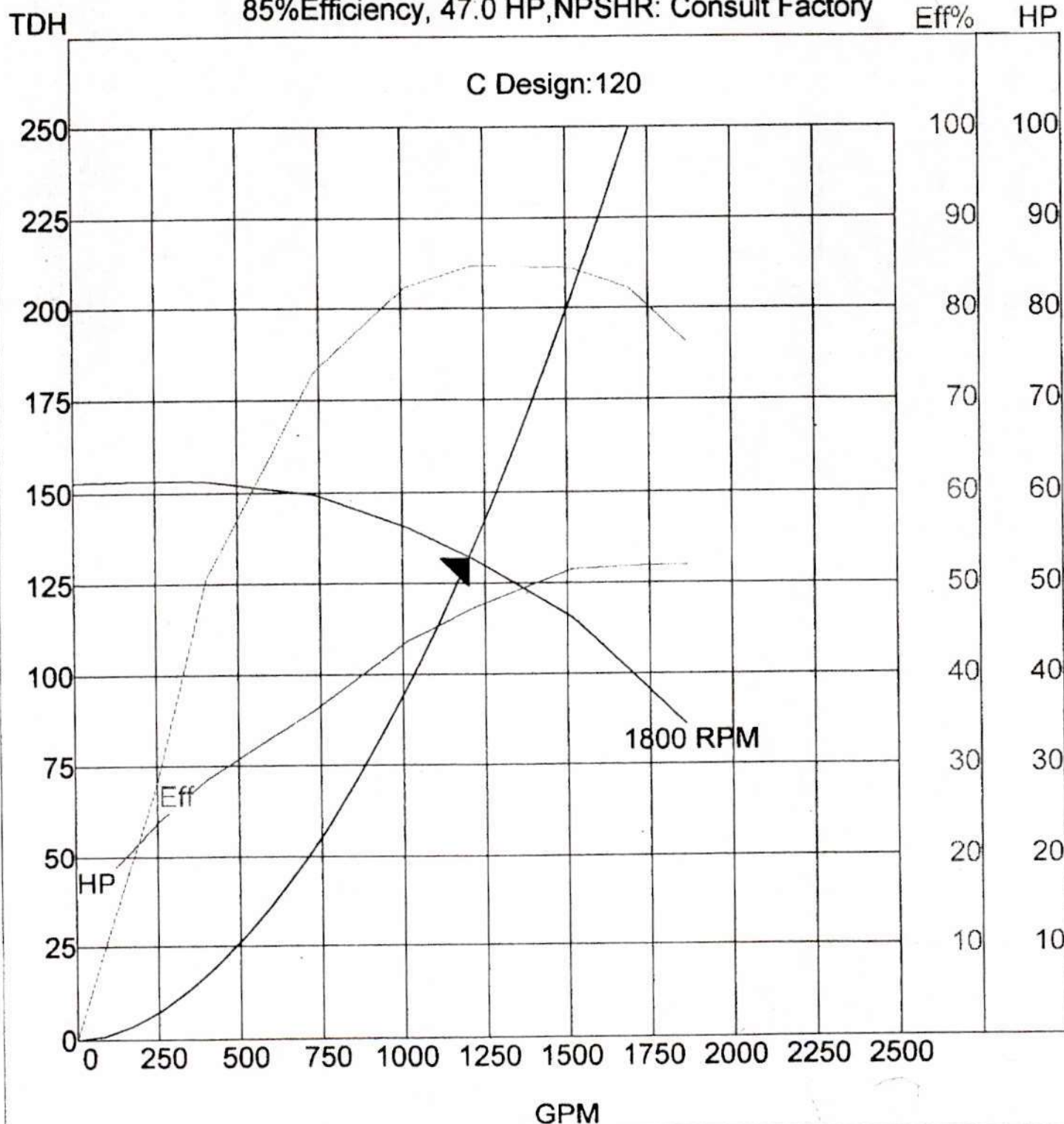
5RB VA

DS5RBF-103014

2323 S.E. Harvester Drive
Portland, Oregon 97222

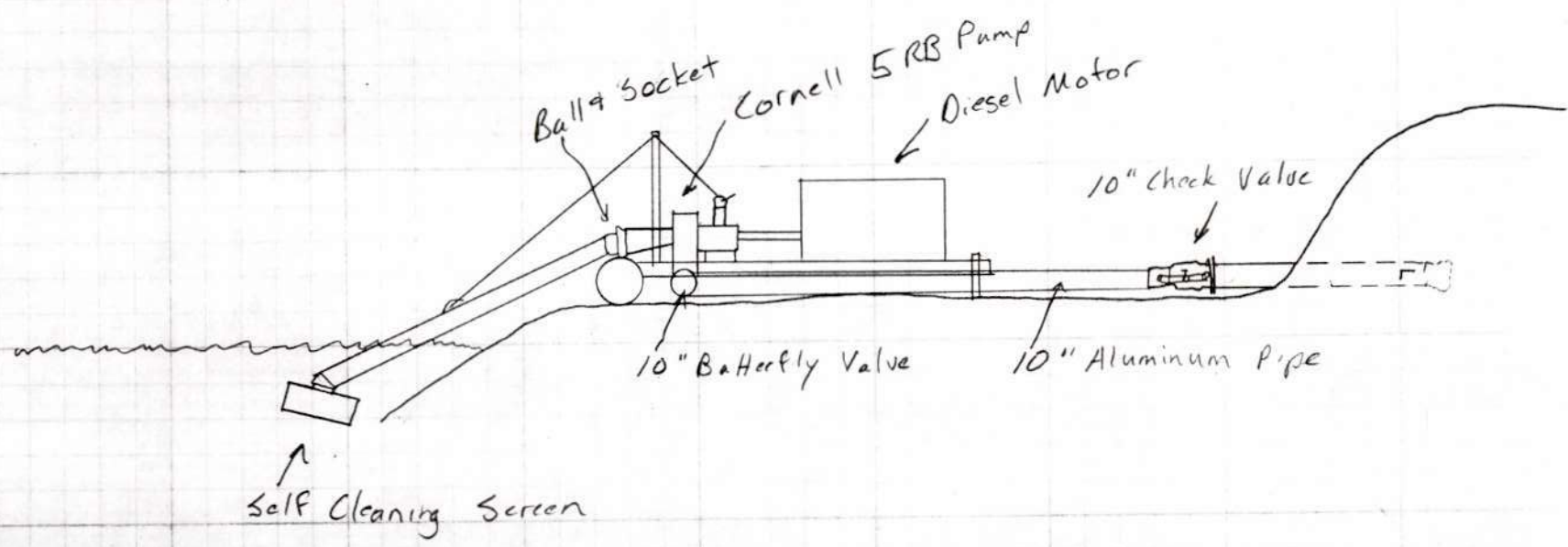
Phone (503)653-0330
FAX (503)653-0338

Prepared For: Larry Handy
5RB 1200 GPM @132' TDH, 1800 RPM 11.75" Impeller
85%Efficiency, 47.0 HP, NPSHR: Consult Factory



G(R) 104484-405

Side View





Valley Dealer

AGRI INDUSTRIES - WILLISTON
3105 2nd St W
PO Box 1166
Williston, ND 58801
United States

Dealer No.

00000337

Customer

Larry Handy
30467 County Road 149
Poplar, MT 59255-9509
US

Field Name

Larry Handy #2

Parent Order No. 15099627
Sprinkler Order No. 15100163

Plant MCCOOK MANUFACTURING

Dealer PO P0-12436
Order Date 01/08/2024
Load Date 01/23/2024
Method Of Shipment W/SYS (15099627)

7 Span Valley Standard Pivot 7000
Machine Flow 700 (GPM)
Pivot Pressure 25 (PSI)

Span and Overhang								Field Area		Flow	
Model	Qty	Length (ft)	Pipe O.D. (in)	Coupler Spacing (in)	D. U. Qty	Profile	Tire	138.3 (Ac) Total		700 (GPM)	
7000	7	180.0	6 5/8	108	20	Standard	11.2 x 38	121.6 (Ac)Pivot 360°		5.06 (GPM per Acre)	
7000	1	36.0	6 5/8	110	6			16.7 (Ac) EG on 100%		0.27 (in per day) App Rate	
								1298.3 (ft)Machine Length		0.157 (in) App Depth @ 100%	
								86.6 (ft)End Gun Radius		94.1 (GPM) End Gun	

Messages	Pressure	LRDU Drive Train
<u>Caution:</u> None	25 (PSI) Pivot Pressure	34 RPM Center Drive @60 Hz freq.
<u>Dealer:</u> None	Calculated Pressure	11.2 x 38 Tire
	0.0 (ft) Highest Elevation	52:1Wheel GB Ratio, LRDU Dist 1262.1 (ft)
	0.0 (ft) Lowest Elevation	14.0 Hrs/360° @ 100% 9.45 (Ft per Min)
		14 Hrs/360° @ 100%

Sprinkler -- Computer Spacing

