

NOTICE AREA

Application No. **40S 30165373** Regional Office # **4**

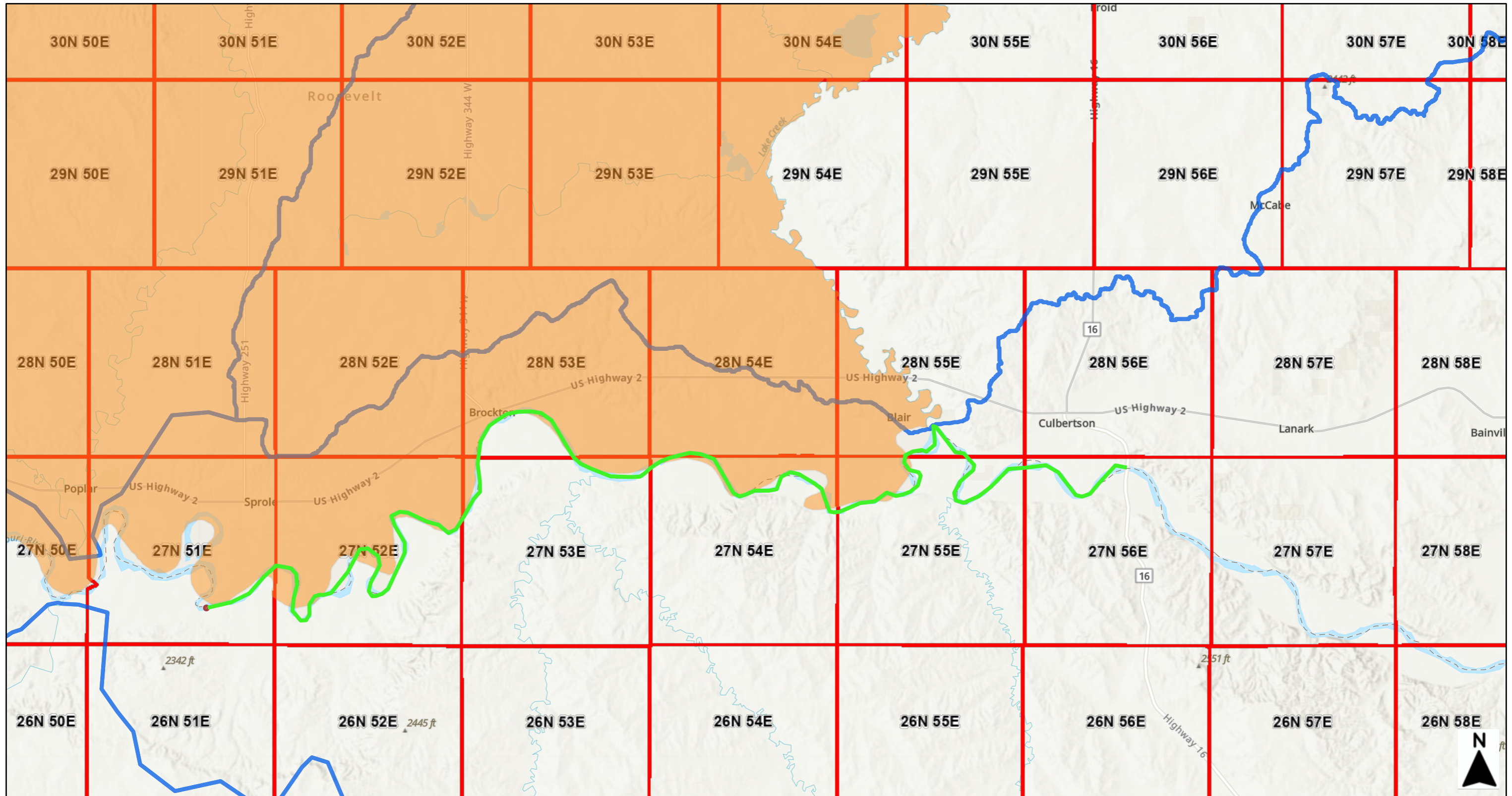
Applicant's Name **RICHLAND COUNTY CONSERVATION DISTRICT (COLGAN)**

Indian Reservation Yes No If yes, Reservation _____

Irrigation District Yes No If yes, District _____

Specialist **Kailee Ingalls** Date **7/30/25**

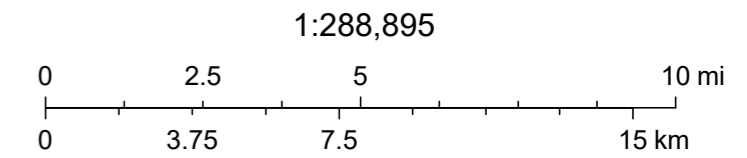
40S 30165373



- Point of Diversion
- Notice Area
- Fort Peck Indian Reservation
- DNRC Basins
- Township



Map Created 07/30/25
Author: Kailee Ingalls
Water Resource Specialist



Esri, NASA, NGA, USGS, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Water Right Owner	Water Right # (Basin, ID, and Number)
Applicant: Richland County Conservation District	40S 30165373
Teresa E. Olson	Consultant
1DSL	
1FWS	
1FWP	
2FWP	
1TUL	
1PPL	
1NWE	
1WQB	
4HVR	
7GLS	
1BOR	
7RHC	
7RCD	
1CRP	
1DOI	
7SON	
7FPT	
1BIA	
MONTANA, STATE OF DEPT OF FISH WILDLIFE & PARKS	40S 30017671
CARLISLE, JAMES D	40S 184965 00
USA (DEPT OF INTERIOR BUREAU OF LAND MGMT)	40S 30142616
USA (DEPT OF INTERIOR BUREAU OF LAND MGMT)	40S 30142619
USA (DEPT OF INTERIOR BUREAU OF LAND MGMT)	40S 30142621
USA (DEPT OF INTERIOR BUREAU OF INDIAN AFF)	40S 30073870
USA (DEPT OF INTERIOR BUREAU OF INDIAN AFF)	40S 30073871
CULBERTSON, CITY OF	40S 1549 00
BNSF RAILWAY CO	40S 142790 00
TVEIT, NOLAN; TVEIT, LESLIE; TVEIT, BRAD; TVEIT, MEGAN	40S 1508 00
TVEIT, NOLAN; TVEIT, LESLIE; TVEIT, BRAD; TVEIT, MEGAN	40S 30030883
SANDHILL RED ANGUS, LLC	40S 30046592
SANDHILL RED ANGUS, LLC	40S 30030881
CL-JLG LLC; GUSTAFSON, JOANN; GUSTAFSON, VICTOR; GUSTAFSON, BRIAN; GUSTAFSON, KENNETH	40S 101303 00
CARLISLE, JAMES D; RICHLAND COUNTY CONSERVATION DISTRICT	40S 30150186
IVERSEN, CONSTANCE C; RICHLAND COUNTY CONSERVATION DISTRICT	40S 30012791
RICHLAND COUNTY CONSERVATION DISTRICT IVERSEN, NEIL J; IVERSEN, AMY K;	40S 30027588
ROOSEVELT COUNTY CONSERVATION DISTRICT; MONTANA STATE BOARD OF LAND COMMISSIONERS; GOBBS PHEASANT RIDGE RANCH LLC	40S 30044041
ROOSEVELT COUNTY CONSERVATION DISTRICT; GOBBS PHEASANT RIDGE RANCH LLC	40S 103671 00
GOBBS PHEASANT RIDGE RANCH LLC	40S 178507 00
CALDWELL, LAURA J IRREVOCABLE TRUST	40S 163084 00

KNUDSEN FAMILY PARTNERSHIP	40S 78203 00
IVERSEN, DONALD B; IVERSEN, MICHAEL D	40S 178504 00
RICHLAND COUNTY CONSERVATION DISTRICT; HARDY INVESTMENTS LP	40S 101074 00
HARDY INVESTMENTS LP	40S 96357 00
RICHLAND COUNTY CONSERVATION DISTRICT; COLWELL, CLIFFORD; COLWELL, DUANE N; COLUCCI, JOYCE A; COLWELL, CHARLES	40S 106990 00
MONTANA STATE BOARD OF LAND COMMISSIONERS	40S 42905 00
MONTANA STATE BOARD OF LAND COMMISSIONERS	40S 42906 00
BAXTER, KAREN K	40S 11957 00
BAXTER, KAREN K	40S 5134 00
COLWELL, CAROLE; COLWELL, CLIFFORD; COLWELL, DUANE N; COLWELL, SHIRLEY A; CARLISLE, JAMES D	40S 101292 00
FINNICUM, BERNIE; FINNICUM, PAUL	40S 17844 00
IVERSEN, NEIL J, IVERSEN, AMY K	40S 30022924
IVERSEN, CONSTANCE C	40S 4947 00
SMITH, DOUGLAS B; SMITH, WENDY J	40S 30022935
AMES SAVAGE WATER SOLUTIONS LLC	40S 30051664
USA (DEPT OF INTERIOR BUREAU OF LAND MGMT)	40S 30142628
RENZ, MABEL	40S 214733 00
USA (DEPT OF INTERIOR BUREAU OF LAND MGMT)	40S 30142617
USA (DEPT OF INTERIOR BUREAU OF LAND MGMT)	40S 30142620
BRIDGER PIPELINE LLC	40S 30148233
JOHNSTON, LARRY D; CANDEE, TROY G; CANDEE, ANGELA J	40S 5257 00
JOHNSTON, LARRY D; CANDEE, TROY G; CANDEE, ANGELA J	40S 2400 00
RICHLAND COUNTY CONSERVATION DISTRICT; RALSTON, ROBERT F	40S 30025552
SCHMITZ JOE & ANNA AND BURKE PAT & ANNA TRUST	40S 80553 00
DEVILS ELBOW RANCH LLC	40S 46549 00
RICHLAND COUNTY CONSERVATION DISTRICT; A7 RANCH INC	40S 114741 00
RICHLAND COUNTY CONSERVATION DISTRICT; BECKER, KEVIN J; BECKER, WENDY L	40S 116904
ROOSEVELT COUNTY CONSERVATION DISTRICT; MATTELIN, MILO	40S 30002059
RICHLAND COUNTY CONSERVATION DISTRICT; SMITH, DOUGLAS B; SMITH, WENDY J	40S 30027595
RICHLAND COUNTY CONSERVATION DISTRICT; BECKER, KEVIN J; BECKER, WENDY L	40S 30072073
RICHLAND COUNTY CONSERVATION DISTRICT; CASTERLINE, CAROLYN	40S 30104412
FS3 LAND & CATTLE INC	40S 30104519
ROCKING R CORP	40S 30104520
RICHLAND COUNTY CONSERVATION DISTRICT; COLGAN, PATRICK W; COLGAN, THOMAS F	40S 30001844
MARSHALL, EDWARD	40S 10761 00
BIDEGARAY, REMI	40S 130506 00
BIDEGARAY, REMI	40S 130507 00
RALSTON, ROBERT REVOCABLE TRUST; RALSTON, GLORIA REVOCABLE TRUST	40S 182909 00
BIDEGARAY, CLAUDE	40S 30151578
RICHLAND COUNTY CONSERVATION DISTRICT; IVERSEN, NEIL J	40S 30159245
WALIKONIS, MARY JEAN	40S 38071 00

SCHMITZ JOE & ANNA AND BURKE PAT & ANNA TRUST	40S 168965 00
GMM PROPERTIES LLC	40S 70237 00
GMM PROPERTIES LLC	40S 89101 00
BECKER, WENDY L; BECKER, KEVIN J; SCHMITZ, AL P	40S 125402 00
RENZ, MABEL	40S 214734 00
RICHLAND COUNTY CONSERVATION DISTRICT; SCHMITZ JOE & ANNA AND BURKE PAT & ANNA TRUST	40S 30043641
CASTERLINE, CAROLYN; CASTERLINE, SAM	40S 57404 00
MARSHALL, EDWARD	40S 172266 00
RICHLAND COUNTY CONSERVATION DISTRICT; RALSTON, REX	40S 101055 00
MARSHALL, EDWARD	40S 101076 00
ROOSEVELT COUNTY CONSERVATION DISTRICT; MATTELIN HEREFORD RANCH	40S 101092 00
BIDEGARAY, REMI	40S 1666 00
RICHLAND COUNTY CONSERVATION DISTRICT; HACKLEY, STEVEN T	40S 30005493
RICHLAND COUNTY CONSERVATION DISTRICT; CANDEE, TROY G; CANDEE, ANGELA J	40S 30024907
BIDEGARAY, CLAUDE	40S 30152290
BIDEGARAY, CLAUDE	40S 66284 00
ROOSEVELT COUNTY CONSERVATION DISTRICT; MATTELIN HEREFORD RANCH	40S 106984 00
RICHLAND COUNTY CONSERVATION DISTRICT; DEVILS ELBOW RANCH LLC	40S 30006748
RICHLAND COUNTY CONSERVATION DISTRICT; TURNBULL, NEIL; TURNBULL, JUDITH FOSS	40S 30063091
COLGAN, MARQUIETA M	40S 91841 00
RALSTON, GLORIA REVOCABLE TRUST; RALSTON, ROBERT REVOCABLE TRUST	40S 13878 00
A7 RANCH INC; TURNBULL, NEIL; TURNBULL, JUDITH FOSS	40S 5421 00
RALSTON, REX	40S 130565 00
GMM PROPERTIES LLC	40S 137 00
GMM PROPERTIES LLC	40S 89100 00
BECKER, KEVIN J; BECKER, WENDY L; SCHMITZ, AL P	40S 17166 00
SHANKS FARMS INC	40S 171797 00
CANDEE, ANGELA J; CANDEE, TROY G	40S 46465 00
BECKER, KEVIN J; BECKER, WENDY L	40S 3215 00
HINES, ALMA TRUST	40S 171834 00
HINES, ALMA TRUST	40S 171835 00
PUBLISHED: Sidney Herald REMARKS: The proposed point of diversion is located approximately 49 river miles upstream of the USGS Missouri River near Culbertson. A total of 95 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).	

**If owner listed twice, only one notice sent*

Draft Preliminary Determinations

- **Draft PD**
- **Draft PD cover letter**
- **Updated Draft PD**
- **Updated Draft PD cover letter**
- **Any correspondence with the applicant regarding the draft PDs**

Draft Preliminary Determinations

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

* * * * *

APPLICATION TO CHANGE WATER RIGHT NO. 40S 30165373 BY RICHLAND COUNTY CONSERVATION DISTRICT (PATRICK COLGAN, PRODUCER)	}	DRAFT PRELIMINARY DETERMINATION TO GRANT CHANGE
---	---	--

* * * * *

On June 4, 2025, Richland County Conservation District (Applicant) submitted Application to Change Water Right No. 40S 30165373 to change Conservation District Record 40S 30165160 to the Havre Regional Office of the Department of Natural Resources and Conservation (Department or DNRC). The Department published receipt of the application on its website. A preapplication meeting was held between the Department and the Applicant on February 25, 2025, in which the Applicant designated that the technical analyses for this application would be completed by the Department. The Applicant returned the completed Preapplication Meeting Form on March 21, 2025. The Department delivered the Department - completed technical analyses on May 1, 2025. The Application was determined to be correct and complete as of June 11, 2025. An Environmental Assessment for this application was completed on June 11, 2025.

INFORMATION

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

Application as filed:

- Form 606-CD, Conservation District Application to Change Water Reservation
- Attachments:
 - Copy of the Conservation District Application from the Producer, Dated April 17, 2023.
 - Half Circle Map
 - Half Circle Map with Soil Description
 - Physical Soil Properties
 - Report – Physical Soil Properties
 - Report – Irrigation - General and Sprinkler
 - Agri Industries Valley V-Chart
 - Valley Standard Pivot 7000 Machine Summary
 - Valley Standard Pivot 7000 Machine Sprinkler Chart

- Valley Standard Pivot 7000 Percent Timer Data
- Statement/ Agreement between Larry and Laura Handy with Patrick Colgan
- Statement/Agreement between Tom and Marquieta Colgan with Patrick Colgan
- Signed Copy of the Reserved Water Use Authorization from the Conservation District, Dated January 10, 2025.
- 40S 30164956 Conservation District Record General Abstract, Dated February 18, 2025.
- Copy of the Conservation Public Notice from the Conservation District, Undated.
- Affidavit of Publication from the Conservation District, Dated December 11, 2024.
- Copy of the public notice Certificate of Service from the Conservation District, Dated December 9, 2024.

Maps:

- Richland County Conservation District Detailed Development Plan Review Map, Pat Colgan Application, (Undated)
- Department- completed technical analyses based on information provided in the Preapplication Checklist, dated May 1, 2025.

Information Received after Application Filed

- None

Information within the Department's Possession/Knowledge

- DNRC Water Rights Database Records
- Lower Missouri River Basin Final Order of the Board of Natural Resources & Conservation, December 30, 1994.
- USGS Gaging Station #06185500 data for the Missouri River near Culbertson (Period of Record: April 1958 – September 2024)

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

For the purposes of this document, Department or DNRC means the Department of Natural Resources & Conservation; CFS means cubic feet per second; GPM means gallons per minute; AF means acre-feet; AC means acres; and AF/YR means acre-feet per year. CD means Conservation District; and Producer means the applicant who applied to the CD to use a portion of the CD water reservation water right.

WATER RIGHTS TO BE CHANGED

FINDINGS OF FACT

1. The Applicant seeks to add a point of diversion and place of use to the Richland County Conservation District Water Reservation (40S 84500-00) that were not included in the original water reservation public notice.

Table 1: Water Rights Proposed for Change

WR TYPE	WR NUMBER	WR PRIORITY DATE	WR SOURCE
Water Reservation	40S 84500-00	7/1/1985 08:00 AM	Missouri River
Conservation District Record	40S 30165160 (RI-034M)	04/17/2023 09:40 AM (Internal CD Priority Date)	Missouri River

2. There are no supplemental water rights for the 122 AC to be irrigated.

CHANGE PROPOSAL

FINDINGS OF FACT

3. The Applicant proposes to divert water from the Missouri River, by means of pump, from April 1 through October 31 at 1.8 CFS up to 294 AF, from a point in the NWSESE, Section 27, Lot 05, T27N, R51E, Richland County, for Sprinkler Irrigation use from April 1 through October 31. The proposed place of use is located in the following locations:

Table 2: Proposed Place of Use							
Irrigation Type	POD ID #	Total AC	QTR	SEC	TWN	RGE	COUNTY
Sprinkler	1	3.18	E2SWSW	27	27N	51E	RICHLAND
	1	25.8	SESW	27	27N	51E	RICHLAND
	1	3.85	E2NWNW	34	27N	51E	RICHLAND
	1	38.12	NENW	34	27N	51E	RICHLAND
	1	38.22	NWNE	34	27N	51E	RICHLAND
	1	4.35	N2SWNE	34	27N	51E	RICHLAND
	1	4.34	N2SENW	34	27N	51E	RICHLAND
	1	4.14	E2NENE	34	27N	51E	RICHLAND

4. According to the 2025 Water Reservation Record, the Richland County CD had 61.05 CFS and 14,518.15 AF remaining in their water reservation prior to the submission of this application.

5. The CD granted the producer (Patrick Colgan) the right to use a portion of the CD water reservation on January 10, 2025. The CD granted approval subject to the installation of a water measuring device. As such, the DNRC will add the following conditions:

WATER MEASUREMENT-MEETS CONSERVATION DISTRICT REQUIREMENT

THIS RIGHT IS SUBJECT TO THE TYPE OF WATER USE MEASURING DEVICE OR WATER USE ESTIMATION TECHNIQUE REQUIRED BY THE CONSERVATION DISTRICT. THE APPROPRIATOR SHALL KEEP WRITTEN RECORDS OF THE FLOW RATE AND VOLUME OF WATER USED. RECORDS SHALL BE SUBMITTED BY NOVEMBER 30 OF EACH YEAR AND UPON REQUEST AT OTHER TIMES DURING THE YEAR. FAILURE TO SUBMIT REPORTS MAY BE CAUSE FOR REVOCATION OF THE CHANGE. THE RECORDS MUST BE SENT TO THE WATER RESOURCES REGIONAL OFFICE. THE WATER USER SHALL MAINTAIN THE MEASURING DEVICE SO IT ALWAYS OPERATES PROPERLY AND MEASURES FLOW RATE AND VOLUME ACCURATELY.

CHANGE CRITERIA

6. The Department is authorized to approve a change if the Applicant meets its burden to prove the applicable § 85-2-402, MCA, criteria by a preponderance of the evidence. *Matter of Royston*, 249 Mont. 425, 429, 816 P.2d 1054, 1057 (1991); *Hohenlohe v. DNRC*, 2010 MT 203, ¶¶ 33, 35, and 75, 357 Mont. 438, 240 P.3d 628 (an Applicant's burden to prove change criteria by a preponderance of evidence is "more probable than not."); *Town of Manhattan v. DNRC*, 2012 MT 81, ¶ 8, 364 Mont. 450, 276 P.3d 920. Under this Preliminary Determination, the relevant change criteria in § 85-2-402(2), MCA, are:

(2) Except as provided in subsections (4) through (6), (15), (16), and (18) and, if applicable, subject to subsection (17), the department shall approve a change in appropriation right if the appropriator proves by a preponderance of evidence that the following criteria are met:

(a) The proposed change in appropriation right will not adversely affect the use of the existing water rights of other persons or other perfected or planned uses or developments for which a permit or certificate has been issued or for which a state water reservation has been issued under part 3.

(b) The proposed means of diversion, construction, and operation of the appropriation works are adequate, except for: (i) a change in appropriation right for instream flow pursuant to 85-2-320 or 85-2-436; (ii) a temporary change in appropriation right for instream flow pursuant to 85-2-408; or (iii) a change in appropriation right pursuant to 85-2-420 for mitigation or marketing for mitigation.

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

(d) The Applicant has a possessory interest, or the written consent of the person with the possessory interest, in the property where the water is to be put to beneficial use or, if the proposed change involves a point of diversion, conveyance, or place of use on national forest system lands, the Applicant has any written special use authorization required by federal law to occupy, use, or traverse national forest system lands for the purpose of diversion, impoundment, storage, transportation, withdrawal, use, or distribution of water. This subsection (2)(d) does not apply to: (i) a change in appropriation right for instream flow pursuant to 85-2-320 or 85-2-436; (ii) a temporary change in appropriation right for instream flow pursuant to 85-2-408; or (iii) a change in appropriation right pursuant to 85-2-420 for mitigation or marketing for mitigation.

7. The evaluation of a proposed change in appropriation does not adjudicate the underlying right(s). The Department's change process only addresses the water right holder's ability to make a different use of that existing right. *E.g.*, *Hohenlohe*, ¶¶ 29-31; *Town of Manhattan*, ¶ 8; *In the Matter of Application to Change Appropriation Water Right No.41F-31227 by T-L Irrigation Company* (DNRC Final Order 1991).

WATER RESERVATION CRITERIA

FINDINGS OF FACT

8. An authorization for change is required in § 85-2-316(12), MCA, because the producer's proposed point of diversion and place of use are outside the project areas identified in the original Water Reservation application's public notice.
9. The purpose for the Water Reservation was established by the Board of Natural Resources and Conservation and the conclusions are contained in the Lower Missouri River Basin Final Order dated December 30, 1994.
10. The need for the Water Reservation was established by the Board of Natural Resources and Conservation and the conclusions are contained in the Lower Missouri River Basin Final Order dated December 30, 1994.
11. The amount of water necessary for the purposes of the Water Reservation was established by the Board of Natural Resources and Conservation and the conclusions are contained in the Lower Missouri River Basin Final Order dated December 30, 1994.
12. That the water reservation was in the public interest was established by the Board of Natural Resources and the conclusions are contained in the Lower Missouri River Basin Final Order dated December 30, 1994.
13. This change authorization proposal is consistent with the purpose, need, amount, and public interest established by the Board of Natural Resources.

HISTORICAL USE AND ADVERSE EFFECT

FINDINGS OF FACT - Historical Use

14. The Board of Natural Resources and Conservation granted the Richland County Conservation District a water reservation (40S 84500-00) for 186.9 CFS up to 25,349 AF for use on 11,141 acres for future irrigation development out of the Missouri River. The water reservation was granted in the Lower Missouri River Basin Final Order dated December 30, 1994, with a priority date of July 1, 1985.
15. 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.

ADVERSE EFFECT

FINDINGS OF FACT

16. Richland County CD is proposing to add Sprinkler Irrigation to its water reservation. The proposed period of diversion and period of use is April 1 to October 31.
17. Water is physically and legally available in the amount the Applicant seeks to appropriate under the Richland County CD water reservation.
18. The CD published notice of this proposed project on December 11, 2024, in the Roundup and set a January 10, 2025, deadline for objections.
19. The CD sent individual public notices to water users downstream of the proposed point of diversion and to the entities on the DNRC standardized list of entities to notice.
20. No objections were received by the CD to this project.
21. The Richland County CD requires the water user to keep written records of the flow rate and volume of all water diverted and to submit the report to the Conservation District annually by November 15. The method of water flow measurement will be recorded by flowmeter.
22. The Applicant is seeking to divert 294 AF to irrigate 122 AC. A consumptive volume was calculated by assigning a field application of 2.4 AF, as authorized by the Richland County CD for 122 AC.
23. A full-service irrigation Consumptive Volume was calculated by the Department using the Wolf Point, MT weather station. This station was chosen because it is closest to the proposed irrigated acres. Using a management factor of 74.6% per ARM 36.12.1902. Sprinkler Irrigation will consume $27.03 \text{ in/} 12\text{in/ft} \times 74.6 \times 122 \text{ AC} = 205 \text{ AF}$ per year. Adding 10% of the diverted volume (292.86 AF) as irrecoverable losses from pivot operation, the total consumptive use is $205 \text{ AF} + 29.29 \text{ AF} = 234.29 \text{ AF}$.
24. The Applicants proposed diverted volume is 294 AF and the Department diverted volume necessary for a full-service irrigation is 292.86 AF.
25. There is no historical return flow to assess because the water has not yet been put to beneficial use.
26. This application represents a non-perfected portion of the Richland County CD water reservation. Therefore, water rights both senior and junior to Water Reservation No. 40S 84500-00 must be considered in order to determine whether this proposed application would have adverse effect. USGS Gaging Station #06185500, Missouri River near Culbertson, was used to calculate the flow rate and volume physically available during the proposed period of diversion. The Culbertson gaging station is approximately 49

river miles downstream of the POD and has a period of record from April 1958 to September 2024. Water physically available was calculated by taking the median of the mean monthly flows (CFS) and adding in all water rights between the requested POD and the gaging station. Table 3 lists the existing water rights between the POD and the gaging station:

Table 3: Existing Water Rights between Proposed POD and Gaging Station				
Water Right #	Flow (CFS)	Volume (AF)	Period of Diversion	Water Right Type
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
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

Water Right #	Flow (CFS)	Volume (AF)	Period of Diversion	Water Right Type
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
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 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

Water Right #	Flow (CFS)	Volume (AF)	Period of Diversion	Water Right Type
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
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: Physical Availability of Flow Rate and Volume 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	241.94	3,882.18	8,241.94	479,082.18
May	8,656	531,305	305.20	4,827.53	8,961.20	536,132.81
June	9,547	567,092	323.48	5,117.60	9,870.48	572,209.40
July	9,371	575,192	323.48	5,117.60	9,694.48	580,309.58
August	8,973	550,763	323.48	5,117.60	9,296.48	555,880.34

September	7,836	465,458	317.68	4,946.33	8,153.68	470,404.73
October	6,976	428,187	256.06	4,166.77	7,232.06	432,353.65

*Median of the mean monthly volume was calculated by multiplying the median of the mean monthly flow rates in CFS by the number of days in the month by 1.98 AF/CFS/day.

27. The Department determined that the area of potential impact for this application is from the POD approximately 49 river miles downstream to the Culbertson gaging station.

Table 5 lists the existing downstream users within the area of potential impact:

Water Right #	Flow (CFS)	Volume (AF)	Period of Diversion	Water Right Type
MCA 85-20-201	See Table 6	See Table 6	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
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

Water Right #	Flow (CFS)	Volume (AF)	Period of Diversion	Water Right Type
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
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 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

Water Right #	Flow (CFS)	Volume (AF)	Period of Diversion	Water Right Type
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
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 6: 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.

28. Water legally available was calculated by subtracting the existing legal demands, the MT Department of Fish, Wildlife and Parks (FWP) instream flow reservation (Water Reservation 40S 30017671), and the Fort Peck Tribal right (assuming full development of Fort Peck-Montana Compact, MCA §85-20-201, Article III F.1) from the flow and volume physically available within the identified area of potential impact. Tables 7 and 8 summarize the legal availability of flow and volume on the source within the area of potential impact. The monthly volume of downstream water rights was calculated by dividing the claimed volumes by the number of months in the claimed period of use.

Table 7: Legal Availability of Flow Rate					
A	B	C	D	E	F
Month	Flow Rate Physically Available (CFS)	Existing Legal Demands (CFS)	FWP Instream Flow Reservation (CFS)	Fort Peck Tribal Right (CFS)**	Flow Rate Legally Available Water (CFS)
April	8,241.9	241.9	5,178.00	840	1982.00
May	8,961.2	305.2	5,178.00	1708	1770.00
June	9,870.5	323.5	5,178.00	2437	1932.00
July	9,694.5	323.5	5,178.00	3497	696.00
August	9,296.5	323.5	5,178.00	2927	868.00
September	8,153.7	317.7	5,178.00	1765	893.00
October	7,232.1	256.1	5,178.00	813	985.00

** 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.

Table 8: Legal Availability of Volume					
A	B	C	D	E	F
Month	Volume Physically Available (AF)	Existing Legal Demands (AF)	FWP Instream Flow Reservation (AF)	Fort Peck Tribal Right (AF)	Volume Available Water (AF)
April	479,082.18	3,882.18	307,573.20	50,000	117,626.8

May	536,132.81	4,827.53	317,825.64	105,000	108,479.6
June	572,209.40	5,117.60	307,573.20	145,000	114,518.6
July	580,309.58	5,117.60	317,825.64	215,000	42,366.3
August	555,880.34	5,117.60	317,825.64	180,000	52,937.1
September	470,404.73	4,946.33	307,573.20	105,000	52,885.2
October	432,353.65	4,166.77	317,825.64	50,000	60,361.2

29. The least amount of flow legally available in any month during the period of diversion is 696 CFS in July and the Applicant is applying for 1.8 CFS. The least amount of volume legally available in any month during the period of diversion is 42,366.3 AF in July and the Applicant is requesting 294 AF for the entire period of use. The Department finds the proposed change will not have an adverse effect on other users.

BENEFICIAL USE

FINDINGS OF FACT

- 30. This change will allow the Richland County Conservation District to authorize the use of a portion of their water reservation. The Conservation District must authorize projects to fulfill the purpose of the reservation.
- 31. The Applicant proposes to use water for Sprinkler Irrigation on 122 AC. Irrigation is recognized as beneficial use under the Montana Water Use Act. § 85-2-102 (5), MCA. Applicant proposes to use 1.8 CFS up to 294 AF. The volume and flow rate were agreed upon by the Conservation District and the producer. The Department finds the proposed use of water to be beneficial.

ADEQUATE DIVERSION

FINDINGS OF FACT

- 32. The water will be diverted under Richland County's water reservation from the Missouri River at a point of diversion, shared with Conservation District Record 40S 30001844.
- 33. The Point of Diversion is located in the NWSESE, Section 27, Lot 05, T27N, R51E, Richland County. The diversion method is a Cornell 6H - 2200 rpm pump. The pump is powered by a John Deere 4045T stationary diesel engine (77hp @ 1800 rpm). The pump is a shared diversion method with an existing pivot irrigation system (served by Conservation District Record 40S 30001844). A 1.8 CFS flow rate is being proposed.
- 34. Water will be conveyed in a 10" 80# PIP pipe with a #2 aluminum cable connection to a Valley Center pivot system. The existing (Conservation District Record 40S 30001844)

and proposed pivot may be operated at the same time or individually, depending on field needs and to prevent over-saturation.

35. The diversion and conveyance are typical of those used for Sprinkler Irrigation on this source in this region.
36. Measurements will be taken by flowmeter to measure the total amount of water diverted from the Missouri River.
37. The Department finds the means of diversion and conveyance to the places of use to be adequate.

POSSESSORY INTEREST

FINDINGS OF FACT

38. The submission of the Conservation District Application for Reserved Water Use Authorization (Form 101) was signed by the producer, Patrick Colgan, and implies written consent. The affidavit on the Conservation District Reserved Water Use Authorization (Form 102) was signed by Shawn Conradsen, Conservation District Chairman and Julie Goss, District Administrator.
39. A statement was signed by the Larry and Lauri Handy Trust, addressing that Patrick Colgan owns the proposed pivot and can apply for reserved water through the Richland County Conservation District, on this property.
40. A statement was signed by Tom and Marqueta Colgan, addressing that Patrick Colgan has a lifetime lease on their property, owns the proposed pivot, and can apply for reserved water through the Richland County Conservation District, on this property.

CONCLUSIONS OF LAW

WATER RESERVATION CRITERIA

41. The Applicant has proven by a preponderance of the evidence that the purpose, need, amount, and public interest are consistent with the 1978 Order of Board of Natural Resources Establishing Water Reservations. §§ 85-2-316(12), 85-2-402(2)(d), MCA. (FOF Nos. 8-13)

HISTORICAL USE AND ADVERSE EFFECT

42. Montana's change statute codifies the fundamental principles of the Prior Appropriation Doctrine. Sections 85-2-401 and -402(1)(a), MCA, authorize changes to existing water rights, permits, and water reservations subject to the fundamental tenet of Montana water

law that one may change only that to which he or she has the right based upon beneficial use. A change to an existing water right may not expand the consumptive use of the underlying right or remove the well-established limit of the appropriator's right to water actually taken and beneficially used. An increase in consumptive use constitutes a new appropriation and is subject to the new water use permit requirements of the MWUA. *McDonald v. State*, 220 Mont. 519, 530, 722 P.2d 598, 605 (1986) (beneficial use constitutes the basis, measure, and limit of a water right); *Featherman v. Hennessy*, 43 Mont. 310, 316-17, 115 P. 983, 986 (1911) (increased consumption associated with expanded use of underlying right amounted to new appropriation rather than change in use); *Quigley v. McIntosh*, 110 Mont. 495, 103 P.2d 1067, 1072-74 (1940) (appropriator may not expand a water right through the guise of a change – expanded use constitutes a new use with a new priority date junior to intervening water uses); *Allen v. Petrick*, 69 Mont. 373, 222 P. 451(1924) (“quantity of water which may be claimed lawfully under a prior appropriation is limited to that quantity within the amount claimed which the appropriator has needed, and which within a reasonable time he has actually and economically applied to a beneficial use. . . . it may be said that the principle of beneficial use is the one of paramount importance . . . The appropriator does not own the water. He has a right of ownership in its use only”); *Town of Manhattan*, ¶ 10 (an appropriator's right only attaches to the amount of water actually taken and beneficially applied).¹

43. Sections 85-2-401(1) and -402(2)(a), MCA, codify the prior appropriation principles that Montana appropriators have a vested right to maintain surface and ground water conditions substantially as they existed at the time of their appropriation; subsequent appropriators may insist that prior appropriators confine their use to what was actually appropriated or necessary for their originally intended purpose of use; and, an appropriator may not change or alter its use in a manner that adversely affects another water user. *Spokane Ranch & Water Co. v. Beatty*, 37 Mont. 342, 96 P. 727, 731 (1908); *Quigley*, 110 Mont. at 505-11, 103 P.2d at 1072-74; *Matter of Royston*, 249 Mont. at 429, 816 P.2d at

¹ DNRC decisions are available at: <https://dnrc.mt.gov/Directors-Office/HearingOrders>

1057; *Hohenlohe*, ¶¶ 43-45.²

44. The cornerstone of evaluating potential adverse effect to other appropriators is the determination of the “historic use” of the water right being changed. *Town of Manhattan*, ¶10 (recognizing that the Department’s obligation to ensure that change will not adversely affect other water rights requires analysis of the actual historic amount, pattern, and means of water use). A change Applicant must prove the extent and pattern of use for the underlying right proposed for change through evidence of the historic diverted amount, consumed amount, place of use, pattern of use, and return flow because a statement of claim, permit, or decree may not include the beneficial use information necessary to evaluate the amount of water available for change or potential for adverse effect.³ A comparative analysis of the historic use of the water right to the proposed change in use is necessary to prove the change will not result in expansion of the original right, or adversely affect water users who are entitled to rely upon maintenance of conditions on the source of supply for their water rights. *Quigley*, 103 P.2d at 1072-75 (it is necessary to ascertain historic use of a decreed water right to determine whether a change in use expands the underlying right to the detriment of other water user because a decree only provides a limited description of the right); *Royston*, 249 Mont. at 431-32, 816 P.2d at 1059-60 (record could not sustain a conclusion of no adverse effect because the Applicant failed to provide the Department with evidence of the historic diverted volume, consumption, and return flow); *Hohenlohe*, ¶ 44-45; *Town of Manhattan v. DNRC*, Cause No. DV-09-872C, Montana Eighteenth Judicial District Court, *Order Re Petition for Judicial Review*, Pgs. 11-12 (proof of historic use is required even when the right has been decreed because the decreed flow rate or volume establishes the maximum appropriation that may be diverted, and may exceed the historical pattern of use, amount diverted or amount consumed through actual use); Matter of Application For Beneficial Water Use Permit By

² See also *Holmstrom Land Co., Inc., v. Newlan Creek Water District*, 185 Mont. 409, 605 P.2d 1060 (1979); *Lokowich v. Helena*, 46 Mont. 575, 129 P. 1063 (1913); *Thompson v. Harvey*, 164 Mont. 133, 519 P.2d 963 (1974) (plaintiff could not change his diversion to a point upstream of the defendants because of the injury resulting to the defendants); *McIntosh v. Graveley*, 159 Mont. 72, 495 P.2d 186 (1972) (appropriator was entitled to move his point of diversion downstream, so long as he installed measuring devices to ensure that he took no more than would have been available at his original point of diversion); *Head v. Hale*, 38 Mont. 302, 100 P. 222 (1909) (successors of the appropriator of water appropriated for placer mining purposes cannot so change its use as to deprive lower appropriators of their rights, already acquired, in the use of it for irrigating purposes); and, *Gassert v. Noyes*, 18 Mont. 216, 44 P. 959 (1896) (change in place of use was unlawful where reduced the amount of water in the source of supply available which was subject to plaintiff’s subsequent right).