<u>Sprinkler Configuration</u>	<u>Range(ft)</u>
Valley U-Pipe 6(in) Galvanized 3/4 M NPT x 3/4 M Hose	All
Blue Premium Hose Drop Variable Length 60(in) Ground Clr	
Nelson Regulator All Flo ACME 15(PSI) 3/4 F NPT	
Nelson D3000 Integrated Weight 1.00	
Nelson R3030 D8 - Orange 3/4 F Acme	
990.50 (ft) Total Drop Hose Length	

Pressure Loss

Pipe Length (ft)	Pipe I.D. (in)	Pipe Finish	C-Factor	Loss (PSI)
1280.2	6.42	Galvanized	150	7.4
18.1	3.79	Galvanized	150	0.3
Total =				7.7

End Gun(s) & Booster Pump Information



Primary End Gun
Nelson SR100 End Gun
0.55 Nozzle
Berkeley 2 HP Booster Pump

Secondary End Gun
Nelson R55i VT End Gun
60 Nozzle

Will be operated at the same time as the primary end gun.

Span Flow

Span Number	Irrigated Length (ft)	Area (Ac)	Rqd (GPM)	Act (GPM)	Rqd (GPM per Acre)	Act (GPM per Acre)	% Deviation
1	179.9	2.4	11.7	13.7	4.91	5.74	16.9
2	180.1	7.1	34.7	34.7	4.91	4.91	0.0
3	180.1	11.7	57.6	57.6	4.91	4.91	-0.1
4	180.1	16.4	80.6	80.8	4.91	4.92	0.2
5	180.1	21.1	103.6	103.6	4.91	4.91	-0.0
6	180.1	25.8	126.5	126.7	4.91	4.91	0.1
7	179.8	30.4	149.3	149.0	4.91	4.90	-0.2
O/H	36.2	6.7	33.7	33.9	5.05	5.07	0.5
EG	86.6	16.7	97.9	94.1	5.84	5.62	-3.8
Totals		138.3		694.1			
Drain Sprinkler			8.7	8.2			
Total Machine Flow				702.3			

Advanced Options

Drain Sprinkler = Senninger Directional
Last Sprinkler Coverage = 1 ft
Sprinkler Coverage Length = 1299.3 ft
Use Last Coupler= YES
Minimum Mainline Pressure = 6 PSI

Shipping Options

Ship Drop Hardware
Ship Endgun Nozzle
Ship Endgun & Hardware
Do not ship Endgun Valve / Nozzle Valve Hardware
Do not ship Boosterpump Hardware