³A claim only constitutes *prima facie* evidence for the purposes of the adjudication under § 85-2-221, MCA. The claim does not constitute *prima facie* evidence of historical use in a change proceeding under § 85-2-402, MCA. For example, most water rights decreed for irrigation are not decreed with a volume and provide limited evidence of actual historic beneficial use. Section 85-2-234, MCA

City of Bozeman, Memorandum, Pgs. 8-22 (Adopted by DNRC *Final Order* January 9, 1985)(evidence of historic use must be compared to the proposed change in use to give effect to the implied limitations read into every decreed right that an appropriator has no right to expand his appropriation or change his use to the detriment of juniors).⁴

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

⁴ Other western states likewise rely upon the doctrine of historic use as a critical component in evaluating changes in appropriation rights for expansion and adverse effect: *Pueblo West Metropolitan District v. Southeastern Colorado Water Conservancy District*, 717 P.2d 955, 959 (Colo. 1986)("[O]nce an appropriator exercises his or her privilege to change a water right ... the appropriator runs a real risk of requantification of the water right based on actual historical consumptive use. In such a change proceeding a junior water right ... which had been strictly administered throughout its existence would, in all probability, be reduced to a lesser quantity because of the relatively limited actual historic use of the right."); *Santa Fe Trail Ranches Property Owners Ass'n v. Simpson*, 990 P.2d 46, 55 -57 (Colo., 1999); *Farmers Reservoir and Irr. Co. v. City of Golden*, 44 P.3d 241, 245 (Colo. 2002)("We [Colorado Supreme Court] have stated time and again that the need for security and predictability in the prior appropriation system dictates that holders of vested water rights are entitled to the continuation of stream conditions as they existed at the time they first made their appropriation); *Application for Water Rights in Rio Grande County*, 53 P.3d 1165, 1170 (Colo. 2002); Wyo. Stat. § 41-3-104 (When an owner of a water right wishes to change a water right ... he shall file a petition requesting permission to make such a change The change ... may be allowed provided that the quantity of water transferred ... shall not exceed the amount of water historically diverted under the existing use, nor increase the historic rate of diversion under the existing use, nor increase the historic amount consumptively used under the existing use, nor decrease the historic amount of return flow, nor in any manner injure other existing lawful appropriators.); *Basin Elec. Power Co-op. v. State Bd. of Control*, 578 P.2d 557, 564 -566 (Wyo, 1978) (a water right holder may not effect a change of use transferring more water than he had historically consumptively used; regardless of the lack of injury to other appropriators, the amount of water historically diverted under the existing use, the historic rate of diversion under the existing use, the historic amount consumptively used under the existing use, and the historic amount of return flow must be considered.)

- is not part of a water right and is subject to appropriation by subsequent water users).⁵

46. Although the level of analysis may vary, analysis of the extent to which a proposed change may alter the amount, location, or timing return flows is critical in order to prove that the proposed change will not adversely affect other appropriators who rely on those return flows as part of the source of supply for their water rights. *Royston*, 249 Mont. at 431, 816 P.2d at 1059-60; *Hohenlohe*, at ¶¶ 45-46 and 55-6; *Spokane Ranch & Water Co.*, 37 Mont. at 351-52, 96 P. at 731.

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

The question of adverse effect under §§ 85-2-402(2) and -408(3), MCA, implicates return flows. A change in the amount of return flow, or to the hydrogeologic pattern of return flow, has the potential to affect adversely downstream water rights. There consequently exists an inextricable link between the “amount historically consumed” and the water that re-enters the stream as return flow. . . .

An appropriator historically has been entitled to the greatest quantity of water he can put to use. The requirement that the use be both beneficial and reasonable, however, proscribes this tenet. This limitation springs from a fundamental tenet of western water law—that an appropriator has a right only to that amount of water historically put to beneficial use—developed in concert with the rationale that each subsequent appropriator “is entitled to have the water flow in the same manner as when he located,” and the appropriator may insist that prior appropriators do not affect adversely his rights.

This fundamental rule of Montana water law has dictated the Department’s determinations in numerous prior change proceedings. The Department claims that historic consumptive use, as quantified in part by return flow analysis, represents a key element of proving historic beneficial use.

We do not dispute this interrelationship between historic consumptive use, return flow, and the amount of water to which an appropriator is entitled as limited by his past beneficial use.

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

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

48. The Department's rules reflect the above fundamental principles of Montana water law and are designed to itemize the type evidence and analysis required for an Applicant to meet its burden of proof. ARM 36.12.1901 through 1903. These rules forth specific evidence and analysis required to establish the parameters of historic use of the water right being changed. ARM 36.12.1901 and 1902. The rules also outline the analysis required to establish a lack of adverse effect based upon a comparison of historic use of the water rights being changed to the proposed use under the changed conditions along with evaluation of the potential impacts of the change on other water users caused by changes in the amount, timing, or location of historic diversions and return flows. ARM 36.12.1901 and 1903.
49. There is no historic use because the water being changed in this application is for future irrigation development pursuant to § 85-2-316, MCA. (FOF Nos. 14-15)
50. The Applicant has proven by a preponderance of the evidence that the proposed change in appropriation will not adversely affect the use of the existing water rights of other persons or other perfected or planned uses or developments for which a permit or certificate has been issued or for which a state water reservation has been issued. § 85-2-402(2)(b), MCA. (FOF Nos. 16-29)

BENEFICIAL USE

51. A change Applicant must prove by a preponderance of the evidence the proposed use is a beneficial use. Sections 85-2-102(4) and -402(2)(c), MCA. Beneficial use is and has always been the hallmark of a valid Montana water right: "[T]he amount actually needed for beneficial use within the appropriation will be the basis, measure, and the limit of all water rights in Montana . . ." McDonald, 220 Mont. at 532, 722 P.2d at 606. The analysis of the beneficial use criterion is the same for change authorizations under §85-2-402, MCA, and new beneficial permits under §85-2-311, MCA. ARM 36.12.1801. The amount of water that may be authorized for change is limited to the amount of water necessary to sustain the beneficial use. *E.g., Bitterroot River Protective Association v. Siebel, Order on Petition for Judicial Review*, Cause No. BDV-2002-519 (Mont. 1st Jud. Dist. Ct.) (2003) (*affirmed on other grounds*, 2005 MT 60, 326 Mont. 241, 108 P.3d 518); *Worden v. Alexander*, 108 Mont. 208, 90 P.2d 160 (1939); *Allen v. Petrick*, 69 Mont. 373, 222 P. 451(1924); *Sitz Ranch v. DNRC*, DV-10-13390,, *Order Affirming DNRC Decision*, Pg. 3 (Mont. 5th Jud. Dist. Ct.) (2011) (citing *BRPA v. Siebel*, 2005 MT 60, and rejecting

Applicant's argument that it be allowed to appropriate 800 acre-feet when a typical year would require 200-300 acre-feet); *Toohey v. Campbell*, 24 Mont. 13, 60 P. 396 (1900) ("The policy of the law is to prevent a person from acquiring exclusive control of a stream, or any part thereof, not for present and actual beneficial use, but for mere future speculative profit or advantage, without regard to existing or contemplated beneficial uses. He is restricted in the amount that he can appropriate to the quantity needed for such beneficial purposes."); § 85-2-312(1)(a), MCA (DNRC is statutorily prohibited from issuing a permit for more water than can be beneficially used).

52. Applicant proposes to use water for Irrigation which is a recognized beneficial use. Section 85-2-102(5), MCA. Applicant has proven by a preponderance of the evidence Irrigation is a beneficial use and that 294 AF of diverted volume and 1.8 CFS flow rate of water requested is the amount needed to sustain the beneficial use on 122 AC. Section 85-2-402(2)(c), MCA (FOF Nos. 30-31).

ADEQUATE MEANS OF DIVERSION

53. Pursuant to § 85-2-402 (2)(b), MCA, the Applicant must prove by a preponderance of the evidence that the proposed means of diversion, construction, and operation of the appropriation works are adequate. This codifies the prior appropriation principle that the means of diversion must be reasonably effective for the contemplated use and may not result in a waste of the resource. *Crowley v. 6th Judicial District Court*, 108 Mont. 89, 88 P.2d 23 (1939); *In the Matter of Application for Beneficial Water Use Permit No. 41C-11339900 by Three Creeks Ranch of Wyoming LLC* (DNRC Final Order 2002) (information needed to prove that proposed means of diversion, construction, and operation of the appropriation works are adequate varies based upon project complexity; design by licensed engineer adequate).

54. Pursuant to § 85-2-402 (2)(b), MCA, Applicant has proven by a preponderance of the evidence that the proposed means of diversion, construction, and operation of the appropriation works are adequate for the proposed beneficial use. (FOF Nos. 32-37)

POSSESSORY INTEREST

55. Pursuant to § 85-2-402(2)(d), MCA, the Applicant must prove by a preponderance of the evidence that it has a possessory interest, or the written consent of the person with the

possessory interest, in the property where the water is to be put to beneficial use. See also ARM 36.12.1802.

56. The Applicant has proven by a preponderance of the evidence that it has a possessory interest, or the written consent of the person with the possessory interest, in the property where the water is to be put to beneficial use. (FOF No. 38-40).

PRELIMINARY DETERMINATION

Subject to the terms and analysis in this Preliminary Determination Order, the Department preliminarily determines that this Application to Change Water Right No. 40S 30165373 should be GRANTED subject to the following.

The Applicant proposes to divert water from the Missouri River, by means of pump, from April 1 through October 31 at 1.8 CFS up to 294 AF, from a point in the NWSESE, Section 27, Lot 05, T27N, R51E, Richland County, for Sprinkler Irrigation use from April 1 through October 31.

The Applicant is authorized to add the proposed point of diversion and place of use. A flow rate of 1.8 CFS up to 294 AF shall be diverted from the Missouri River from the following location: NWSESE, Section 27, Lot 05, T27N, R51E, Richland County to 122 AC of place of use (see Table 2). The period of diversion and period of use are from April 1 to October 31. This change authorization will be subject to the following conditions, limitations, or restrictions:

WATER MEASUREMENT-MEETS CONSERVATION DISTRICT REQUIREMENT

THIS RIGHT IS SUBJECT TO THE TYPE OF WATER USE MEASURING DEVICE OR WATER USE ESTIMATION TECHNIQUE REQUIRED BY THE CONSERVATION DISTRICT. THE APPROPRIATOR SHALL KEEP WRITTEN RECORDS OF THE FLOW RATE AND VOLUME OF WATER USED. RECORDS SHALL BE SUBMITTED BY NOVEMBER 30 OF EACH YEAR AND UPON REQUEST AT OTHER TIMES DURING THE YEAR. FAILURE TO SUBMIT REPORTS MAY BE CAUSE FOR REVOCATION OF THE CHANGE. THE RECORDS MUST BE SENT TO THE WATER RESOURCES REGIONAL OFFICE. THE WATER USER SHALL MAINTAIN THE MEASURING DEVICE SO IT ALWAYS OPERATES PROPERLY AND MEASURES FLOW RATE AND VOLUME ACCURATELY.

NOTICE

The Department will provide a notice of opportunity for public comment on this Application and the Department's Draft Preliminary Determination to Grant pursuant to § 85-2-307, MCA. The Department will set a deadline for public comments to this Application pursuant to §§ 85-2-307, and -308, MCA. If this Application receives public comment, the Department shall consider the public comments, respond to the public comments, and issue a preliminary determination to grant the application, grant the application in modified form, or deny the application. If no public comments are received pursuant to § 85-2-307(4), MCA, the Department's preliminary determination will be adopted as the final determination.

DATED this 9th day of July 2025.

Matt Miles

Digitally signed by
Matt Miles
Date: 2025.07.09
10:32:22 -06'00'

Matt Miles, Manager
Havre Regional Office
Montana Department of Natural Resources and Conservation

CERTIFICATE OF SERVICE

This certifies that a true and correct copy of the DRAFT PRELIMINARY DETERMINATION TO GRANT was served upon all parties listed below on this 9th day of July, 2025, by first class United States mail.

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

Teresa Olson (Consultant)
2612 7th Ave. N.
Billings, MT 59101
Via Email: tolson@hydrosi.com



HAVRE Regional Office, (406) 265-5516



GOVERNOR GREG GIANFORTE

DNRC DIRECTOR AMANDA KASTER

July 9th, 2025

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

Subject: Draft Preliminary Determination to Grant Water Right Conservation District
Water Reservation Based Change Application No. 40S 30165373

Dear Applicant,

The Department of Natural Resources and Conservation (Department or DNRC) has completed a preliminary review of your application. This review consists of an evaluation of the criteria for issuance of a Change Authorization found in §85-2-402, MCA. The Department has preliminarily determined that the criteria are met, and this application should be granted. A copy of the Draft Preliminary Determination to Grant your application is attached.

You have the opportunity to request an extension of time to submit additional information for the Department to consider in the decision, within 15 business days of the date of this letter. If no response is received by July 30th, 2025, the Department will prepare a notice of opportunity to provide public comment per §85-2-307(4), MCA.

Please note that if you are granted an extension of time to submit additional information to the Department, additional information may be considered an amendment to your application, which may reset application timelines pursuant to ARM 36.12.1401.

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



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



GOVERNOR GREG GIANFORTE

DNRC DIRECTOR AMANDA KASTER

June 11th, 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 30165373

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

JUN 04 2025

DNRC WATER RESOURCES
HAVRE REGIONAL OFFICE

Application # 30165373 Basin 405
 Priority Date _____ Time _____ AM/PM
 Rec'd By DH
 Fee Rec'd \$ 1000 Check # 8840
 Deposit Receipt # HVS 2525291
 Payor Richland County Conservation District
 Refund \$ _____ Date _____

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.

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: Patrick W. Colgan
 Mailing Address: 30678 County Road 149 City Poplar State MT Zip 59255-9505
 Phone Numbers: Home 406-525-3515 Work _____ Cell 406-688-9435
 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 61.05 CFS How much flow rate remains for this CD water reservation prior to this application?
A.2 14,518.15 AF 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 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 NW 1/4 SE 1/4 SE 1/4 Sec 27 Twp 27N N/S Rge 51E E/W County Richland
Lot _____ Block _____ Tract No. _____ Subdivision Name _____
Government Lot 5 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.

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

3.18 Acres _____ Lot _____ Block E2 1/4 SW 1/4 SW 1/4 Sec 27 Twp 27N N/S Rge 51E E/W
25.80 Acres _____ Lot _____ Block _____ 1/4 SE 1/4 SW 1/4 Sec 27 Twp 27N N/S Rge 51E E/W
3.85 Acres _____ Lot _____ Block E2 1/4 NW 1/4 NW 1/4 Sec 34 Twp 27N N/S Rge 51E E/W
38.12 Acres _____ Lot _____ Block _____ 1/4 NE 1/4 NW 1/4 Sec 34 Twp 27N N/S Rge 51E E/W

Continued on additional sheet (enclosed)



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 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.
N/A

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 6H pump powered by a John Deere 4045T stationary diesel engine.
Water will be conveyed in 10" 80# PIP pipe with #2 aluminum cable connection to a Valley Center Pivot system. 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 30001844 (RI-017M). The pump capacity will not be exceeded in operating the 2 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 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 D. Cowglen

Applicant Signature [Signature]

Date: 5-22-2025

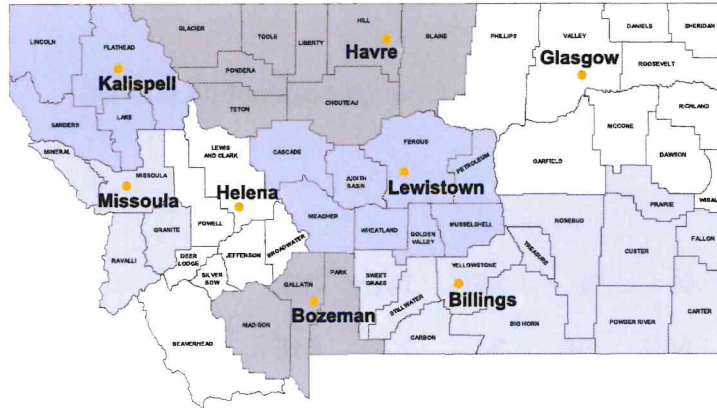
Printed Name _____

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



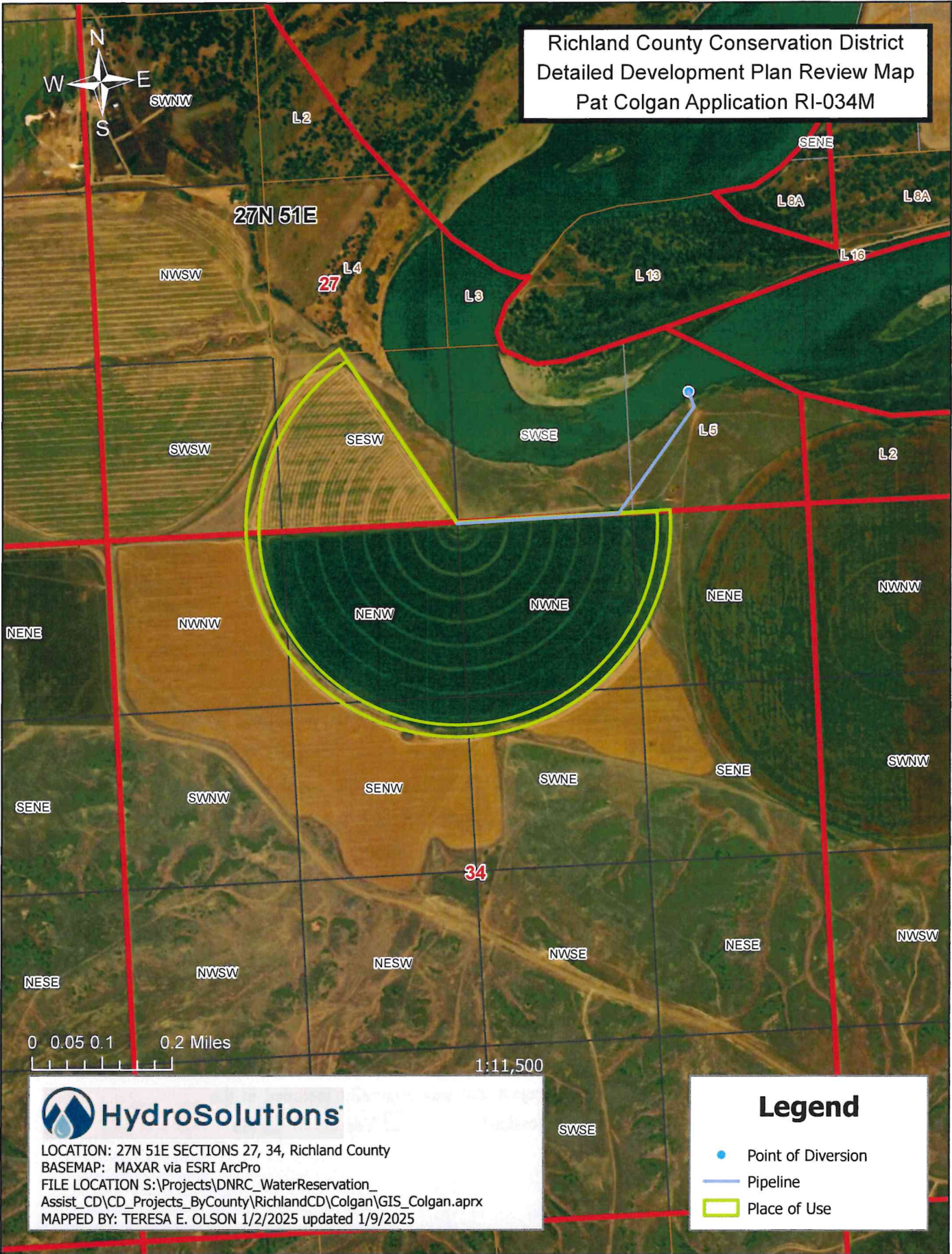
Richland Conservation District- Colgan Change Application 606-CD

Place of Use Additional:

ACRES	¼	¼	¼	SEC	TWN	RGE
38.22		NW	NE	34	27N	51E
4.35	N2	SW	NE	34	27N	51E
4.34	N2	SE	NW	34	27N	51E
<u>4.14</u>	<u>E2</u>	<u>NE</u>	<u>NE</u>	<u>34</u>	<u>27N</u>	<u>51E</u>


122 TOTAL ACRES

Richland County Conservation District
 Detailed Development Plan Review Map
 Pat Colgan Application RI-034M




0 0.05 0.1 0.2 Miles

1:11,500

 **HydroSolutions**
 LOCATION: 27N 51E SECTIONS 27, 34, Richland County
 BASEMAP: MAXAR via ESRI ArcPro
 FILE LOCATION S:\Projects\DNRC_WaterReservation_
 Assist_CD\CD_Projects_ByCounty\RichlandCD\Colgan\GIS_Colgan.aprx
 MAPPED BY: TERESA E. OLSON 1/2/2025 updated 1/9/2025

Legend

-  Point of Diversion
-  Pipeline
-  Place of Use

APPLICATION FOR RESERVED WATER USE
RICHLAND COUNTY CONSERVATION DISTRICT

Application No. <u>RC-60411</u>		For District Use Only	
Date Received <u>9/17/2023</u>		Time <u>9:40</u>	
Fee Received \$ _____		Received By <u>[Signature]</u>	

Please Print or Type:

- Applicant Name Pat Colgan
Mailing Address 30678 County Road 149
City or Town Poplar State MI Zip _____
Home Phone (406) 525-3515 Other Phone (406) 688-9435
- Applying for (check one): New Irrigation, Supplemental, Both
- Source of Water: Missouri River
- Describe Irrigation System: Valley Center Pivot
- Crops to be Grown: Alfalfa, Corn, Wheat, Hay Barley
Point of Diversion Description (to the nearest 10 acres): County Richland
government lot _____, SE 1/4, SE 1/4, NE 1/4, sec 27, twp 27 N/S, rge 51 E/W
- Point of Discharge Description (to the nearest 10 acres): County N/A
government lot _____, _____ 1/4, _____ 1/4, _____ 1/4, sec _____, twp _____ N/S, rge _____ E/W
- Place of Use Description: County see attached, New (n) or Supplemental (s) acres _____, gvt. lot _____, _____ 1/4, _____ 1/4, _____ 1/4, sec _____, twp _____ N/S, rge _____ E/W, n/s acres _____, gvt. lot _____, _____ 1/4, _____ 1/4, _____ 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: 294 acre-feet, Volume of Discharge: _____ acre-feet
- Flow Rate Requested: _____ cubic ft. per second (cfs), or 800 gallons per minute (gpm)
- Diversion Means: Pump: Type & Power Cornell 100 HP 6N, Other _____
- Conveyance Means: Pipeline, Other _____
- 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

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 plan/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: TBD

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.

 2-14-23
Applicant's Signature Date

Prepared By: Justin Candee 4/17/2023
Date

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

APPLICATION FOR RESERVED WATER USE
RICHLAND COUNTY CONSERVATION DISTRICT

CONTINUED FROM PAGE 1 - PLACE OF USE ADDENDUM

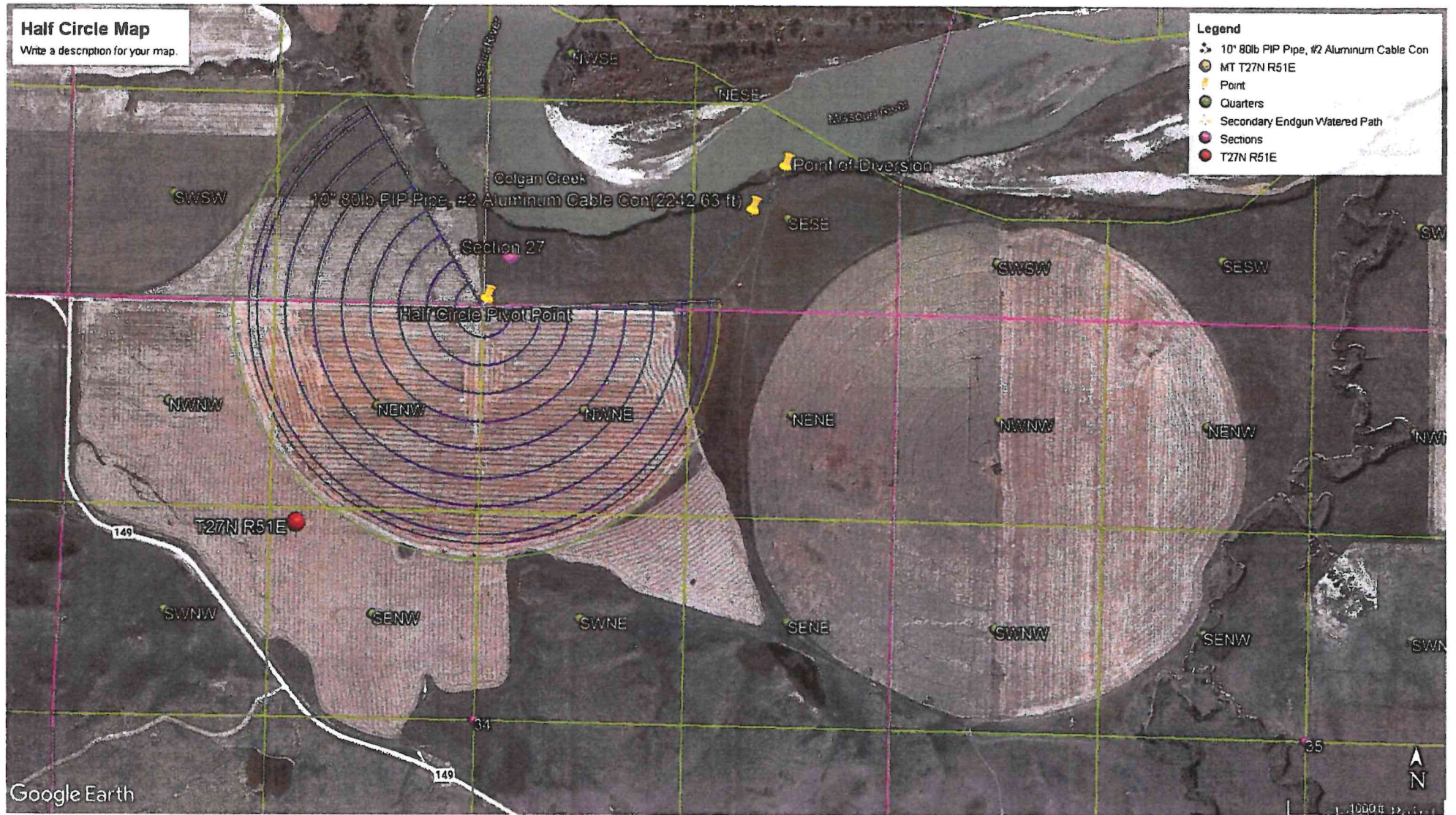
8. Place of Use Description: County Richland, New (n) or Supplemental (s)
- acres 40, gvt. lot _____, $\frac{1}{4}$, NW $\frac{1}{4}$, NE $\frac{1}{4}$, sec 34, twp 27 N/S, rge 51 E/W, n/s
- acres 40, gvt. lot _____, $\frac{1}{4}$, NE $\frac{1}{4}$, NW $\frac{1}{4}$, sec 34, twp 27 N/S, rge 51 E/W, n/s
- acres 40, gvt. lot _____, $\frac{1}{4}$, SE $\frac{1}{4}$, SW $\frac{1}{4}$, sec 27, twp 27 N/S, rge 51 E/W, n/s
- acres 2, gvt. lot _____, $\frac{1}{4}$, NE $\frac{1}{4}$, NE $\frac{1}{4}$, sec 34, twp 27 N/S, rge 51 E/W, n/s
- acres _____, gvt. lot _____, $\frac{1}{4}$, _____, _____, sec _____, twp _____ N/S, rge _____ E/W, n/s
- acres _____, gvt. lot _____, $\frac{1}{4}$, _____, _____, sec _____, twp _____ N/S, rge _____ E/W, n/s
- acres _____, gvt. lot _____, $\frac{1}{4}$, _____, _____, sec _____, twp _____ N/S, rge _____ E/W, n/s
- acres _____, gvt. lot _____, $\frac{1}{4}$, _____, _____, sec _____, twp _____ N/S, rge _____ E/W, n/s
- acres _____, gvt. lot _____, $\frac{1}{4}$, _____, _____, sec _____, twp _____ N/S, rge _____ E/W, n/s
- acres _____, gvt. lot _____, $\frac{1}{4}$, _____, _____, sec _____, twp _____ N/S, rge _____ E/W, n/s
- acres _____, gvt. lot _____, $\frac{1}{4}$, _____, _____, sec _____, twp _____ N/S, rge _____ E/W, n/s
- acres _____, gvt. lot _____, $\frac{1}{4}$, _____, _____, sec _____, twp _____ N/S, rge _____ E/W, n/s
- acres _____, gvt. lot _____, $\frac{1}{4}$, _____, _____, sec _____, twp _____ N/S, rge _____ E/W, n/s
- acres _____, gvt. lot _____, $\frac{1}{4}$, _____, _____, sec _____, twp _____ N/S, rge _____ E/W, n/s
- acres _____, gvt. lot _____, $\frac{1}{4}$, _____, _____, sec _____, twp _____ N/S, rge _____ E/W, n/s
- acres _____, gvt. lot _____, $\frac{1}{4}$, _____, _____, sec _____, twp _____ N/S, rge _____ E/W, n/s
- acres _____, gvt. lot _____, $\frac{1}{4}$, _____, _____, sec _____, twp _____ N/S, rge _____ E/W, n/s
- acres _____, gvt. lot _____, $\frac{1}{4}$, _____, _____, sec _____, twp _____ N/S, rge _____ E/W, n/s
- acres _____, gvt. lot _____, $\frac{1}{4}$, _____, _____, sec _____, twp _____ N/S, rge _____ E/W, n/s
- acres _____, gvt. lot _____, $\frac{1}{4}$, _____, _____, sec _____, twp _____ N/S, rge _____ E/W, n/s
- acres _____, gvt. lot _____, $\frac{1}{4}$, _____, _____, sec _____, twp _____ N/S, rge _____ E/W, n/s
- TOTAL ACRES 122

Half Circle Map

Write a description for your map.

Legend

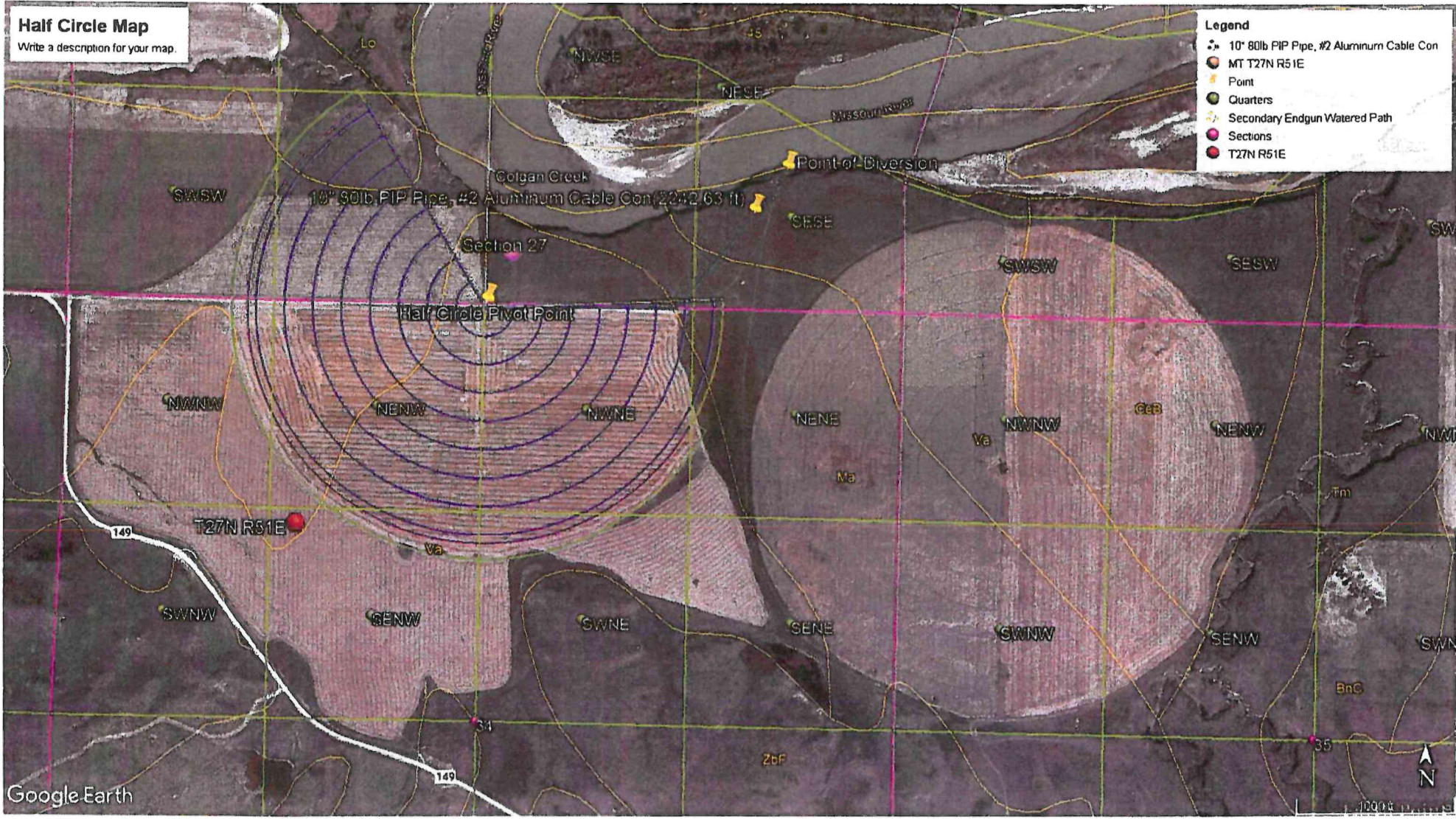
- 10" 80lb PIP Pipe, #2 Aluminum Cable Con
- MT T27N R51E
- Point
- Quarters
- Secondary Endgun Watered Path
- Sections
- T27N R51E



Half Circle Map

Write a description for your map.

- Legend**
- 10" 80lb PIP Pipe, #2 Aluminum Cable Con
 - MT T27N R51E
 - Point
 - Quarters
 - Secondary Endgun Watered Path
 - Sections
 - T27N R51E



Physical Soil Properties

This table shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller.

Sand as a soil separate consists of mineral soil particles that are 0.05 millimeter to 2 millimeters in diameter. In this table, the estimated sand content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Silt as a soil separate consists of mineral soil particles that are 0.002 to 0.05 millimeter in diameter. In this table, the estimated silt content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In this table, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, saturated hydraulic conductivity (K_{sat}), plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (oven-dry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at 1/3- or 1/10-bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute linear extensibility, shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Saturated hydraulic conductivity (Ksat) refers to the ease with which pores in a saturated soil transmit water. The estimates in the table are expressed in terms of micrometers per second. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Saturated hydraulic conductivity (Ksat) is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at 1/3- or 1/10-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. The amount and type of clay minerals in the soil influence volume change.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In this table, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter. The content of organic matter in a soil can be maintained by returning crop residue to the soil.

Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops and soil organisms.

Erosion factors are shown in the table as the K factor (Kw and Kf) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and Ksat. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Erosion factor Kw indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Erosion factor Kf indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by wind and/or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are described in the "National Soil Survey Handbook."

Wind erodibility index is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

Reference:

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. (<http://soils.usda.gov>)

Report—Physical Soil Properties

Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

Physical Soil Properties—Richland County, Montana														
Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	micro m/sec	In/In	Pct	Pct					
Ma—Marias silty clay														
Marias	0-5	- 5-	-45-	40-50- 60	1.25-1.35 -1.45	0.42-1.00-1.40	0.14-0.16-0.18	6.0- 7.5- 8.9	0.5- 1.3- 2.0	.24	.24	5	4	86
	5-14	- 5-	-45-	40-50- 60	1.30-1.40 -1.50	0.01-0.21-0.42	0.12-0.14-0.16	6.0- 7.5- 8.9	0.5- 0.8- 1.0	.32	.32			
	14-60	- 5-	-45-	40-50- 60	1.30-1.43 -1.55	0.01-0.21-0.42	0.12-0.14-0.16	6.0- 7.5- 8.9	0.0- 0.3- 0.5	.32	.32			
Va—Vanda clay														
Vanda	0-8	-22-	-28-	40-50- 60	1.25-1.35 -1.45	0.01-0.21-0.42	0.08-0.10-0.12	6.0- 7.5- 8.9	0.5- 1.3- 2.0	.17	.17	5	4	86
	8-60	-23-	-29-	35-48- 60	1.30-1.40 -1.50	0.01-0.21-0.42	0.08-0.10-0.12	6.0- 7.5- 8.9	0.0- 0.3- 0.5	.28	.28			

Data Source Information

Soil Survey Area: Richland County, Montana
 Survey Area Data: Version 20, Aug 29, 2022

Irrigation - General and Sprinkler

This table shows the degree and kind of soil limitations that affect irrigation systems on mineral soils. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Irrigation systems are used to provide supplemental water to crops, orchards, vineyards, and vegetables in area where natural precipitation will not support desired production of crops being grown.

Irrigation – general evaluates a soil's limitation(s) for installation and use of non-specific irrigation methods and is intended to provide initial planning information. Additional interpretations provide more specific information. This interpretation does not apply if the crop planned for irrigation is rice or other crops with unique plant physiological characteristics (such as cranberries). The ratings are for soils in their natural condition and do not consider present land use.

The soil properties and qualities important in design and management of irrigation systems are sodium adsorption ratio, depth to high water table, available water holding capacity, permeability, slope, calcium carbonate content, ponding, and flooding. Soil properties and qualities that influence installation are stones, depth to bedrock or cemented pan, and depth to a high water table. The properties and qualities that affect performance of the irrigation system are depth to bedrock or to a cemented pan, the sodium adsorption ratio, salinity, and soil reaction.