Parent Order No 15099627				Dealer AGRI INDUSTRIES - WILLISTON				Sprinkler Order No 15100163					
				Customer Larry Handy									
				Field Name Larry Handy #2									
Valley Standard Pivot 7000 Machine Sprinkler Chart													
Cpl No	Dist From Pivot (ft)	Spk No	Dist Last Spk (ft)	Nozzle Size	Color	Spk Model	Wear Pad	Drop Length (in)	Regulator	Line (PSI)	Spk (PSI)	Rqd (GPM)	Act (GPM)
1	6.3			Gauge						25.0			
2	15.3			Plug									
3	24.3			Plug									
Sprinkler : Nelson Rotator R3030													
4	33.3	1		14	Lime	R3030	D8 - Orange	114	All Flo ACME 15A	24.0	16.0	0.6	1.3
5	42.3			Plug									
6	51.3	2	18.0	14	Lime	R3030	D8 - Orange	123	All Flo ACME 15A	23.5	16.0	0.7	1.3
7	60.3			Plug									
8	69.3	3	18.0	14	Lime	R3030	D8 - Orange	130	All Flo ACME 15A	23.1	16.0	0.9	1.3
9	78.3			Plug									
10	87.3	4	18.0	14	Lime	R3030	D8 - Orange	133	All Flo ACME 15A	22.8	16.0	1.1	1.3
11	96.2			Plug									
12	105.2	5	17.9	14	Lime	R3030	D8 - Orange	133	All Flo ACME 15A	22.7	16.0	1.3	1.3
13	114.2			Plug									
14	123.2	6	18.0	15	Lime/Notch	R3030	D8 - Orange	129	All Flo ACME 15A	22.6	16.0	1.6	1.6
15	132.2			Plug									
16	141.1	7	17.9	16	Lavender	R3030	D8 - Orange	123	All Flo ACME 15A	22.7	16.0	1.8	1.8
17	150.1			Plug									
18	159.1	8	18.0	17	Lavender/Notch	R3030	D8 - Orange	113	All Flo ACME 15A	22.9	16.0	2.0	2.0
19	168.1			Plug									
20	177.1	9	18.0	18	Gray	R3030	D8 - Orange	101	All Flo ACME 15A	23.2	16.0	2.3	2.2
	181.7	Tower Number : 1 Span Length(ft) : 179.9											
21	186.4			Plug									
22	195.4	10	18.3	19	Gray/Notch	R3030	D8 - Orange	108	All Flo ACME 15A	22.8	15.9	2.5	2.5
23	204.4			Plug									
24	213.4	11	18.0	20	Turquoise	R3030	D8 - Orange	120	All Flo ACME 15A	22.2	15.9	2.7	2.8
25	222.4			Plug									
26	231.4	12	18.0	21	Turq/Notch	R3030	D8 - Orange	129	All Flo ACME 15A	21.7	15.9	2.9	3.0
27	240.4			Plug									
28	249.4	13	18.0	22	Yellow	R3030	D8 - Orange	134	All Flo ACME 15A	21.3	15.8	3.2	3.3

Parent Order No 15099627				Dealer AGRI INDUSTRIES - WILLISTON				Sprinkler Order No 15100163					
				Customer Larry Handy									
				Field Name Larry Handy #2									
<u>Valley Standard Pivot 7000 Machine Sprinkler Chart</u>													
Cpl No	Dist From Pivot (ft)	Spk No	Dist Last Spk (ft)	Nozzle Size	Color	Spk Model	Wear Pad	Drop Length (in)	Regulator	Line (PSI)	Spk (PSI)	Rqd (GPM)	Act (GPM)
29	258.4			Plug									
30	267.4	14	18.0	22	Yellow	R3030	D8 - Orange	137	All Flo ACME 15A	21.1	15.8	3.4	3.3
31	276.3			Plug									
32	285.3	15	17.9	23	Yellow/Notch	R3030	D8 - Orange	136	All Flo ACME 15A	21.0	15.8	3.6	3.6
33	294.3			Plug									
34	303.3	16	18.0	24	Red	R3030	D8 - Orange	132	All Flo ACME 15A	21.0	15.7	3.9	4.0
35	312.3			Plug									
36	321.2	17	17.9	24	Red	R3030	D8 - Orange	125	All Flo ACME 15A	21.1	15.7	4.1	4.0
37	330.2			Plug									
38	339.2	18	18.0	25	Red/Notch	R3030	D8 - Orange	114	All Flo ACME 15A	21.3	15.7	4.3	4.3
39	348.2			Plug									
40	357.2	19	18.0	26	White	R3030	D8 - Orange	101	All Flo ACME 15A	21.6	15.6	4.6	4.6
	361.8	Tower Number : 2 Span Length(ft) : 180.1											
41	366.5			Plug									
42	375.5	20	18.3	27	White/Notch	R3030	D8 - Orange	108	All Flo ACME 15A	21.2	15.6	4.8	5.0
43	384.5			Plug									
44	393.5	21	18.0	27	White/Notch	R3030	D8 - Orange	120	All Flo ACME 15A	20.7	15.5	5.0	4.9
45	402.5			Plug									
46	411.5	22	18.0	28	Blue	R3030	D8 - Orange	129	All Flo ACME 15A	20.2	15.5	5.2	5.4
47	420.5			Plug									
48	429.5	23	18.0	28	Blue	R3030	D8 - Orange	134	All Flo ACME 15A	19.9	15.5	5.5	5.4
49	438.5			Plug									
50	447.5	24	18.0	29	Blue/Notch	R3030	D8 - Orange	137	All Flo ACME 15A	19.7	15.4	5.7	5.7
51	456.4			Plug									
52	465.4	25	17.9	29	Blue/Notch	R3030	D8 - Orange	136	All Flo ACME 15A	19.5	15.4	5.9	5.7
53	474.4			Plug									
54	483.4	26	18.0	30	Dark Brown	R3030	D8 - Orange	132	All Flo ACME 15A	19.6	15.4	6.1	6.1
55	492.4			Plug									
56	501.3	27	17.9	31	Dk Brown/Notch	R3030	D8 - Orange	125	All Flo ACME 15A	19.7	15.3	6.4	6.5
57	510.3			Plug									
58	519.3	28	18.0	31	Dk Brown/Notch	R3030	D8 - Orange	114	All Flo ACME 15A	19.9	15.3	6.6	6.5
59	528.3			Plug									
60	537.3	29	18.0	32	Orange	R3030	D8 - Orange	101	All Flo ACME 15A	20.3	15.2	6.9	6.9