Irrigation, sprinkler (close spaced outlets drops) evaluates a soil for installation and use of sprinkler irrigation systems equipped with close spaced outlets on drops. The ratings are for soils in their natural condition and do not consider present land use.

Sprinkler irrigation systems equipped with low pressure spray nozzles mounted on close spaced drops apply water close to the ground surface. These systems are generally found on linear move or center pivot systems and they have separate slope criteria from other sprinkler systems due to their higher application rate which increase risk of runoff and irrigation-induced erosion on steeper slopes. Examples of these types of systems include Low Pressure in Canopy (LPIC), Low Energy Precision Application (LEPA), Low Elevation Spray Application (LESA), and Mid-Elevation Spray Application (MESA) systems. These types of irrigation systems are generally suitable for small grains, row crops, and vegetables.

The soil properties and qualities important in the design and management of sprinkler irrigation systems utilizing close spaced spray nozzles on drops are depth, available water holding capacity, sodium adsorption ratio, surface coarse fragments, permeability, salinity, slope, wetness, and flooding. The features that affect performance of the system and plant growth are surface texture, surface rocks, salinity, sodium adsorption ratio, wetness, erosion potential, and available water holding capacity.

Irrigation, sprinkler (general) evaluates a soil for installation and use of sprinkler irrigation systems excluding those equipped with close spaced outlets on drops. The ratings are for soils in their natural condition and do not consider present land use.

Sprinkler irrigation systems apply irrigation water to a field through a series of pipes and nozzles and can be either solid set or mobile. Generally, this type of irrigation system is suitable for small grains, row crops, vegetables, and orchards.

The soil properties and qualities important in the design and management of sprinkler irrigation systems are depth, available water holding capacity, sodium adsorption ratio, surface coarse fragments, permeability, salinity, slope, wetness, and flooding. The features that affect performance of the system and plant growth are surface rocks, salinity, sodium adsorption ratio, wetness, and available water holding capacity.

Information in this table is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this table. Local ordinances and regulations should be considered in planning, in site selection, and in design. The irrigation interpretations are not designed or intended to be used in a regulatory manner.

Report—Irrigation - General and Sprinkler

[The information in this table provides irrigation interpretations for mineral soils. Onsite investigation may be needed to validate the interpretations and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. The table shows only the top five limitations for any given soil. The soil may have additional limitations]

Irrigation - General and Sprinkler—Richland County, Montana							
Map symbol and soil name	Pct. of map unit	Irrigation (general)		Irrigation, Sprinkler (close spaced outlet drops)		Irrigation, Sprinkler (general)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Ma—Marias silty clay Marias	90	Somewhat limited Excess Salt Excess Sodium	0.50 0.09	Somewhat limited Slow water movement Surface clay Excess Salt Excess Sodium	0.99 0.50 0.50 0.09	Somewhat limited Slow water movement Surface clay Excess Salt Excess Sodium	0.99 0.50 0.50 0.09
Va—Vanda clay Vanda	90	Very limited Excess Sodium Excess Salt Low water holding capacity Slope	1.00 0.50 0.16 0.01	Very limited Excess Sodium Slow water movement Surface clay Excess Salt Low water holding capacity	1.00 0.99 0.50 0.50 0.50 0.16	Very limited Excess Sodium Slow water movement Surface clay Excess Salt Low water holding capacity	1.00 0.99 0.50 0.50 0.50 0.16

Data Source Information

Soil Survey Area: Richland County, Montana
 Survey Area Data: Version 20, Aug 29, 2022



V-Chart

Valley Dealer

Agri Industries
1775 S CENTRAL AVE
Sidney, MT 59270-5524
UNITED STATES

Customer

PAT COLGAN
30678 COUNTY ROAD 149
POPLAR, MT 59255
UNITED STATES OF AMERICA

Dealer No.

00910337

Field Name

Parent Order No. 10996758
Sprinkler Order No. 10996845

Plant McCook Manufacturing

Dealer PO
Order Date 05/01/2013
Load Date 05/10/2013
Method Of Shipment W/SYS (10996758)

8 Span Valley Standard Pivot 7000
Machine Flow 800 GPM
Pivot Pressure 24 PSI

Valley Standard Pivot 7000 Machine Summary

Span and Overhang

Model	Qty	Length Pipe		Coupler		D. U.	
		Ft	O.D. In	Spacing	Qty	Profile	Tire
7000	8	180.0	6 5/8	108	20	Standard	11.2 x 38
7000	1	54.0	6 5/8	110	8		

Field Area

91.3 Acres Total
 80.8 Acres: Pivot 180°
 10.5 EG on 100%
 1497.3 Ft. Machine Length
 93.9 Ft. End Gun Radius

Flow

800 Gallons Per Minute
 8.76 GPM/Acre
 0.46 In/Day App Rate
 0.155 In. App Depth @ 100%
 91.6 GPM End Gun

Messages

Caution:
 None

Dealer:
 None



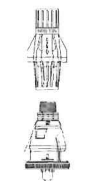
Pressure

24 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 1442.4 Ft.
 8.0 Hrs/180° @ 100% (9.45) Ft/Min

Sprinkler -- Computer Spacing

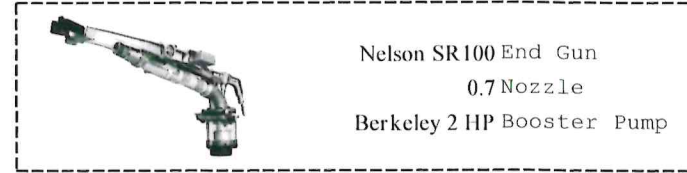
<u>Sprinkler Configuration</u>	<u>Range (ft)</u>	
Valley U-Pipe 6 Galvanized 3/4 M NPT x 3/4 M Hose	All	
Blue Premium Hose Drop Variable Length 48" Ground Clr		
Nelson Regulator Blue Acme 10 3/4 F NPT		
Valley Slip Weight 26 2.0 Poly		
Nelson S3000 D8 - Yellow 3/4 F Acme		

1893.05 Ft Total Drop Hose Length

Valley Standard Pivot 7000 Machine Summary

Pressure Loss

Pipe Length Ft	Pipe I.D. In	Pipe Finish	C-Factor	Loss PSI
1469.9	6.42	Galvanized	150	10.8
27.4	3.79	Galvanized	150	0.5
Total =				11.3



Nelson SR100 End Gun
 0.7 Nozzle
 Berkeley 2 HP Booster Pump

Span Flow

Span Number	Irrigated Length	Irrigated Acres	Rqd GPM	Act GPM	Rqd GPM/Acre	Act GPM/Acre	% Deviation
1	179.9	1.2	10.3	13.0	8.64	10.85	25.6
2	180.1	3.5	30.5	30.5	8.64	8.62	-0.2
3	180.1	5.9	50.8	50.9	8.64	8.66	0.2
4	180.1	8.2	71.0	71.0	8.64	8.64	-0.0
5	180.1	10.6	91.2	91.3	8.64	8.65	0.1
6	180.1	12.9	111.4	111.3	8.64	8.63	-0.1
7	180.1	15.2	131.6	131.5	8.64	8.63	-0.1
8	179.8	17.5	151.6	151.8	8.64	8.65	0.1
O/H	54.8	5.8	51.2	51.3	8.80	8.82	0.2
EG	93.9	10.5	91.7	91.6	8.77	8.76	0.0
Totals			91.3	794.2			
Drain Sprinkler			8.8	8.7			
Total Machine Flow			802.9				


Advanced Options

Drain Sprinkler = Senninger Directional
 Last Sprinkler Coverage = 1.0 ft
 Sprinkler Coverage Length = 1498.3 ft
 Use Last Coupler= YES
 Minimum Mainline Pressure = 6.0 PSI

Shipping Options

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

Valley Standard Pivot 7000 Machine Sprinkler Chart

Cpl No	Dist From Pivot	Spk No	Dist Last Spk	Nozzle Size	Color	Spk Model	Wear Pad	Drop Length	Regulator	Line PSI	Spk PSI	Rqd GPM	Act GPM
1	6.5				Gauge					24.0			
Sprinkler : Nelson Spinner 													
2	15.5	1		10	Beige	S3000	Beige	116	Blue Acme 10L	23.6	11.6	0.1	0.6
3	24.5	2	9.0	10	Beige	S3000	Beige	123	Blue Acme 10L	23.3	11.6	0.1	0.6
4	33.5	3	9.0	10	Beige	S3000	Beige	129	Blue Acme 10L	22.9	11.6	0.2	0.6
5	42.5	4	9.0	10	Beige	S3000	Beige	134	Blue Acme 10L	22.7	11.6	0.2	0.6
6	51.5	5	9.0	10	Beige	S3000	Beige	138	Blue Acme 10L	22.4	11.6	0.3	0.6
7	60.5	6	9.0	10	Beige	S3000	Beige	142	Blue Acme 10L	22.2	11.6	0.3	0.6
8	69.5	7	9.0	10	Beige	S3000	Beige	145	Blue Acme 10L	22.0	11.6	0.4	0.6
9	78.5	8	9.0	10	Beige	S3000	Beige	147	Blue Acme 10L	21.8	11.6	0.4	0.6
10	87.5	9	9.0	10	Beige	S3000	Beige	148	Blue Acme 10L	21.6	11.6	0.5	0.6
11	96.4	10	8.9	10	Beige	S3000	Beige	148	Blue Acme 10L	21.5	11.6	0.5	0.6
12	105.4	11	9.0	10	Beige	S3000	Beige	148	Blue Acme 10L	21.4	11.6	0.6	0.6
13	114.4	12	9.0	11	Beige/Gold	S3000	Beige	146	Blue Acme 10L	21.4	11.5	0.6	0.7
14	123.4	13	9.0	11	Beige/Gold	S3000	Beige	144	Blue Acme 10L	21.3	11.5	0.7	0.7
15	132.4	14	9.0	11	Beige/Gold	S3000	Beige	142	Blue Acme 10L	21.3	11.5	0.7	0.7
16	141.3	15	8.9	12	Gold	S3000	Beige	138	Blue Acme 10L	21.4	11.5	0.8	0.8
17	150.3	16	9.0	12	Gold	S3000	Beige	134	Blue Acme 10L	21.4	11.5	0.8	0.8
18	159.3	17	9.0	12	Gold	S3000	Beige	128	Blue Acme 10L	21.5	11.5	0.9	0.8
19	168.3	18	9.0	13	Gold/Lime	S3000	Beige	122	Blue Acme 10L	21.6	11.5	0.9	1.0
20	177.3	19	9.0	13	Gold/Lime	S3000	Beige	116	Blue Acme 10L	21.8	11.4	1.0	1.0
182.0		Tower Number : 1		Span Length : 179.9									
21	186.6	20	9.3	13	Gold/Lime	S3000	Beige	116	Blue Acme 10L	21.6	11.4	1.1	1.0
22	195.6	21	9.0	14	Lime	S3000	Beige	123	Blue Acme 10L	21.3	11.4	1.1	1.1
23	204.6	22	9.0	14	Lime	S3000	Beige	129	Blue Acme 10L	20.9	11.4	1.1	1.1
24	213.6	23	9.0	15	Lime/Lavender	S3000	Beige	135	Blue Acme 10L	20.6	11.4	1.2	1.3
25	222.6	24	9.0	14	Lime	S3000	Beige	140	Blue Acme 10L	20.4	11.4	1.2	1.1
26	231.6	25	9.0	15	Lime/Lavender	S3000	Beige	144	Blue Acme 10L	20.1	11.4	1.3	1.3
27	240.6	26	9.0	15	Lime/Lavender	S3000	Beige	147	Blue Acme 10L	19.9	11.3	1.3	1.3
28	249.6	27	9.0	16	Lavender	S3000	D8 - Yellow	149	Blue Acme 10L	19.7	11.3	1.4	1.5
29	258.6	28	9.0	16	Lavender	S3000	D8 - Yellow	151	Blue Acme 10L	19.6	11.3	1.5	1.5

Field Name

Valley Standard Pivot 7000 Machine Sprinkler Chart

Cpl No	Dist From Pivot	Spk No	Dist Last Spk	Nozzle Size	Color	Spk Model	Wear Pad	Drop Length	Regulator	Line PSI	Spk PSI	Rqd GPM	Act GPM
30	267.6	29	9.0	16	Lavender	S3000	D8 - Yellow	152	Blue Acme 10L	19.4	11.3	1.5	1.5
31	276.5	30	8.9	16	Lavender	S3000	D8 - Yellow	152	Blue Acme 10L	19.3	11.3	1.5	1.5
32	285.5	31	9.0	17	Lavender/Gray	S3000	D8 - Yellow	151	Blue Acme 10L	19.3	11.3	1.6	1.7
33	294.5	32	9.0	17	Lavender/Gray	S3000	D8 - Yellow	149	Blue Acme 10L	19.2	11.3	1.7	1.7
34	303.5	33	9.0	17	Lavender/Gray	S3000	D8 - Yellow	147	Blue Acme 10L	19.2	11.3	1.7	1.7
35	312.5	34	9.0	17	Lavender/Gray	S3000	D8 - Yellow	144	Blue Acme 10L	19.2	11.3	1.7	1.7
36	321.4	35	8.9	18	Gray	S3000	D8 - Yellow	140	Blue Acme 10L	19.3	11.2	1.8	1.9
37	330.4	36	9.0	18	Gray	S3000	D8 - Yellow	135	Blue Acme 10L	19.4	11.2	1.9	1.9
38	339.4	37	9.0	18	Gray	S3000	D8 - Yellow	129	Blue Acme 10L	19.5	11.2	1.9	1.9
39	348.4	38	9.0	18	Gray	S3000	D8 - Yellow	123	Blue Acme 10L	19.6	11.2	2.0	1.9
40	357.4	39	9.0	19	Gray/Turquoise	S3000	D8 - Yellow	116	Blue Acme 10L	19.8	11.2	2.0	2.1
362.1		Tower Number : 2		Span Length : 180.1									
41	366.7	40	9.3	19	Gray/Turquoise	S3000	D8 - Yellow	116	Blue Acme 10L	19.7	11.2	2.1	2.1
42	375.7	41	9.0	19	Gray/Turquoise	S3000	D8 - Yellow	123	Blue Acme 10L	19.3	11.2	2.1	2.1
43	384.7	42	9.0	20	Turquoise	S3000	D8 - Yellow	129	Blue Acme 10L	19.0	11.2	2.2	2.3
44	393.7	43	9.0	19	Gray/Turquoise	S3000	D8 - Yellow	135	Blue Acme 10L	18.7	11.2	2.2	2.1
45	402.7	44	9.0	20	Turquoise	S3000	D8 - Yellow	140	Blue Acme 10L	18.4	11.1	2.3	2.3
46	411.7	45	9.0	20	Turquoise	S3000	D8 - Yellow	144	Blue Acme 10L	18.2	11.1	2.3	2.3
47	420.7	46	9.0	20	Turquoise	S3000	D8 - Yellow	147	Blue Acme 10L	18.0	11.1	2.4	2.3
48	429.7	47	9.0	21	Turq/Yellow	S3000	D8 - Yellow	149	Blue Acme 10L	17.8	11.1	2.4	2.5
49	438.7	48	9.0	21	Turq/Yellow	S3000	D8 - Yellow	151	Blue Acme 10L	17.6	11.1	2.5	2.5
50	447.7	49	9.0	21	Turq/Yellow	S3000	D8 - Yellow	152	Blue Acme 10L	17.5	11.1	2.5	2.5
51	456.6	50	8.9	21	Turq/Yellow	S3000	D8 - Yellow	152	Blue Acme 10L	17.4	11.1	2.5	2.5
52	465.6	51	9.0	21	Turq/Yellow	S3000	D8 - Yellow	151	Blue Acme 10L	17.4	11.1	2.6	2.5
53	474.6	52	9.0	22	Yellow	S3000	D8 - Yellow	149	Blue Acme 10L	17.3	11.1	2.7	2.8
54	483.6	53	9.0	22	Yellow	S3000	D8 - Yellow	147	Blue Acme 10L	17.3	11.1	2.7	2.8
55	492.6	54	9.0	22	Yellow	S3000	D8 - Yellow	144	Blue Acme 10L	17.4	11.1	2.7	2.8
56	501.5	55	8.9	22	Yellow	S3000	D8 - Yellow	140	Blue Acme 10L	17.4	11.0	2.8	2.8
57	510.5	56	9.0	22	Yellow	S3000	D8 - Yellow	135	Blue Acme 10L	17.5	11.0	2.9	2.8
58	519.5	57	9.0	23	Yellow/Red	S3000	D8 - Yellow	129	Blue Acme 10L	17.6	11.0	2.9	3.0
59	528.5	58	9.0	23	Yellow/Red	S3000	D8 - Yellow	123	Blue Acme 10L	17.8	11.0	3.0	3.0
60	537.5	59	9.0	23	Yellow/Red	S3000	D8 - Yellow	116	Blue Acme 10L	17.9	11.0	3.1	3.0
542.2		Tower Number : 3		Span Length : 180.1									
61	546.8	60	9.3	23	Yellow/Red	S3000	D8 - Yellow	116	Blue Acme 10L	17.9	11.0	3.1	3.0

Customer PAT COLGAN

Field Name

Valley Standard Pivot 7000 Machine Sprinkler Chart

Cpl No	Dist From Pivot	Spk No	Dist Last Spk	Nozzle Size	Color	Spk Model	Wear Pad	Drop Length	Regulator	Line PSI	Spk PSI	Rqd GPM	Act GPM
62	555.8	61	9.0	23	Yellow/Red	S3000	D8 - Yellow	123	Blue Acme 10L	17.5	11.0	3.1	3.0
63	564.8	62	9.0	24	Red	S3000	D8 - Yellow	129	Blue Acme 10L	17.2	11.0	3.2	3.3
64	573.8	63	9.0	24	Red	S3000	D8 - Yellow	135	Blue Acme 10L	16.9	11.0	3.2	3.3
65	582.8	64	9.0	24	Red	S3000	D8 - Yellow	140	Blue Acme 10L	16.7	11.0	3.3	3.3
66	591.8	65	9.0	24	Red	S3000	D8 - Yellow	144	Blue Acme 10L	16.4	10.9	3.3	3.3
67	600.8	66	9.0	24	Red	S3000	D8 - Yellow	147	Blue Acme 10L	16.2	10.9	3.4	3.3
68	609.8	67	9.0	25	Red/White	S3000	D8 - Yellow	149	Blue Acme 10L	16.1	10.9	3.4	3.6
69	618.8	68	9.0	24	Red	S3000	D8 - Yellow	151	Blue Acme 10L	15.9	10.9	3.5	3.3
70	627.8	69	9.0	25	Red/White	S3000	D8 - Yellow	152	Blue Acme 10L	15.8	10.9	3.5	3.6
71	636.7	70	8.9	25	Red/White	S3000	D8 - Yellow	152	Blue Acme 10L	15.8	10.9	3.6	3.5
72	645.7	71	9.0	25	Red/White	S3000	D8 - Yellow	151	Blue Acme 10L	15.7	10.8	3.6	3.5
73	654.7	72	9.0	26	White	S3000	D8 - Yellow	149	Blue Acme 10L	15.7	10.8	3.7	3.8
74	663.7	73	9.0	25	Red/White	S3000	D8 - Yellow	147	Blue Acme 10L	15.7	10.8	3.7	3.5
75	672.7	74	9.0	26	White	S3000	D8 - Yellow	144	Blue Acme 10L	15.7	10.8	3.8	3.8
76	681.6	75	8.9	26	White	S3000	D8 - Yellow	140	Blue Acme 10L	15.8	10.8	3.8	3.8
77	690.6	76	9.0	26	White	S3000	D8 - Yellow	135	Blue Acme 10L	15.9	10.8	3.9	3.8
78	699.6	77	9.0	26	White	S3000	D8 - Yellow	129	Blue Acme 10L	16.0	10.7	3.9	3.8
79	708.6	78	9.0	27	White/Blue	S3000	D8 - Yellow	123	Blue Acme 10L	16.2	10.7	4.0	4.1
80	717.6	79	9.0	27	White/Blue	S3000	D8 - Yellow	116	Blue Acme 10L	16.4	10.7	4.1	4.1
722.3			Tower Number : 4		Span Length : 180.1								
81	726.9	80	9.3	27	White/Blue	S3000	D8 - Yellow	116	Blue Acme 10L	16.3	10.7	4.1	4.1
82	735.9	81	9.0	27	White/Blue	S3000	D8 - Yellow	123	Blue Acme 10L	16.0	10.7	4.1	4.1
83	744.9	82	9.0	27	White/Blue	S3000	D8 - Yellow	129	Blue Acme 10L	15.7	10.6	4.2	4.1
84	753.9	83	9.0	28	Blue	S3000	D8 - Yellow	135	Blue Acme 10L	15.4	10.6	4.2	4.5
85	762.9	84	9.0	27	White/Blue	S3000	D8 - Yellow	140	Blue Acme 10L	15.2	10.6	4.3	4.1
86	771.9	85	9.0	28	Blue	S3000	D8 - Yellow	144	Blue Acme 10L	15.0	10.6	4.3	4.4
87	780.9	86	9.0	28	Blue	S3000	D8 - Yellow	147	Blue Acme 10L	14.8	10.6	4.4	4.4
88	789.9	87	9.0	28	Blue	S3000	D8 - Yellow	149	Blue Acme 10L	14.7	10.6	4.4	4.4
89	798.9	88	9.0	28	Blue	S3000	D8 - Yellow	151	Blue Acme 10L	14.5	10.6	4.5	4.4
90	807.9	89	9.0	28	Blue	S3000	D8 - Yellow	152	Blue Acme 10L	14.4	10.6	4.5	4.4
91	816.8	90	8.9	28	Blue	S3000	D8 - Yellow	152	Blue Acme 10L	14.4	10.5	4.6	4.4
92	825.8	91	9.0	29	Blue/Dark Brown	S3000	D8 - Yellow	151	Blue Acme 10L	14.4	10.5	4.6	4.7
93	834.8	92	9.0	29	Blue/Dark Brown	S3000	D8 - Yellow	149	Blue Acme 10L	14.4	10.5	4.7	4.7
94	843.8	93	9.0	29	Blue/Dark Brown	S3000	D8 - Yellow	147	Blue Acme 10L	14.4	10.5	4.7	4.7



Valley Standard Pivot 7000 Machine Sprinkler Chart

Cpl No	Dist From Pivot	Spk No	Dist Last Spk	Nozzle Size	Color	Spk Model	Wear Pad	Drop Length	Regulator	Line PSI	Spk PSI	Rqd GPM	Act GPM
95	852.8	94	9.0	29	Blue/Dark Brown	S3000	D8 - Yellow	144	Blue Acme 10L	14.4	10.5	4.8	4.7
96	861.7	95	8.9	29	Blue/Dark Brown	S3000	D8 - Yellow	140	Blue Acme 10L	14.5	10.4	4.8	4.7
97	870.7	96	9.0	30	Dark Brown	S3000	D8 - Yellow	135	Blue Acme 10L	14.6	10.4	4.9	5.0
98	879.7	97	9.0	30	Dark Brown	S3000	D8 - Yellow	129	Blue Acme 10L	14.8	10.4	4.9	5.0
99	888.7	98	9.0	30	Dark Brown	S3000	D8 - Yellow	123	Blue Acme 10L	15.0	10.4	5.0	5.0
100	897.7	99	9.0	30	Dark Brown	S3000	D8 - Yellow	116	Blue Acme 10L	15.2	10.4	5.1	5.0
	902.4		Tower Number : 5		Span Length : 180.1								
101	907.0	100	9.3	30	Dark Brown	S3000	D8 - Yellow	116	Blue Acme 10L	15.1	10.3	5.2	5.0
102	916.0	101	9.0	30	Dark Brown	S3000	D8 - Yellow	123	Blue Acme 10L	14.8	10.3	5.1	5.0
103	925.0	102	9.0	31	Dk Brown/Orange	S3000	D8 - Yellow	129	Blue Acme 10L	14.5	10.3	5.2	5.3
104	934.0	103	9.0	31	Dk Brown/Orange	S3000	D8 - Yellow	135	Blue Acme 10L	14.3	10.3	5.2	5.3
105	943.0	104	9.0	31	Dk Brown/Orange	S3000	D8 - Yellow	140	Blue Acme 10L	14.1	10.3	5.3	5.3
106	952.0	105	9.0	31	Dk Brown/Orange	S3000	D8 - Yellow	144	Blue Acme 10L	13.9	10.3	5.3	5.3
107	961.0	106	9.0	31	Dk Brown/Orange	S3000	D8 - Yellow	147	Blue Acme 10L	13.7	10.2	5.4	5.3
108	970.0	107	9.0	31	Dk Brown/Orange	S3000	D8 - Yellow	149	Blue Acme 10L	13.6	10.2	5.4	5.3
109	979.0	108	9.0	32	Orange	S3000	D8 - Yellow	151	Blue Acme 10L	13.5	10.2	5.5	5.7
110	988.0	109	9.0	32	Orange	S3000	D8 - Yellow	152	Blue Acme 10L	13.4	10.2	5.5	5.7
111	996.9	110	8.9	31	Dk Brown/Orange	S3000	D8 - Yellow	152	Blue Acme 10L	13.4	10.2	5.6	5.3
112	1005.9	111	9.0	32	Orange	S3000	D8 - Yellow	151	Blue Acme 10L	13.3	10.1	5.6	5.7
113	1014.9	112	9.0	32	Orange	S3000	D8 - Yellow	149	Blue Acme 10L	13.4	10.1	5.7	5.7
114	1023.9	113	9.0	32	Orange	S3000	D8 - Yellow	147	Blue Acme 10L	13.4	10.1	5.7	5.7
115	1032.9	114	9.0	33	Orange/Dk Green	S3000	D8 - Yellow	144	Blue Acme 10L	13.5	10.1	5.8	6.0
116	1041.8	115	8.9	32	Orange	S3000	D8 - Yellow	140	Blue Acme 10L	13.6	10.1	5.8	5.7
117	1050.8	116	9.0	33	Orange/Dk Green	S3000	D8 - Yellow	135	Blue Acme 10L	13.7	10.1	5.9	6.0
118	1059.8	117	9.0	33	Orange/Dk Green	S3000	D8 - Yellow	129	Blue Acme 10L	13.9	10.1	5.9	6.0
119	1068.8	118	9.0	33	Orange/Dk Green	S3000	D8 - Yellow	123	Blue Acme 10L	14.1	10.1	6.0	6.0
120	1077.8	119	9.0	33	Orange/Dk Green	S3000	D8 - Yellow	116	Blue Acme 10L	14.3	10.0	6.2	6.0
	1082.5		Tower Number : 6		Span Length : 180.1								
121	1087.1	120	9.3	34	Dark Green	S3000	D8 - Yellow	116	Blue Acme 10L	14.3	10.0	6.2	6.4
122	1096.1	121	9.0	33	Orange/Dk Green	S3000	D8 - Yellow	123	Blue Acme 10L	14.0	10.0	6.1	6.0
123	1105.1	122	9.0	34	Dark Green	S3000	D8 - Yellow	129	Blue Acme 10L	13.7	10.0	6.2	6.4
124	1114.1	123	9.0	33	Orange/Dk Green	S3000	D8 - Yellow	135	Blue Acme 10L	13.5	10.0	6.3	6.0
125	1123.1	124	9.0	34	Dark Green	S3000	D8 - Yellow	140	Blue Acme 10L	13.3	9.9	6.3	6.4
126	1132.1	125	9.0	34	Dark Green	S3000	D8 - Yellow	144	Blue Acme 10L	13.1	9.9	6.4	6.3

Valley Standard Pivot 7000 Machine Sprinkler Chart

Cpl No	Dist From Pivot	Spk No	Dist Last Spk	Nozzle Size	Color	Spk Model	Wear Pad	Drop Length	Regulator	Line PSI	Spk PSI	Rqd GPM	Act GPM
127	1141.1	126	9.0	34	Dark Green	S3000	D8 - Yellow	147	Blue Acme 10L	13.0	9.9	6.4	6.3
128	1150.1	127	9.0	35	Dk Green/Purple	S3000	D8 - Yellow	149	Blue Acme 10L	12.9	9.9	6.5	6.7
129	1159.1	128	9.0	34	Dark Green	S3000	D8 - Yellow	151	Blue Acme 10L	12.8	9.9	6.5	6.3
130	1168.1	129	9.0	35	Dk Green/Purple	S3000	D8 - Yellow	152	Blue Acme 10L	12.7	9.9	6.5	6.7
131	1177.0	130	8.9	35	Dk Green/Purple	S3000	D8 - Yellow	152	Blue Acme 10L	12.7	9.9	6.6	6.7
132	1186.0	131	9.0	35	Dk Green/Purple	S3000	D8 - Yellow	151	Blue Acme 10L	12.7	9.9	6.7	6.7
133	1195.0	132	9.0	35	Dk Green/Purple	S3000	D8 - Yellow	149	Blue Acme 10L	12.7	9.8	6.7	6.7
134	1204.0	133	9.0	35	Dk Green/Purple	S3000	D8 - Yellow	147	Blue Acme 10L	12.8	9.8	6.8	6.7
135	1213.0	134	9.0	35	Dk Green/Purple	S3000	D8 - Yellow	144	Blue Acme 10L	12.9	9.8	6.8	6.7
136	1221.9	135	8.9	35	Dk Green/Purple	S3000	D8 - Yellow	140	Blue Acme 10L	13.0	9.8	6.8	6.7
137	1230.9	136	9.0	36	Purple	S3000	D8 - Yellow	135	Blue Acme 10L	13.2	9.9	6.9	7.0
138	1239.9	137	9.0	36	Purple	S3000	D8 - Yellow	129	Blue Acme 10L	13.3	9.9	7.0	7.0
139	1248.9	138	9.0	36	Purple	S3000	D8 - Yellow	123	Blue Acme 10L	13.6	9.9	7.0	7.0
140	1257.9	139	9.0	36	Purple	S3000	D8 - Yellow	116	Blue Acme 10L	13.8	9.9	7.2	7.0
1262.6		Tower Number : 7		Span Length : 180.1									
141	1267.2	140	9.3	37	Purple/Black	S3000	D8 - Yellow	116	Blue Acme 10L	13.8	9.9	7.2	7.5
142	1276.2	141	9.0	36	Purple	S3000	D8 - Yellow	123	Blue Acme 10L	13.5	9.9	7.2	7.0
143	1285.2	142	9.0	37	Purple/Black	S3000	D8 - Yellow	129	Blue Acme 10L	13.3	9.9	7.2	7.5
144	1294.2	143	9.0	36	Purple	S3000	D8 - Yellow	135	Blue Acme 10L	13.0	9.9	7.3	7.0
145	1303.2	144	9.0	37	Purple/Black	S3000	D8 - Yellow	140	Blue Acme 10L	12.9	9.9	7.3	7.5
146	1312.2	145	9.0	37	Purple/Black	S3000	D8 - Yellow	144	Blue Acme 10L	12.7	9.9	7.4	7.5
147	1321.2	146	9.0	37	Purple/Black	S3000	D8 - Yellow	147	Blue Acme 10L	12.6	9.9	7.4	7.5
148	1330.2	147	9.0	37	Purple/Black	S3000	D8 - Yellow	149	Blue Acme 10L	12.5	9.9	7.5	7.5
149	1339.2	148	9.0	37	Purple/Black	S3000	D8 - Yellow	151	Blue Acme 10L	12.4	9.9	7.5	7.5
150	1348.2	149	9.0	37	Purple/Black	S3000	D8 - Yellow	152	Blue Acme 10L	12.4	9.9	7.5	7.5
151	1357.1	150	8.9	37	Purple/Black	S3000	D8 - Yellow	152	Blue Acme 10L	12.4	9.9	7.6	7.5
152	1366.1	151	9.0	37	Purple/Black	S3000	D8 - Yellow	151	Blue Acme 10L	12.4	9.9	7.7	7.5
153	1375.1	152	9.0	37	Purple/Black	S3000	D8 - Yellow	149	Blue Acme 10L	12.4	9.9	7.7	7.5
154	1384.1	153	9.0	38	Black	S3000	D8 - Yellow	147	Blue Acme 10L	12.5	9.9	7.8	7.9
155	1393.1	154	9.0	38	Black	S3000	D8 - Yellow	144	Blue Acme 10L	12.6	9.9	7.8	7.9
156	1402.0	155	8.9	38	Black	S3000	D8 - Yellow	140	Blue Acme 10L	12.7	9.9	7.8	7.9
157	1411.0	156	9.0	38	Black	S3000	D8 - Yellow	135	Blue Acme 10L	12.9	9.9	7.9	7.9
158	1420.0	157	9.0	38	Black	S3000	D8 - Yellow	129	Blue Acme 10L	13.1	9.9	8.0	7.9
159	1429.0	158	9.0	38	Black	S3000	D8 - Yellow	123	Blue Acme 10L	13.3	9.9	8.0	7.9

Valley Standard Pivot 7000 Machine Sprinkler Chart

Cpl No	Dist From Pivot	Spk No	Dist Last Spk	Nozzle Size	Color	Spk Model	Wear Pad	Drop Length	Regulator	Line PSI	Spk PSI	Rqd GPM	Act GPM
160	1438.0	159	9.0	38	Black	S3000	D8 - Yellow	116	Blue Acme 10L	13.6	9.9	8.1	7.9
161	1441.8		3.8	B.P.									
	1442.4		Tower Number : 8		Span Length : 179.8								
162	1447.0	160	9.0	39	Black/Dk Turq	S3000	D8 - Yellow	114	Blue Acme 10L	13.6	9.9	8.2	8.4
163	1456.1	161	9.1	39	Black/Dk Turq	S3000	D8 - Yellow	118	Blue Acme 10L	13.5	9.9	8.3	8.4
164	1465.3	162	9.2	39	Black/Dk Turq	S3000	D8 - Yellow	123	Blue Acme 10L	13.3	9.9	8.3	8.4
165	1468.9		3.5	Plug									
166	1474.4	163	9.1	39	Black/Dk Turq	S3000	D8 - Yellow	127	Blue Acme 10L	13.1	9.9	8.4	8.4
167	1483.6	164	9.1	39	Black/Dk Turq	S3000	D8 - Yellow	131	Blue Acme 10L	12.9	9.9	8.5	8.4
168	1492.7	165	9.2	41	Dk Turq/Mustard	S3000	D8 - Yellow	136	Blue Acme 10L	12.7	9.9	9.4	9.3
			Sprinkler : Senninger Spray										
													
169	1496.3	166	3.5	19	Black	Directional				12.4	12.4	8.8	8.7
	1497.3		Overhang		Span Length : 54.8								
			Sprinkler : Nelson Endgun										
													
170	1497.3	167	1.0	0.7		SR100				12.4	43.1	91.7	91.6

Endgun Arc Settings: Forward Angle: 45 Reverse Angle: 85

802.7

Valley Standard Pivot 7000 Percent Timer Data

Setup Information - Valley Computer Control Panel Water Application Constants: Minimum Application = 0.155 Hours Per Revolution = 8.0

Based on Inches

Inches Per 180 Degrees	Pivot % Timer	Hours Per 180 Degrees
0.155	100.0	8.0
0.20	77.4	10.3
0.30	51.6	15.5
0.40	38.7	20.7
0.50	31.0	25.8
0.60	25.8	31.0
0.70	22.1	36.2
0.80	19.4	41.2
0.90	17.2	46.5
1.00	15.5	51.6
1.25	12.4	64.5
1.50	10.3	77.7
1.75	8.9	89.9
2.00	7.7	103.9
2.50	6.2	129.0
3.00	5.2	153.8

Based on % Timer

Pivot % Timer	Inches Per 180 Degrees	Hours Per 180 Degrees
100.0	0.155	8.0
90.0	0.17	8.9
80.0	0.19	10.0
70.0	0.22	11.4
60.0	0.26	13.3
50.0	0.31	16.0
45.0	0.34	17.8
40.0	0.39	20.0
35.0	0.44	22.9
30.0	0.52	26.7
25.0	0.62	32.0
20.0	0.77	40.0
17.5	0.89	45.7
15.0	1.03	53.3
12.5	1.24	64.0
10.0	1.55	80.0
7.5	2.07	106.7
5.0	3.10	160.0

Field Area

91.3 Acres Total
 80.8 Acres: Pivot 180°
 10.5 EG on 100%
 1497.3 Ft. Machine Length
 93.9 Ft. End Gun Radius

Flow

800 Gallons Per Minute
 8.76 GPM/Acre
 0.46 In/Day App Rate
 0.155 In. App Depth @ 100%
 91.6 GPM End Gun

Pressure

24 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 1447.4 Ft.
 8.0 Hrs/180 @ 100% (9.45)Ft/Min

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.

November 15, 2024

To whom it may concern:

This is an agreement between Larry and Laurie Handy Trust and Patrick Colgan addressing the irrigation of 40 acres in Section 27, Twp 27 N, Range 51 E. Larry and Laurie Handy Trust own the property in Section 27, Twp 27N, Range 51E and Patrick Colgan owns the pivot to convey the irrigation water on the property. We agree that Patrick Colgan can apply for Reserved Water through the Richland County Conservation District on this property.

Larry and Laurie Handy Trust

Larry Handy 12-2-24
Larry Handy, Trustee Date

Lauri Handy 12/3/24
Lauri Handy, Trustee Date

We, Tom and Marquieta Colgan own the N2 of Sec 34, T27N, R51E in Richland County, Montana. Patrick Colgan has a lifetime lease on this property. He owns the pivot on the property. We agree that he can apply for reserved water through the Richland County Conservation District on this property.