Parent Order No 15099627				Dealer AGRI INDUSTRIES - WILLISTON				Sprinkler Order No 15100163					
				Customer Larry Handy									
				Field Name Larry Handy #2									
<u>Valley Standard Pivot 7000 Machine Sprinkler Chart</u>													
Cpl No	Dist From Pivot (ft)	Spk No	Dist Last Spk (ft)	Nozzle Size	Color	Spk Model	Wear Pad	Drop Length (in)	Regulator	Line (PSI)	Spk (PSI)	Rqd (GPM)	Act (GPM)
541.9		Tower Number : 3			Span Length(ft) : 180.1								
61	546.6			Plug									
62	555.6	30	18.3	33	Orange/Notch	R3030	D8 - Orange	108	All Flo ACME 15A	19.9	15.2	7.1	7.4
63	564.6			Plug									
64	573.6	31	18.0	33	Orange/Notch	R3030	D8 - Orange	120	All Flo ACME 15A	19.4	15.2	7.3	7.4
65	582.6			Plug									
66	591.6	32	18.0	33	Orange/Notch	R3030	D8 - Orange	129	All Flo ACME 15A	18.9	15.2	7.5	7.4
67	600.6			Plug									
68	609.6	33	18.0	34	Dark Green	R3030	D8 - Orange	134	All Flo ACME 15A	18.6	15.1	7.8	7.8
69	618.6			Plug									
70	627.6	34	18.0	34	Dark Green	R3030	D8 - Orange	137	All Flo ACME 15A	18.4	15.1	8.0	7.8
71	636.5			Plug									
72	645.5	35	17.9	35	Dk Green/Notch	R3030	D8 - Orange	136	All Flo ACME 15A	18.3	15.0	8.2	8.2
73	654.5			Plug									
74	663.5	36	18.0	35	Dk Green/Notch	R3030	D8 - Orange	132	All Flo ACME 15A	18.4	15.0	8.4	8.2
75	672.5			Plug									
76	681.4	37	17.9	36	Purple	R3030	D8 - Orange	125	All Flo ACME 15A	18.5	14.9	8.7	8.6
77	690.4			Plug									
78	699.4	38	18.0	37	Purple/Notch	R3030	D8 - Orange	114	All Flo ACME 15A	18.8	14.9	8.9	9.2
79	708.4			Plug									
80	717.4	39	18.0	37	Purple/Notch	R3030	D8 - Orange	101	All Flo ACME 15A	19.2	14.9	9.2	9.2
722.0		Tower Number : 4			Span Length(ft) : 180.1								
81	726.7			Plug									
82	735.7	40	18.3	37	Purple/Notch	R3030	D8 - Orange	108	All Flo ACME 15A	18.9	14.8	9.5	9.2
83	744.7			Plug									
84	753.7	41	18.0	38	Black	R3030	D8 - Orange	120	All Flo ACME 15A	18.3	14.8	9.6	9.7
85	762.7			Plug									
86	771.7	42	18.0	38	Black	R3030	D8 - Orange	129	All Flo ACME 15A	17.9	14.8	9.8	9.7
87	780.7			Plug									
88	789.7	43	18.0	39	Black/Notch	R3030	D8 - Orange	134	All Flo ACME 15A	17.7	14.7	10.1	10.2
89	798.7			Plug									
90	807.7	44	18.0	39	Black/Notch	R3030	D8 - Orange	137	All Flo ACME 15A	17.5	14.7	10.3	10.2
91	816.6			Plug									

Parent Order No 15099627				Dealer AGRI INDUSTRIES - WILLISTON				Sprinkler Order No 15100163					
Customer Larry Handy													
Field Name Larry Handy #2													
Valley Standard Pivot 7000 Machine Sprinkler Chart													
Cpl No	Dist From Pivot (ft)	Spk No	Dist Last Spk (ft)	Nozzle Size	Color	Spk Model	Wear Pad	Drop Length (in)	Regulator	Line (PSI)	Spk (PSI)	Rqd (GPM)	Act (GPM)
92	825.6	45	17.9	34	Dark Green	R3030	D8 - Orange	136	All Flo ACME 15A	17.4	15.1	7.8	7.8
93	834.6	46	9.0	28	Blue	R3030	D8 - Orange	134	All Flo ACME 15A	17.5	15.5	5.3	5.4
94	843.6	47	9.0	28	Blue	R3030	D8 - Orange	132	All Flo ACME 15A	17.5	15.4	5.4	5.4
95	852.6	48	9.0	28	Blue	R3030	D8 - Orange	129	All Flo ACME 15A	17.6	15.4	5.4	5.4
96	861.5	49	8.9	28	Blue	R3030	D8 - Orange	125	All Flo ACME 15A	17.7	15.4	5.5	5.4
97	870.5	50	9.0	29	Blue/Notch	R3030	D8 - Orange	120	All Flo ACME 15A	17.8	15.4	5.5	5.7
98	879.5	51	9.0	29	Blue/Notch	R3030	D8 - Orange	114	All Flo ACME 15A	18.0	15.4	5.6	5.7
99	888.5	52	9.0	29	Blue/Notch	R3030	D8 - Orange	108	All Flo ACME 15A	18.2	15.4	5.7	5.7
100	897.5	53	9.0	29	Blue/Notch	R3030	D8 - Orange	101	All Flo ACME 15A	18.4	15.4	5.8	5.7
902.1		Tower Number : 5 Span Length(ft) : 180.1											
101	906.8	54	9.3	29	Blue/Notch	R3030	D8 - Orange	101	All Flo ACME 15A	18.4	15.4	5.9	5.7
102	915.8	55	9.0	29	Blue/Notch	R3030	D8 - Orange	108	All Flo ACME 15A	18.1	15.4	5.8	5.7
103	924.8	56	9.0	30	Dark Brown	R3030	D8 - Orange	114	All Flo ACME 15A	17.9	15.4	5.9	6.1
104	933.8	57	9.0	30	Dark Brown	R3030	D8 - Orange	120	All Flo ACME 15A	17.6	15.4	6.0	6.1
105	942.8	58	9.0	29	Blue/Notch	R3030	D8 - Orange	125	All Flo ACME 15A	17.4	15.4	6.0	5.7
106	951.8	59	9.0	30	Dark Brown	R3030	D8 - Orange	129	All Flo ACME 15A	17.3	15.3	6.1	6.1
107	960.8	60	9.0	30	Dark Brown	R3030	D8 - Orange	132	All Flo ACME 15A	17.1	15.3	6.1	6.1
108	969.8	61	9.0	30	Dark Brown	R3030	D8 - Orange	134	All Flo ACME 15A	17.0	15.3	6.2	6.1
109	978.8	62	9.0	30	Dark Brown	R3030	D8 - Orange	136	All Flo ACME 15A	16.9	15.3	6.2	6.1
110	987.8	63	9.0	31	Dk Brown/Notch	R3030	D8 - Orange	137	All Flo ACME 15A	16.9	15.3	6.3	6.5
111	996.7	64	8.9	30	Dark Brown	R3030	D8 - Orange	137	All Flo ACME 15A	16.8	15.3	6.3	6.1
112	1005.7	65	9.0	31	Dk Brown/Notch	R3030	D8 - Orange	136	All Flo ACME 15A	16.8	15.3	6.4	6.5
113	1014.7	66	9.0	31	Dk Brown/Notch	R3030	D8 - Orange	134	All Flo ACME 15A	16.9	15.3	6.5	6.5
114	1023.7	67	9.0	31	Dk Brown/Notch	R3030	D8 - Orange	132	All Flo ACME 15A	17.0	15.3	6.5	6.5
115	1032.7	68	9.0	31	Dk Brown/Notch	R3030	D8 - Orange	129	All Flo ACME 15A	17.0	15.3	6.5	6.5
116	1041.6	69	8.9	31	Dk Brown/Notch	R3030	D8 - Orange	125	All Flo ACME 15A	17.2	15.2	6.6	6.5
117	1050.6	70	9.0	32	Orange	R3030	D8 - Orange	120	All Flo ACME 15A	17.3	15.2	6.7	6.9
118	1059.6	71	9.0	32	Orange	R3030	D8 - Orange	114	All Flo ACME 15A	17.5	15.2	6.8	6.9
119	1068.6	72	9.0	32	Orange	R3030	D8 - Orange	108	All Flo ACME 15A	17.7	15.2	6.8	6.9
120	1077.6	73	9.0	32	Orange	R3030	D8 - Orange	101	All Flo ACME 15A	18.0	15.2	7.0	6.9
1082.2		Tower Number : 6 Span Length(ft) : 180.1											
121	1086.9	74	9.3	32	Orange	R3030	D8 - Orange	101	All Flo ACME 15A	17.9	15.2	7.0	6.9
122	1095.9	75	9.0	32	Orange	R3030	D8 - Orange	108	All Flo ACME 15A	17.7	15.2	7.0	6.9