Tom Colgan

10-31-24

Tom Colgan

Date

Marquieta Colgan

10-31-2024

Marquieta Colgan

Date

CONSERVATION DISTRICT RESERVED WATER USE AUTHORIZATION

§85-2-316, 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: Pat Colgan
 Mailing Address: 30678 County Rd 149 City Poplar State MT Zip 59255
 Phone Numbers: 406-525-3515 Cell 406-688-9435
 Email Address: _____

2. Authorization Number: RI-034M Internal Priority Date: 04-17-2023 9:40am

3. Source of Water Supply: Missouri River

A tributary of _____

4. Total Amount: 800 gpm (1.8 cfs) up to 294 acre-ft per Annum

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

6. Point of Diversion:

LOT	¼	¼	¼	SEC	TWP N/S	RGE E/W	COUNTY
5	NW	SE	SE	27	27N	51E	Richland

7. Place of Use:

N = New S = Supplemental

ACRES	LOT	¼	¼	¼	SEC	TWP N/S	RGE E/W	COUNTY	N/S
93				N2	34	27N	51E	Richland	N
29				S2SW	27	27N	51E	Richland	N

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-017 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 Conradson
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

Richland County Conservation District
 DNRC Pre Application Map
 Pat Colgan Application RI-034M



27

27

POD ID#1 Cornell
 6H, 100hp,
 2200 rpm

10" 80lb. PIP Pipe,
 with #2 Aluminum Cable
 Connection

122 Acres
 Sprinkler/Pivot
 Irrigation

34

27N 51E

Water will be pumped with a Cornell 6H pump (100 hp, 2200 rpm), powered by a John Deere 4045T stationary diesel engine (77hp @ 1800 rpm). Water will be conveyed in 10" 80# PIP pipe with #2 aluminum cable connection to a Valley Center pivot system.

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

0 0.13 0.25 0.5 Miles

1:16,200



HydroSolutions

LOCATION: 27N 51E SECTIONS 27, 34, Richland County
 BASEMAP: MAXAR via ESRI ArcPro
 FILE LOCATION S:\Projects\DNRC_WaterReservation_
 Assist_CD\CD_Projects_ByCounty\RichlandCD\Colgan\GIS_Colgan.aprx
 MAPPED BY: TERESA E. OLSON 2/24/2025

Legend

- Point of Diversion
- Pipeline
- Proposed Place of Use
- 40S 30001844
- Existing Pipeline

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 30165160 CONSERVATION DISTRICT RECORD **CD Number:** RI-034 M
Version: 1 -- ORIGINAL RIGHT
Version Status: ACTIVE

Owners: PATRICK W COLGAN
30678 COUNTY RD 149
POPLAR, MT 59255
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 17, 2023 AT 09:40 A.M.

Purpose (Use): IRRIGATION
Maximum Flow Rate: 1.80 CFS
Maximum Volume: 294.00 AC-FT
Maximum Acres: 122.00
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	5	NWSESE	27	27N	51E	RICHLAND

Period of Diversion: APRIL 1 TO OCTOBER 31 **Flow Rate:** 1.80 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	93.00		N2	34	27N	51E	RICHLAND
2	29.00		S2SW	27	27N	51E	RICHLAND

Total: 122.00

Geocodes/Valid: -- NO VALID GEOCODES --

Remarks:

ASSOCIATED RIGHT

THE DIVERSION IS SHARED WITH 40S 3001844 (RI-017)

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:	Patrick Colgan
APPLICATION NO:	RI-034M
DATE FILED:	4/17/2023
INTERNAL PRIORITY DATE:	7/1/1985
WATER SOURCE:	Missouri River
TOTAL AMOUNT:	294 AF
PERIOD OF APPROPRIATION:	4/1/ to 10/31
DIVERSION POINT:	L5 Section 27, 27N 51E Richland County
DIVERSION MEANS:	Cornell 6H 100 HP Pump
USE:	Irrigation
PLACE OF USE:	122 acres in the N2 Sec 34, 27N, 51E and S2SW Sec 27, 27N, 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 _____ (date). Objection forms are available from the Richland County Conservation District. The Conservation District will review this application and any objections at their _____, (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), 4 0 6 -433-2103 (phone number).

PUBLISHED IN THE Roundup (publication name) on _____ (date).

AFFIDAVIT OF PUBLICATION

Linda Wells, being first duly sworn, deposes and says that she is the agent to the Publisher of The Roundup Newspaper printed and published one day a week in the City of Sidney, County of Richland, State of Montana. That the notice, a copy of which is hereto attached and submitted by:

Richland County Conservation District
Julie Goss, Administrator
2745 West Holly Street
Sidney, MT 59270

was printed and published in the regular and entire issue of said The Roundup, 111 West Main, Sidney, MT 59270, 406-433-3306 for

1 issue(s), that said publication was made on each of the following dates to with:

December 11, 2024

It was also published in said paper


_____ , 2024

It was also published in said paper

_____ , 2024

It was also published in said paper

_____ , 2024


Linda Wells

State of Montana)

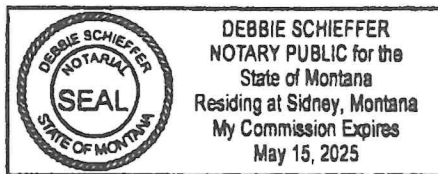
ss

County of Richland)

Subscribed and sworn to before me this

11th day of December, 2024.


Notary Public for the State of Montana



PUBLIC NOTICE

Notice to Water Users

THE FOLLOWING APPLICATION HAS BEEN SUBMITTED FOR RESERVED WATER USE TO THE RICHLAND COUNTY CONSERVATION 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 Use Authorization, Form 107. Objections received outside this period will not be accepted or considered valid.

Name: Patrick Colgan

APPLICATION NO: RI-034M

DATE FILED: 4/17/2023

INTERNAL PRIORITY DATE:

7/1/1985

WATER SOURCE: Missouri River

TOTAL AMOUNT: 294 AF

PERIOD OF APPROPRIATION:

4/1/ to 10/31

DIVERSION POINT: L5 Section

27, 27N 51E Richland County

DIVERSION MEANS: Cornell

6H 100 HP Pump

USE: Irrigation

PLACE OF USE: 122 acres in

the N2 Sec 34, 27N, 51E and

S2SW Sec 27, 27N, 51E

C O M M E N T S O R

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,

406-433-2103 x 3, on or before

January 10th, 2025. Objection

forms are available from the

Richland County Conservation

District.

The Conservation District will

review this application and any

objections at their January 10th,

2025, meeting at 4:00 PM, 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

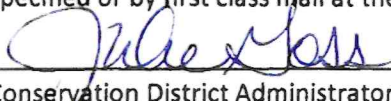
59270, 406-433-2103.

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-034M 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	Patrick Colgan 30678 County Road 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	
ANGELA J CANDEE & TROY CANDEE 31265 COUNTY ROAD 143 POPLAR, MT 59255-9512	
LARRY D JOHNSTON 14148 HIGHWAY 480 POPLAR, MT 59255-9502	
THOMAS F COLGAN 30761 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



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 30165373

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 30165373 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 30165373	Proposed Point of Diversion	NWSESE, Section 27, Lot 05, 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	3
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	6



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 1.8 CFS up to 294 AF, from a point in the NWSESE, Section 27, Lot 05, 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					
QTR	LOT	SECTION	TWN	RANGE	COUNTY
N2		34	27N	51E	RICHLAND
S2SW		27	27N	51E	RICHLAND

The Richland County Conservation District Water Reservation (40S 84500-00) has a flow rate of 61.05 CFS and a volume of 14,518.15 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 30165373

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) =

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

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

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	122.00	27.03	74.60	70%	205.00	292.86	29.29	234.29	58.57
Total	122.00	-	-	-	205.00	292.86	29.29	234.29	58.57

¹Wolf Point IWR Weather Station

²Roosevelt County Proposed Use Management Factor 1997-2006

Total Diverted Volume: 292.86 AF

Total Consumptive Volume: 234.29 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: NWSESE, Section 27, Lot 05, 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 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	241.94	3,882.18	8,241.94	479,082.18
May	8,656	531,305	305.20	4,827.53	8,961.20	536,132.81
June	9,547	567,092	323.48	5,117.60	9,870.48	572,209.40
July	9,371	575,192	323.48	5,117.60	9,694.48	580,309.58
August	8,973	550,763	323.48	5,117.60	9,296.48	555,880.34
September	7,836	465,458	317.68	4,946.33	8,153.68	470,404.73
October	6,976	428,187	256.06	4,166.77	7,232.06	432,353.65

4.0 Area of Potential Impact Analysis

The Area of Potential Impact for this application is: The area of potential impact is approximately 49 river miles downstream of the proposed point of diversion. A total of 95 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 river miles upstream of the USGS Missouri River near Culbertson. A total of 95 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 (NWSESE, Section 27, Lot 05, 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
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



Water Right #	Flow (CFS)	Volume (AF)	Period of Diversion	Water Right Type
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
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 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



Water Right #	Flow (CFS)	Volume (AF)	Period of Diversion	Water Right Type
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
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)

For Department Use Only

Application # 40S 30165373 Basin _____
Meeting Date _____ Time _____ AM/PM
Completed Form Deadline _____

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)).

RECEIVED

By Havre RO at 9:33 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

Table of Contents

Application Details	3
Historical Use	7
Historical Use: Place of Use	11
Historical Use: Point of Diversion.....	12
Historical Use: Period of Diversion.....	14
Historical Use: Historical Diverted Volume.....	15
Historical Use: Historical Consumed Volume.....	16
Historical Use: Historical Places of Storage.....	19
Surface Water	20
Surface Water: Return Flow Analysis	20
Surface Water: Mitigation Analysis.....	22
Surface Water: Aquifer Recharge Analysis.....	24
Groundwater	26
Groundwater: Adequacy of Diversion.....	26
Groundwater: Adequacy of Diversion: Well/Pit.....	27
Groundwater: Adequacy of Diversion: Developed Spring.....	28
Groundwater: Adequacy of Diversion: Pond.....	28
Groundwater: Adverse Effect to Existing Groundwater Rights	29
Groundwater: Adverse Effect to Surface Water Rights.....	29
Groundwater: Adverse Effect to Surface Water Rights: Surface Water Depletion Analysis	29
Groundwater: Adverse Effect to Surface Water Rights: Return Flow Analysis.....	30
Groundwater: Mitigation	32
Project-Specific Questions.....	34
Temporary Change	34
Change in Purpose	35
Change in Place of Storage.....	36
Ditch-Specific Questions	37
Water Marketing	41
Instream Flow Change.....	41
Salvage Water.....	43
Non-Mandatory Questions for Criteria Analysis.....	44
Adverse Effect	44
Adverse Effect: Evaluation of Impacts to Identified Water Rights for Return Flow Analysis.....	45
Adverse Effect: Evaluation of Impacts to Identified Water Rights for Surface Water Depletion Analysis	49
Adequate Means of Diversion and Operation.....	53
Beneficial Use.....	55
Possessory Interest.....	56
PREAPPLICATION MEETING AFFIDAVIT & CERTIFICATION.....	57
FOLLOW-UP PAGE.....	58
AMENDED RESPONSES PAGE.....	59
FOLLOW-UP PAGE AFFIDAVIT & CERTIFICATION.....	60

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?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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).	<input type="checkbox"/> A	<input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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.	<input type="checkbox"/> S	<input type="checkbox"/> F
4.	How many change applications will be needed for this project? Please refer to ARM 36.12.1305 for more information. _____		<input type="checkbox"/> 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	<input type="checkbox"/> S	<input type="checkbox"/> F

N/A



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

Water Right #							
Point of diversion							
Place of use							
Purpose of use							
Place of storage							

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

POD #	¼	¼	¼	Sec	Twp	Rge	County	Lot	Block	Tract	Subdivision	Gov Lot	GW or SW	Source Name	Means

9.	Does the change involve a change in place of use?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
a.	If yes,		
i.	What are the geocodes of the proposed place of use?	<input type="checkbox"/> A	<input type="checkbox"/> 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.								<input type="checkbox"/> A	<input type="checkbox"/> 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?								<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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).								<input type="checkbox"/> S	<input type="checkbox"/> 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.								<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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.								<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F	
12. Are conveyance ditches used for historical or proposed uses? If yes, answer ditch-specific questions 120 to 126.								<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F	
13. Do you have ownership of the entire historical POU for the water right(s) being changed?								<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F	N/A
a. If no,										
i. List the water right(s) for which you do not own the entire historical POU. _____									<input type="checkbox"/> F	N/A
ii. Are the water right(s) listed in question 13.a.i severed from the historical POU?								<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F	N/A
1. If yes, do you own the entirety of the severed water right(s) proposed for change?								<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F	



iii. Are you filing on behalf of another entity? If yes, describe. _____	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F	N/A
iv. Are all owners of the historical place of use willing to sign the application?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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	<input type="checkbox"/> S	<input type="checkbox"/> 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. _____ _____	<input type="checkbox"/> A	<input type="checkbox"/> F	
14. Is the proposed use temporary? If yes, answer questions 99 to 105 for temporary changes.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F	
20. Will the proposed use include salvage water? If yes, answer questions 146 to 150 for Salvage Water.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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. <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/> <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/>				<input type="checkbox"/> A	<input type="checkbox"/> 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.				<input type="checkbox"/> A	<input type="checkbox"/> 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				<input type="checkbox"/> A	<input type="checkbox"/> 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.

<input type="checkbox"/> A	<input type="checkbox"/> F
----------------------------	----------------------------

N/A

Water Right No. Proposed for Change	Historical Use Analysis Option and Information Required for Historical Use
	<input type="checkbox"/> New Historical Use Analysis. Date for new Historical Use Analysis: _____
	<input type="checkbox"/> Existing Historical Use Analysis. Change authorization number with existing Historical Use Analysis: _____
	<input type="checkbox"/> Full Historical Use Analysis NA. Water right number serving as historical use in lieu of analysis: _____
	<input type="checkbox"/> New Historical Use Analysis. Date for new Historical Use Analysis: _____
	<input type="checkbox"/> Existing Historical Use Analysis. Change authorization number with existing Historical Use Analysis: _____
	<input type="checkbox"/> Full Historical Use Analysis NA. Water right number serving as historical use in lieu of analysis: _____
	<input type="checkbox"/> New Historical Use Analysis. Date for new Historical Use Analysis: _____
	<input type="checkbox"/> Existing Historical Use Analysis. Change authorization number with existing Historical Use Analysis: _____
	<input type="checkbox"/> Full Historical Use Analysis NA. Water right number serving as historical use in lieu of analysis: _____



	<input type="checkbox"/> New Historical Use Analysis. Date for new Historical Use Analysis: _____
	<input type="checkbox"/> Existing Historical Use Analysis. Change authorization number with existing Historical Use Analysis: _____
	<input type="checkbox"/> Full Historical Use Analysis NA. Water right number serving as historical use in lieu of analysis: _____
	<input type="checkbox"/> New Historical Use Analysis. Date for new Historical Use Analysis: _____
	<input type="checkbox"/> Existing Historical Use Analysis. Change authorization number with existing Historical Use Analysis: _____
	<input type="checkbox"/> Full Historical Use Analysis NA. Water right number serving as historical use in lieu of analysis: _____
	<input type="checkbox"/> New Historical Use Analysis. Date for new Historical Use Analysis: _____
	<input type="checkbox"/> Existing Historical Use Analysis. Change authorization number with existing Historical Use Analysis: _____
	<input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F	N/A
a. If yes,			
i. Is this firsthand knowledge?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F	N/A
ii. Who has this knowledge and what was their role? _____	<input type="checkbox"/> A	<input type="checkbox"/> F	



b. If no,			
i. Where will the historical use data be derived?	<input type="checkbox"/> A	<input type="checkbox"/> F	N/A
<hr/> <hr/>			

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?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F	N/A
29. Are you proposing to change all water right(s) associated with the historical place of use?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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.	<input type="checkbox"/> A	<input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F	N/A
1. If yes,			
a. Does the Water Resources Survey corroborate the acres irrigated listed on the abstract?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F	N/A
i. If no, provide aerial photograph(s) that can corroborate the historical place of use.	<input type="checkbox"/> S	<input type="checkbox"/> F	N/A
b. Does the legal land description from the abstract match the actual location of the historical place of use?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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.	<input type="checkbox"/> S	<input type="checkbox"/> F	N/A



2. If no, provide one or more aerial photographs that can corroborate the historical place of use.	<input type="checkbox"/> S	<input type="checkbox"/> F	N/A
b. Lawn and garden			
i. Provide aerial photographs that can corroborate the historical place of use.	<input type="checkbox"/> S	<input type="checkbox"/> F	N/A
c. Stock			
i. Provide aerial photographs, grazing records, or other records to corroborate the historical place of use.	<input type="checkbox"/> S	<input type="checkbox"/> F	N/A
ii. Did the stock drink direct from source or direct from ditch?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F	N/A
1. If no, provide data sources that make clear the location of the stock watering infrastructure.	<input type="checkbox"/> S	<input type="checkbox"/> 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.	<input type="checkbox"/> S	<input type="checkbox"/> 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).			<input type="checkbox"/> A	<input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F	N/A
a. If no, do you have aerial photograph(s) that clearly show the location of the historical point(s) of diversion?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F	N/A
i. If yes,			
1. Provide the photograph(s).	<input type="checkbox"/> S	<input type="checkbox"/> 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.	<input type="checkbox"/> S	<input type="checkbox"/> 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).	<input type="checkbox"/> A	<input type="checkbox"/> 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		<input type="checkbox"/> A	<input type="checkbox"/> F	N/A
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).				

POD ID	Estimated Capacity (GPM or CFS)	Method

c. Well, pit, or other groundwater point of diversion		<input type="checkbox"/> A	<input type="checkbox"/> F	N/A
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).				