Valley Standard Pivot 7000 Machine Sprinkler Chart

Cpl No	Dist From Pivot (ft)	Spk No	Dist Last Spk (ft)	Nozzle Size	Color	Spk Model	Wear Pad	Drop Length (in)	Regulator	Line (PSI)	Spk (PSI)	Rqd (GPM)	Act (GPM)
123	1104.9	76	9.0	32	Orange	R3030	D8 - Orange	114	All Flo ACME 15A	17.4	15.2	7.0	6.9
124	1113.9	77	9.0	32	Orange	R3030	D8 - Orange	120	All Flo ACME 15A	17.2	15.2	7.1	6.9
125	1122.9	78	9.0	33	Orange/Notch	R3030	D8 - Orange	125	All Flo ACME 15A	17.0	15.2	7.2	7.4
126	1131.9	79	9.0	33	Orange/Notch	R3030	D8 - Orange	129	All Flo ACME 15A	16.9	15.2	7.2	7.4
127	1140.9	80	9.0	33	Orange/Notch	R3030	D8 - Orange	132	All Flo ACME 15A	16.7	15.2	7.3	7.4
128	1149.9	81	9.0	33	Orange/Notch	R3030	D8 - Orange	134	All Flo ACME 15A	16.6	15.2	7.3	7.4
129	1158.9	82	9.0	33	Orange/Notch	R3030	D8 - Orange	136	All Flo ACME 15A	16.6	15.2	7.4	7.4
130	1167.9	83	9.0	33	Orange/Notch	R3030	D8 - Orange	137	All Flo ACME 15A	16.5	15.2	7.4	7.4
131	1176.8	84	8.9	33	Orange/Notch	R3030	D8 - Orange	137	All Flo ACME 15A	16.5	15.2	7.5	7.4
132	1185.8	85	9.0	33	Orange/Notch	R3030	D8 - Orange	136	All Flo ACME 15A	16.6	15.1	7.6	7.4
133	1194.8	86	9.0	33	Orange/Notch	R3030	D8 - Orange	134	All Flo ACME 15A	16.6	15.1	7.6	7.4
134	1203.8	87	9.0	34	Dark Green	R3030	D8 - Orange	132	All Flo ACME 15A	16.7	15.1	7.7	7.8
135	1212.8	88	9.0	34	Dark Green	R3030	D8 - Orange	129	All Flo ACME 15A	16.8	15.1	7.7	7.8
136	1221.7	89	8.9	34	Dark Green	R3030	D8 - Orange	125	All Flo ACME 15A	16.9	15.1	7.7	7.8
137	1230.7	90	9.0	34	Dark Green	R3030	D8 - Orange	120	All Flo ACME 15A	17.1	15.1	7.8	7.8
138	1239.7	91	9.0	34	Dark Green	R3030	D8 - Orange	114	All Flo ACME 15A	17.3	15.1	7.9	7.8
139	1248.7	92	9.0	34	Dark Green	R3030	D8 - Orange	108	All Flo ACME 15A	17.5	15.1	8.0	7.8
140	1257.7	93	9.0	34	Dark Green	R3030	D8 - Orange	101	All Flo ACME 15A	17.8	15.1	7.9	7.8
141	1261.5				B.P.								
	1262.1				Tower Number : 7								
					Span Length(ft) : 179.8								
142	1266.5	94	8.8	35	Dk Green/Notch	R3030	D8 - Orange	99	All Flo ACME 15A	17.8	15.0	8.1	8.2
143	1275.6	95	9.2	35	Dk Green/Notch	R3030	D8 - Orange	103	All Flo ACME 15A	17.7	15.0	8.2	8.2
144	1279.2				Plug								
145	1284.6	96	8.9	35	Dk Green/Notch	R3030	D8 - Orange	107	All Flo ACME 15A	17.5	15.0	8.2	8.2
146	1293.7	97	9.2	37	Purple/Notch	R3030	D8 - Orange	112	All Flo ACME 15A	17.3	14.9	9.3	9.2
					Sprinkler : Senninger Spray								
147	1297.3	98		17	Dark Green	Directional				17.0	17.0	8.7	8.2
	1298.3				Overhang								
					Span Length(ft) : 36.2								

Sprinkler : Nelson End Of Pivot Sprinkler

Valley Standard Pivot 7000 Machine Sprinkler Chart

Cpl No	Dist From Pivot (ft)	Spk No	Dist Last Spk (ft)	Nozzle Size	Color	Spk Model	Wear Pad	Drop Length (in)	Regulator	Line (PSI)	Spk (PSI)	Rqd (GPM)	Act (GPM)
147	1298.3	99		# 60	Red Snap Fit	R55i VT				17.0	17.7	33.0	30.6
		Sprinkler : Nelson Endgun -----											
													
148	1298.3	100		0.55		SR100				17.0	51.4	64.9	63.6

Primary Endgun Arc Settings: Forward Angle: 71 Reverse Angle: 71 702.2
Secondary Endgun Arc Settings: Forward Angle: 90 Reverse Angle: 90

Dealer AGRI INDUSTRIES - WILLISTON
 Customer Larry Handy
 Field Name Larry Handy #2



Sprinkler Order No 15100163

Parent Order No 15099627

Valley Standard Pivot 7000 Percent Timer Data

Setup Information - Valley Computer Control Panel Water Application Constants: Minimum Application = 0.157 (in)

Hours/360° = 14

Based on IN

IN Per 360 degrees	Pivot % Timer	Hours Per 360 degrees
0.157	100.0	14.0
0.20	78.3	17.9
0.30	52.2	26.8
0.40	39.1	35.8
0.50	31.3	44.7
0.60	26.1	53.6
0.70	22.4	62.5
0.80	19.6	71.4
0.90	17.4	80.5
1.00	15.7	89.2
1.25	12.5	112.0
1.50	10.4	134.6
1.75	8.9	157.3
2.00	7.8	179.5
2.50	6.3	222.2
3.00	5.2	269.2

Based on % Timer

Pivot % Timer	IN Per 360 degrees	Hours Per 360 degrees
100.0	0.157	14.0
90.0	0.17	15.6
80.0	0.20	17.5
70.0	0.22	20.0
60.0	0.26	23.3
50.0	0.31	28.0
45.0	0.35	31.1
40.0	0.39	35.0
35.0	0.45	40.0
30.0	0.52	46.7
25.0	0.63	56.0
20.0	0.78	70.0
17.5	0.89	80.0
15.0	1.04	93.3
12.5	1.25	112.0
10.0	1.57	140.0
7.5	2.09	186.7
5.0	3.13	280.0

Field Area

138.3 (Ac) Total
121.6 (Ac) Pivot 360°
16.7 (Ac) EG on 100%
1298.3 (ft) Machine Length
86.6 (ft) End Gun Radius

Flow

700 (GPM)
5.06 (GPM per Acre)
0.27 (in per day) App Rate
0.157 (in) App Depth @ 100%
94.1 (GPM) End Gun

Pressure

25 (PSI) Pivot Pressure
Calculated Pressure
0.0 (ft) Highest Elevation
0.0 (ft) Lowest Elevation

LRDU Drive Train

34 RPM Center Drive @ 60 Hz freq.
11.2 x 38 Tire
52:1 Wheel GB Ratio, LRDU Dist 1262.1 (ft)
14.0 Hrs/360° @ 100% (9.45)(Ft per Min)
14 Hrs/360° @ 100%

Disclaimer

The information presented in the attached Percent Timer Report is based on variables which cannot be totally controlled by Valmont (including, but not limited to; pivot pressure, inside pipeline surface, end gun throw, end gun arc setting, tire slippage, tire pressure, field slopes, soil variations, sprinkler package installation, well capacity, center drive motor voltage, center drive motor frequency, climatic conditions and other elements and circumstances beyond Valmont's reasonable control). Valmont recommends monitoring the machine for at least one pass through field to obtain an accurate rotation time.



REQUEST FOR PREAPPLICATION MEETING

ARM 36.12.1302(2)

(Revised 01/2024)

For Department Use Only

Instructions

Use this optional form to submit a written request for a preapplication meeting, as required in ARM 36.12.1302(2) for applicants electing to complete a preapplication meeting with the department prior to submitting an application for a beneficial water use permit or change in appropriation right pursuant to §85-2-302, MCA. Use additional sheets as necessary.

Submit this form to the appropriate regional office; see contact information on the last page of this form.

Date Received 1/13/2025
Received By Kailee Ingalls
Scheduled Meeting Date _____

1. Applicant Name Richland County Conservation District
Mailing Address 2745 West Holly ST
City Sidney State MT Zip 59270
Home Phone 406-943-3001 Other Phone _____
Email: Julie.Goss@mt.nacdn.net

2. Representative Name (if other than Applicant) Teresa Olson
☒ Representative is Consultant ☐ Representative is Attorney ☐ Representative is Other
Mailing Address 2912 7th Ave. N.
City Billings State MT Zip 59101-0906
Home Phone _____ Other Phone 406-366-6547
Email: tolson@hydrosi.com

3. Are you requesting a preapplication meeting for a permit or change application?

☐ Permit ☒ Change

4. Identify the following elements of the proposed permit or change in appropriation.

a) The flow rate and volume of water required:

Flow Rate 2.7 ☐ GPM ☒ CFS Volume 368 Acre-Feet

b) The point of diversion:

Point of Diversion #1 NE 1/4 SE 1/4 SW 1/4 Section 27, Township 27 ☒ N ☐ S, Range 51 ☒ E ☐ W
County Richland

Lot/Tract _____ Block _____ Subdivision Name _____

Point of Diversion #2 _____ 1/4 _____ 1/4 _____ 1/4 Section _____, Township _____ ☐ N ☐ S, Range _____ ☐ E ☐ W
County _____

Lot/Tract _____ Block _____ Subdivision Name _____

c) The place of use: see attached addendum

_____ Acres _____ Lot _____ Block _____ 1/4 _____ 1/4 _____ 1/4 Sec _____, Twp _____ ☐ N ☐ S, Rge _____ ☐ E ☐ W

_____ Acres _____ Lot _____ Block _____ 1/4 _____ 1/4 _____ 1/4 Sec _____, Twp _____ ☐ N ☐ S, Rge _____ ☐ E ☐ W

_____ Acres _____ Lot _____ Block _____ 1/4 _____ 1/4 _____ 1/4 Sec _____, Twp _____ ☐ N ☐ S, Rge _____ ☐ E ☐ W

_____ Acres _____ Lot _____ Block _____ 1/4 _____ 1/4 _____ 1/4 Sec _____, Twp _____ ☐ N ☐ S, Rge _____ ☐ E ☐ W



_____ Acres _____ Lot _____ Block _____ 1/4 _____ 1/4 _____ 1/4 Sec _____, Twp _____ ☐ N ☐ S, Rge _____ ☐ E ☐ W

d) The source of water: Missouri River

e) The proposed purpose: Irrigation

f) For a change in appropriation right, the water right(s) proposed for change:

Type of water right CONSERVATION DISTRICT Basin _____ Water Right # 40S 84500-00

Type of water right Lower Missouri Water Reservation Basin _____ Water Right # _____

Type of water right _____ Basin _____ Water Right # _____

g) For a change in appropriation right, an explanation of historical use of the right(s) proposed for change:

Place of use and diversion are outside of the original application for reservation (projects) and all subsequent authorizations issued by the Richland County Conservation District.

h) Any proposed place of storage, if applicable (only if storage capacity is greater than 0.1 acre-feet): N/A

#1 Capacity: Surface Acres _____ x Max Depth (feet) _____ x (.4 for dams/.5 for pits) = _____ Acre-Feet

Location: _____ 1/4 _____ 1/4 _____ 1/4 Section _____, Township _____ ☐ N ☐ S, Range _____ ☐ E ☐ W

#2 Capacity: Surface Acres _____ x Max Depth (feet) _____ x (.4 for dams/.5 for pits) = _____ Acre-Feet

Location: _____ 1/4 _____ 1/4 _____ 1/4 Section _____, Township _____ ☐ N ☐ S, Range _____ ☐ E ☐ W

#3 Capacity: Surface Acres _____ x Max Depth (feet) _____ x (.4 for dams/.5 for pits) = _____ Acre-Feet

Location: _____ 1/4 _____ 1/4 _____ 1/4 Section _____, Township _____ ☐ N ☐ S, Range _____ ☐ E ☐ W

i) For applications proposing a new well or wells, the well depth(s) and location: N/A

New Well #1 _____ 1/4 _____ 1/4 _____ 1/4 Section _____, Township _____ ☐ N ☐ S, Range _____ ☐ E ☐ W
County _____

Lot/Tract _____ Block _____ Subdivision Name _____

Estimated Well Depth _____ Feet

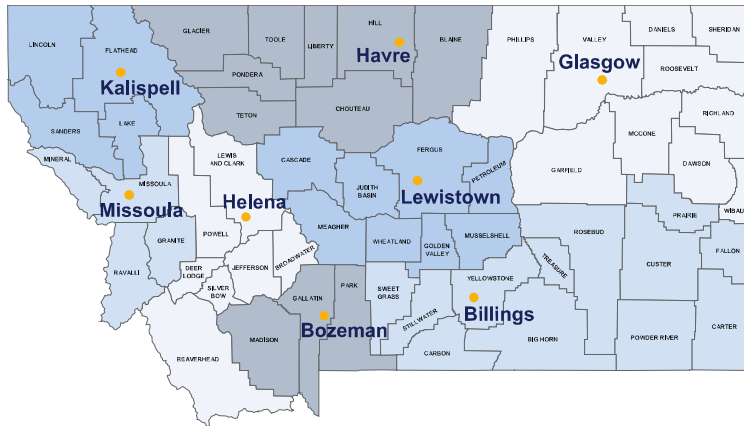
New Well #2 _____ 1/4 _____ 1/4 _____ 1/4 Section _____, Township _____ ☐ N ☐ S, Range _____ ☐ E ☐ W
County _____

Lot/Tract _____ Block _____ Subdivision Name _____

Estimated Well Depth _____ Feet



WATER RESOURCES REGIONAL OFFICES



BILLINGS

Airport Industrial Park, 1371 Rimtop Dr
Billings, MT 59105-9702

PHONE 406-247-4415 FAX 406-247-4416

EMAIL DNRCBillingsWater@mt.gov

Big Horn, Carbon, Carter, Custer, Fallon, Powder River, Prairie, Rosebud, Stillwater, Sweet Grass, Treasure, and Yellowstone Counties



HELENA

1424 9th Ave., PO Box 201601,
Helena, MT 59620-1601

PHONE 406-444-6999 FAX 406-444-9317

EMAIL DNRCHelenaWater@mt.gov

Beaverhead, Broadwater, Deer Lodge, Jefferson, Lewis and Clark, Powell, and Silver Bow Counties



BOZEMAN

2273 Boot Hill Court, Suite 110
Bozeman, MT 59715-7249

PHONE 406-586-3136 FAX 406-587-9726

EMAIL DNRCBozemanWater@mt.gov

Gallatin, Madison, and Park Counties



KALISPELL

655 Timberwolf Parkway, Suite 4
Kalispell, MT 59901-1215

PHONE 406-752-2288

EMAIL DNRCKalispellWater@mt.gov

Flathead, Lake, Lincoln, and Sanders Counties



GLASGOW

222 6th Street South, PO Box 1269
Glasgow, MT 59230-1269

PHONE 406-228-2561

EMAIL DNRCGlasgowWater@mt.gov

Daniels, Dawson, Garfield, McCone, Phillips, Richland, Roosevelt, Sheridan, Valley, and Wibaux Counties



LEWISTOWN

613 Northeast Main St., Suite E
Lewistown, MT 59457-2020

PHONE 406-538-7459

EMAIL DNRCLeWistownWater@mt.gov

Cascade, Fergus, Golden Valley, Judith Basin, Meagher, Musselshell, Petroleum, and Wheatland Counties



HAVRE

210 6th Ave., PO Box 1828
Havre, MT 59501-1828

PHONE 406-265-5516

EMAIL DNRCHavreWater@mt.gov

Blaine, Chouteau, Glacier, Hill, Liberty, Pondera, Teton, and Toole Counties



MISSOULA

2705 Spurgin Rd. Bldg. C, PO Box 5004
Missoula, MT 59806-5004

PHONE 406-721-4284 FAX 406-542-5899

EMAIL DNRCMissoulaWater@mt.gov

Granite, Mineral, Missoula, and Ravalli Counties



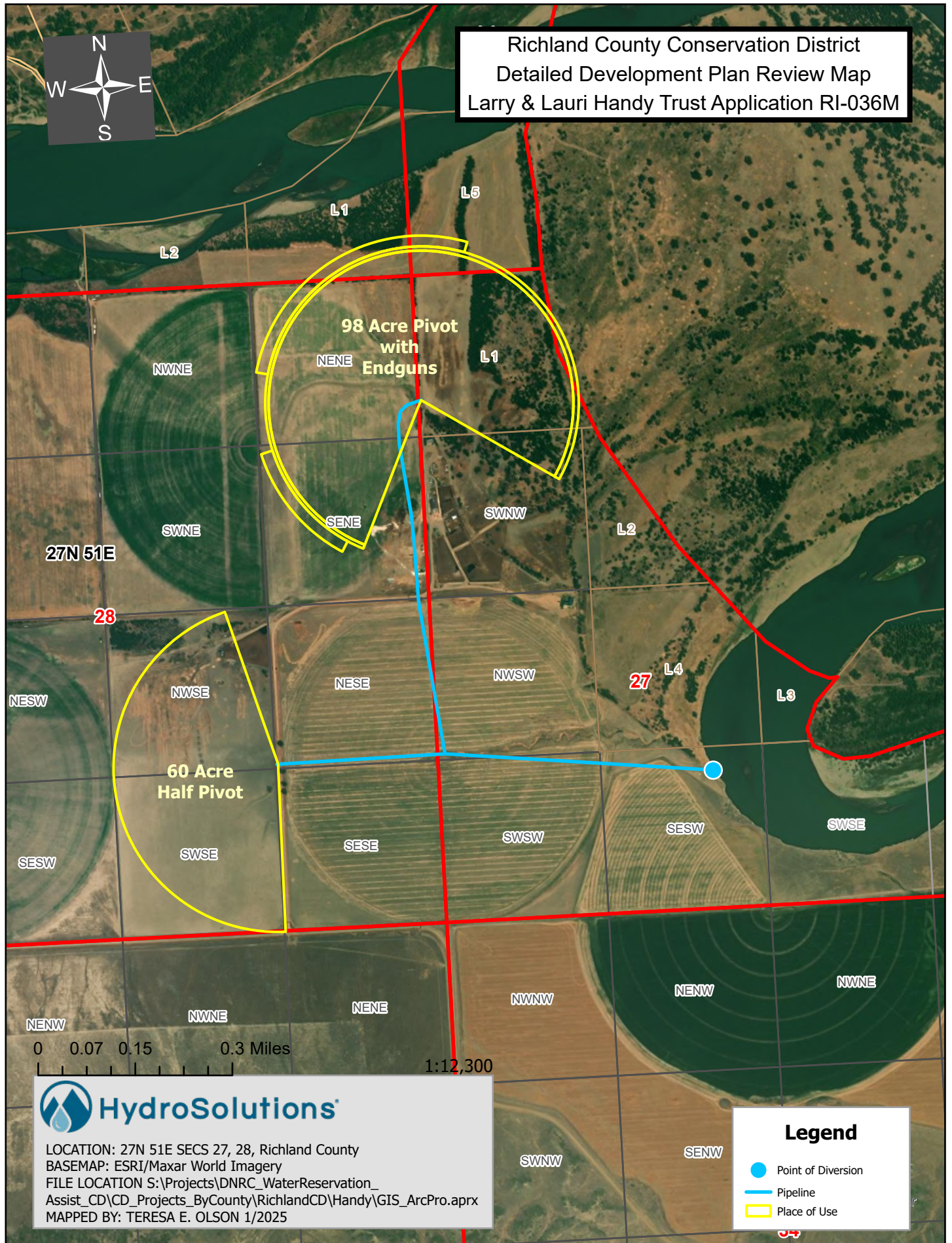
MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION
Water Resources Division – Water Rights Bureau
<https://dnrc.mt.gov/Water-Resources/Water-Rights/>

Pre Application Meeting Request Form Place of Use Addendum

Acres	QtrSec	Sec	Twp	Rge	County
28	NWSE	28	27N	51E	Richland
<u>32</u>	SWSE	28	27N	51E	Richland
60 Acres					

Acres	Govt Lot	QtrSec	Sec	Twp	Rge	County
4.5	L1		21	27N	51E	Richland
4	L5		22	27N	51E	Richland
34	L1		27	27N	51E	Richland
35.5		NENE	28	27N	51E	Richland
4		N2SWNW	27	27N	51E	Richland
<u>16</u>		SENE	28	27N	51E	Richland
98 Acres						

Richland County Conservation District
Detailed Development Plan Review Map
Larry & Lauri Handy Trust Application RI-036M



LOCATION: 27N 51E SECS 27, 28, Richland County
BASEMAP: ESRI/Maxar World Imagery
FILE LOCATION S:\Projects\DNRC_WaterReservation_
Assist_CD\CD_Projects_ByCounty\RichlandCD\Handy\GIS_ArcPro.aprx
MAPPED BY: TERESA E. OLSON 1/2025

Legend

- Point of Diversion
- Pipeline
- Place of Use