POD ID	Estimated Capacity (GPM or CFS)	Method

34. Do other water rights share the point(s) of diversion?		<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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).		<input type="checkbox"/> A	<input type="checkbox"/> 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?		<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
a. If no,			
i. Why are they different?		<input type="checkbox"/> A	<input type="checkbox"/> F

ii. Is there a place of storage?		<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
36. When was water diverted for the purpose(s) of the water right(s) being changed? Reservation #8450000 per Final Order		<input type="checkbox"/> A	<input type="checkbox"/> 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? 04/01 - 10/31 Climatic Area II		<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
a. If yes, does the period of diversion fall within Department standards?		<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
b. If no or if the period of diversion falls outside Department standards, explain how the period of diversion is reasonable for the purpose.		<input type="checkbox"/> A	<input type="checkbox"/> F

38. If the water right(s) being changed have an irrigation purpose, answer the following questions.			
a. What were the crop(s) grown? _____			<input type="checkbox"/> 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? _____		<input type="checkbox"/> F	
b. Did diversions ever temporarily cease within the period of use? This may include water shortages or calls based on priority date.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F	N/A
i. If yes, please explain. _____ _____ _____	<input type="checkbox"/> A	<input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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.	<input type="checkbox"/> S	<input type="checkbox"/> F	N/A
b. Non-irrigation			
i. How often was water historically diverted? _____		<input type="checkbox"/> F	N/A
ii. What was the duration of each historical diversion? _____		<input type="checkbox"/> F	N/A
iii. Was wastewater historically discharged? If yes, what amount was discharged? _____	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F	N/A
iv. What is the volume of water historically diverted (AF)? _____		<input type="checkbox"/> F	N/A
v. How did you determine the volume of water historically diverted? _____ _____ _____	<input type="checkbox"/> A	<input type="checkbox"/> F	N/A
vi. Did the historical diverted volume serve more than one purpose of use?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F	N/A



1. If yes, how much of the diverted volume served each purpose of use and how did you determine this? _____ _____ _____	<input type="checkbox"/> A	<input type="checkbox"/> F	N/A
--	----------------------------	----------------------------	-----

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?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F	N/A
1. If no,			
a. What method will you use to determine historical consumptive use? _____ _____	<input type="checkbox"/> A	<input type="checkbox"/> 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.	<input type="checkbox"/> S	<input type="checkbox"/> 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. _____ _____	<input type="checkbox"/> A	<input type="checkbox"/> F	N/A
b. What was the slope of the historical place of use? _____		<input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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	<input type="checkbox"/> S	<input type="checkbox"/> F	N/A



completed.						
d. Based on answers to the above questions, what is the percent efficiency of irrigation? _____						<input type="checkbox"/> F N/A
e. What is the County Management Factor? _____						<input type="checkbox"/> F N/A
f. What is evapotranspiration (ET) based on the irrigation method and county? _____						<input type="checkbox"/> F N/A
g. What percent of applied water are irrecoverable losses per ARM 36.12.1902(17)? _____						<input type="checkbox"/> F N/A
h. Do other water rights supplement or overlap the historical place of use that contribute to the irrigation water demand?					<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
i. If yes,						
1. How were the water rights operated to serve the irrigation purpose? _____ _____ _____ _____ _____ _____					<input type="checkbox"/> A	<input type="checkbox"/> 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.					<input type="checkbox"/> A	<input type="checkbox"/> 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.		<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F	
1. If yes, which standard? _____			<input type="checkbox"/> F	
2. If no, please provide an estimate of historical water use based on expert analysis and methods used to determine this estimate. _____ _____		<input type="checkbox"/> A	<input type="checkbox"/> 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. _____			<input type="checkbox"/> F	
ii. How many animal units were historically served? _____			<input type="checkbox"/> F	
iii. Did these animal units rely entirely on the water right(s) proposed for change for their full water demand?		<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F	
1. If no, explain. _____ _____		<input type="checkbox"/> A	<input type="checkbox"/> F	
d. Domestic and multiple domestic				N/A
i. How many households were served? _____			<input type="checkbox"/> 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.		<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F	
1. If no, what standard will be used? _____			<input type="checkbox"/> F	
iii. Did the historical use include wastewater disposal and treatment?		<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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? _____	<input type="checkbox"/> A	<input type="checkbox"/> F	
e. Municipal			N/A
i. What is the volume of water (AF) historically consumed for municipal purposes? _____		<input type="checkbox"/> 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.	<input type="checkbox"/> S	<input type="checkbox"/> F	
f. Other			N/A
i. What is the volume of water (AF) historically consumed for other purposes? _____		<input type="checkbox"/> F	
ii. Please submit to the Department evidence to support the volume of water historically consumed.	<input type="checkbox"/> S	<input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F		
a. If yes, for each historical place of storage please provide the surface area in acres (AC), capacity (AF), annual net evaporation (FT/year), and number of times per year the place of storage was filled.	<input type="checkbox"/> A	<input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N	
a. If yes, what is the consumptive use for the proposed non-irrigation purpose? Please explain. _____ _____ _____ _____ _____	<input type="checkbox"/> A	<input type="checkbox"/> 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.	<input type="checkbox"/> Y <input type="checkbox"/> 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.	<input type="checkbox"/> S	<input type="checkbox"/> F
46. How many acres, if any, will be retired from the historical place of use? _____		<input type="checkbox"/> F
47. Are irrigated acres proposed that are outside the historical place of use?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
a. If yes,		
i. How many acres? _____		<input type="checkbox"/> F

N/A

N/A



ii. What is the proposed irrigation method type (e.g., flood or sprinkler) and subtype (e.g., level border, graded border, furrow, contour ditch, wild flood, center pivot, or wheel line) for the new acres? _____			<input type="checkbox"/> F	
iii. What is the slope of the new place of use? _____			<input type="checkbox"/> F	
iv. Based on 47.a.ii to 47.a.iii, what is the percent efficiency of irrigation for the new acres? _____			<input type="checkbox"/> F	
v. What is the County Management Factor for the new acres? _____			<input type="checkbox"/> F	
vi. What is the ET based on the irrigation method and county for the new acres? _____			<input type="checkbox"/> F	
vii. What percent of applied water are irrecoverable losses for new acres per ARM 36.12.1902(17)? _____			<input type="checkbox"/> F	
viii. Do other water rights supplement or overlap the new place of use that contribute to the irrigation water demand?		<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F	
1. If yes,				
a. How will the water rights be operated to serve the irrigation purpose? _____ _____ _____		<input type="checkbox"/> A	<input type="checkbox"/> 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.		<input type="checkbox"/> A	<input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F	N/A
a. If yes, explain. _____ _____ _____	<input type="checkbox"/> A	<input type="checkbox"/> 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> _____ _____ _____	<input type="checkbox"/> A	<input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
---	---	----------------------------



52. Identify the water right(s) proposed for change to a mitigation purpose, the water right(s) identified as needing mitigation and the application number for the water right(s) identified as needing mitigation. _____	<input type="checkbox"/> A	<input type="checkbox"/> F																																																								
53. What source(s) have been identified as needing mitigation water? _____		<input type="checkbox"/> 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). _____ _____ _____	<input type="checkbox"/> A	<input type="checkbox"/> F																																																								
55. What is the location (¼ ¼ ¼ section of start and end of reach) and length (FT) of the mitigation reach? _____		<input type="checkbox"/> F																																																								
56. What is the amount, timing, and location (¼ ¼ ¼ section) of water needed for mitigation?	<input type="checkbox"/> A	<input type="checkbox"/> 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					
Month	Days	Amount	Location	Month	Days	Amount	Location																																																			
January				July																																																						
February				August																																																						
March				September																																																						
April				October																																																						
May				November																																																						
June				December																																																						
57. How do the priority dates of the water rights proposed for change to mitigation compare to other water rights on the source? _____ _____ _____	<input type="checkbox"/> A	<input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F																																																								



a. If yes, describe and submit them to the Department.								<input type="checkbox"/> S	<input type="checkbox"/> 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?								<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
a. If no, how will mitigation water be made available during the entire period when mitigation is necessary?								<input type="checkbox"/> A	<input type="checkbox"/> F
60. Will other water rights contribute to mitigation water?								<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
a. If yes, what amount, at what timing, and at which location (1/4 1/4 1/4 section) will they contribute?								<input type="checkbox"/> A	<input type="checkbox"/> 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.								<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
62. Is this aquifer recharge for a current mitigation need or marketing for mitigation/aquifer recharge for a future mitigation need?									<input type="checkbox"/> 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?									<input type="checkbox"/> F



<p>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).</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A	<input type="checkbox"/> F
<p>65. How do the priority dates of the water rights proposed for change to aquifer recharge compare to other water rights on the source?</p> <p>_____</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A	<input type="checkbox"/> F
<p>66. Do you have measurement records or Water Commissioner records that show the reliability of the water rights proposed for change to aquifer recharge?</p>	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
<p>a. If yes, describe and submit them to the Department.</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> S	<input type="checkbox"/> 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

<u>Questions, Narrative Responses, and Tables</u>	<u>Check-boxes</u>	<u>Follow-Up</u>
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.	<input type="checkbox"/> A	<input type="checkbox"/> 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)?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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).	<input type="checkbox"/> A	<input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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.	<input type="checkbox"/> S	<input type="checkbox"/> F
b. If yes, did the Department identify deficiencies?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
1. If yes, are variances from ARM 36.12.121 needed?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
a. If yes,		
i. Do you have data for aquifer characteristics?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
1. If yes, provide the data to the Department.	<input type="checkbox"/> S	<input type="checkbox"/> F
ii. Have you submitted Form 653 to the Department?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
1. If yes, was the variance granted?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
71. Have all the wells/pits been constructed?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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.	<input type="checkbox"/> S	<input type="checkbox"/> F
b. If no,		
i. When will the wells/pits be constructed? _____		<input type="checkbox"/> F
ii. Do you have an initial map with the proposed location of wells/pits?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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.	<input type="checkbox"/> S	<input type="checkbox"/> 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: _____ _____	<input type="checkbox"/> S	<input type="checkbox"/> F
iv. Is the requested volume for each new well/pit known?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
1. If no, what is the total requested volume (AF) and the number of new PODs? _____		<input type="checkbox"/> F



Groundwater: Adequacy of Diversion: Developed Spring

Applicable Not Applicable

72. Have you measured the source?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
a. If yes,		
i. Submit measurements to the Department.	<input type="checkbox"/> S	<input type="checkbox"/> F
ii. With what method were measurements collected? _____ _____	<input type="checkbox"/> A	<input type="checkbox"/> F
iii. What is the interval of measurements? _____		<input type="checkbox"/> F
iv. Is the interval of measurements sufficient to comply with ARM 36.12.1703(1)?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
b. If no, or if measurements do not comply with ARM 36.12.1703(1),		
i. When do you plan to measure? _____		<input type="checkbox"/> F
ii. With what method and at what interval will measurements be collected? _____ _____	<input type="checkbox"/> A	<input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
a. If yes, did the Department approve the variance request?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
74. Submit pond bathymetry data, survey, or engineering plans to the Department.	<input type="checkbox"/> S	<input type="checkbox"/> 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.	<input type="checkbox"/> S	<input type="checkbox"/> 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. _____ _____	<input type="checkbox"/> A	<input type="checkbox"/> 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

<p>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.</p>	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
<p>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></p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A	<input type="checkbox"/> F
<p>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?</p>	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
<p>a. If yes, go to question 166. If an analysis of impacts to identified surface water rights is required for the surface water depletion analysis, this information will used for the analysis.</p>		
<p>b. If no, did you elect in question 1 for the Department to conduct technical analyses?</p>	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
<p>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.</p>	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
<p>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.</p>		



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

80. Do the purposes of the water rights proposed for change include irrigation?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N	
a. If yes, what is the consumptive use for the proposed non-irrigation purpose? Please explain.	<input type="checkbox"/> A	<input type="checkbox"/> 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.	<input type="checkbox"/> Y <input type="checkbox"/> 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.	<input type="checkbox"/> S	<input type="checkbox"/> F
84. How many acres, if any, will be retired from the historical place of use? _____		<input type="checkbox"/> F
85. Are irrigated acres proposed that are outside the historical place of use?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
a. If yes,		
i. How many acres? _____		<input type="checkbox"/> 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?		<input type="checkbox"/> F

iii. What is the slope of the new place of use? _____		<input type="checkbox"/> F
iv. Based on question 85.a.ii to 85.a.iii, what is the percent efficiency of irrigation for the new acres?		<input type="checkbox"/> F



v. What is the County Management Factor for the new acres? _____		<input type="checkbox"/> F
vi. What is the ET based on the irrigation method and county for the new acres? _____		<input type="checkbox"/> F
vii. What percent of applied water are irrecoverable losses for new acres? _____		<input type="checkbox"/> F
viii. Do other water rights supplement or overlap the new place of use that contribute to the irrigation water demand?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
1. If yes,		
a. How will the water rights be operated to serve the irrigation purpose? _____ _____ _____ _____ _____ _____	<input type="checkbox"/> A	<input type="checkbox"/> 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.	<input type="checkbox"/> A	<input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
---	---	----------------------------



<p>a. If yes, explain.</p> <p>_____</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A	<input type="checkbox"/> F
<p>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></p> <p>_____</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A	<input type="checkbox"/> F
<p>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?</p>	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
<p>a. If yes, go to question 161. If an analysis of impacts to identified surface water rights is required as part of the return flow analysis, this information will used for the analysis.</p>		
<p>b. If no, did you elect in question 1 for the Department to conduct technical analyses?</p>	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
<p>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.</p>	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
<p>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.</p>		

Groundwater: Mitigation

<p>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.</p>	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
<p>90. Please identify the water rights proposed for change to a mitigation purpose and the water rights identified as needing mitigation. _____</p>	<input type="checkbox"/> A	<input type="checkbox"/> F



91. What sources have been identified as needing mitigation water? _____		<input type="checkbox"/> F
92. By what means will mitigation water be made available? _____ _____	<input type="checkbox"/> A	<input type="checkbox"/> F
93. What is the location (¼ ¼ ¼ section of start and end of reach) and length (feet) of the mitigation reach? _____		<input type="checkbox"/> F
94. What is the amount, timing, and location (¼ ¼ ¼ section) of water needed for mitigation?	<input type="checkbox"/> A	<input type="checkbox"/> 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? _____ _____	<input type="checkbox"/> A	<input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
a. If yes, describe and submit them to the Department. _____ _____ _____	<input type="checkbox"/> S	<input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F



a. If no, how will mitigation water be made available during the entire period when mitigation is necessary? _____ _____ _____	<input type="checkbox"/> A	<input type="checkbox"/> F
98. Will other water rights contribute to mitigation water?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
a. If yes, what amount, at what timing, and at which location (¼ ¼ ¼ section) will they contribute?	<input type="checkbox"/> A	<input type="checkbox"/> 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.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
100. What element(s) of the water right(s) are being temporarily changed? _____		<input type="checkbox"/> F
101. For how many years will the water right(s) be temporarily changed? _____		<input type="checkbox"/> F
102. Will the temporary change be intermittent over the years?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
a. If yes, explain. _____	<input type="checkbox"/> A	<input type="checkbox"/> F
103. For what purpose will the water rights be temporarily used? _____		<input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
a. If yes, explain the water conservation or storage project. _____ _____ _____	<input type="checkbox"/> A	<input type="checkbox"/> 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.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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.	<input type="checkbox"/> A	<input type="checkbox"/> 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. _____ _____ _____	<input type="checkbox"/> A	<input type="checkbox"/> 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.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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.	<input type="checkbox"/> S	<input type="checkbox"/> F
112.	Is this application to add a new place of storage or change an existing place of storage? _____		<input type="checkbox"/> 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. _____ _____	<input type="checkbox"/> A	<input type="checkbox"/> F
113.	Is the place of storage located on-stream?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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. _____ _____	<input type="checkbox"/> A	<input type="checkbox"/> 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> _____	<input type="checkbox"/> S	<input type="checkbox"/> 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).	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
116.	Will the place of storage be lined?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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? _____		<input type="checkbox"/> F
118.	Is the place of storage capacity calculated to be greater than 50 acre-feet?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F



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

Ditch-Specific Questions

120. Does the historical use of water include at least one conveyance ditch? If yes, answer questions 121 to 122. If no, or if you answered these questions earlier in the preapplication meeting, skip to question 123.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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.	<input type="checkbox"/> S	<input type="checkbox"/> 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? _____		<input type="checkbox"/> F
b. List the water right(s) proposed for change that were conveyed by the ditch. _____		<input type="checkbox"/> 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. _____	<input type="checkbox"/> A	<input type="checkbox"/> 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.	<input type="checkbox"/> S	<input type="checkbox"/> 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. _____ _____	<input type="checkbox"/> A	<input type="checkbox"/> F
---	----------------------------	----------------------------



f. What type of soils compose the historical conveyance ditch? For lined ditches, write “lined” instead. _____ _____	<input type="checkbox"/> A	<input type="checkbox"/> F
g. Are other water rights conveyed by the historical conveyance ditch?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
i. If yes,		
1. What are the water right numbers? _____ _____ _____	<input type="checkbox"/> A	<input type="checkbox"/> F
2. What is the sum of the flow rates (GPM or CFS) for all water rights conveyed? _____ _____ _____	<input type="checkbox"/> A	<input type="checkbox"/> 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.	<input type="checkbox"/> S	<input type="checkbox"/> F
h. Were any water rights proposed for change part of one historical water right that was split?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
1. If no, do any of the water right(s) proposed for change have a carriage water requirement?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
a. If yes,		
i. List the water right(s) with a carriage water requirement _____		<input type="checkbox"/> 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.	<input type="checkbox"/> S	<input type="checkbox"/> 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.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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.	<input type="checkbox"/> S	<input type="checkbox"/> 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? _____		<input type="checkbox"/> F
b. Is this ditch a historical conveyance ditch detailed in questions 121 to 122?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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. _____		<input type="checkbox"/> 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. _____ _____	<input type="checkbox"/> A	<input type="checkbox"/> 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.	<input type="checkbox"/> S	<input type="checkbox"/> F

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



<p>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.</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A	<input type="checkbox"/> F
<p>g. What type of soils compose the proposed conveyance ditch? For lined ditches, write “lined” instead.</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A	<input type="checkbox"/> F
<p>h. Are other water rights conveyed by the proposed conveyance ditch?</p>	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
<p>i. If yes,</p>		
<p>1. What are the water right numbers?</p> <p>_____</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A	<input type="checkbox"/> F
<p>2. What is the sum of the flow rates (GPM or CFS) for all water rights conveyed?</p> <p>_____</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A	<input type="checkbox"/> F
<p>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.</p>	<input type="checkbox"/> S	<input type="checkbox"/> F
<p>i. Were any water right(s) proposed for change identified as having a carriage water requirement in question 122.h.i.1.a.i?</p>	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
<p>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.</p>	<input type="checkbox"/> S	<input type="checkbox"/> F
<p>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.</p>		



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.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
128.	Identify the flow rate (GPM or CFS) and volume of water (AF) that will be marketed. _____		<input type="checkbox"/> F
129.	Will the marketed water return to the source?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
	a. If yes, explain how that determination was made. _____ _____ _____	<input type="checkbox"/> A	<input type="checkbox"/> F
130.	For what purpose(s) will the marketed water be used? _____ _____	<input type="checkbox"/> A	<input type="checkbox"/> F
131.	How will you control or limit access to the water? _____ _____	<input type="checkbox"/> A	<input type="checkbox"/> F
132.	Do you have contracts for the entire volume and flow rate sought?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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.	<input type="checkbox"/> S	<input type="checkbox"/> 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.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
136.	Is the proposal to retire all the use from the historical purpose throughout the entire period of use?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
	a. If no, describe why not in detail. _____ _____ _____	<input type="checkbox"/> A	<input type="checkbox"/> F



137. What is the name of the source of water where streamflow will be maintained or enhanced? _____		<input type="checkbox"/> 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. _____	<input type="checkbox"/> A	<input type="checkbox"/> F
139. Does the protected reach begin at the existing point of diversion?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
a. If no, does the proposed protected reach begin upstream of or downstream from the existing point of diversion? _____		<input type="checkbox"/> 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.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
141. Describe the way the streamflow is to be maintained or enhanced. _____ _____ _____	<input type="checkbox"/> A	<input type="checkbox"/> 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. _____ _____ _____ _____	<input type="checkbox"/> A	<input type="checkbox"/> 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. _____ _____ _____ _____	<input type="checkbox"/> A	<input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> F
a. If yes, complete the Salvage Water section (questions 146 to 150).	<input type="checkbox"/> S	<input type="checkbox"/> 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.	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> 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). _____ _____	<input type="checkbox"/> A	<input type="checkbox"/> F
148. How much water was salvaged from creation of the water saving method? Include flow rate (GPM or CFS) and volume (AF). _____		<input type="checkbox"/> F
149. How did you determine the amount of water salvaged? _____ _____ _____ _____ _____	<input type="checkbox"/> A	<input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N
a. If yes, what is your plan to address this with the permitting process? _____ _____	<input type="checkbox"/> A
152. Describe your plan to ensure that existing water rights will be satisfied during times of water shortage. _____ _____ _____	<input type="checkbox"/> A
153. Explain how you can control your diversion in response to call being made. _____ _____ _____	<input type="checkbox"/> A
154. Are you aware of any calls that have been made on the source of supply or depleted surface water source?	<input type="checkbox"/> Y <input type="checkbox"/> N
a. If yes, explain. _____ _____	<input type="checkbox"/> A
155. Does a water commissioner distribute water or oversee water distribution on your proposed source or depleted surface water source?	<input type="checkbox"/> Y <input type="checkbox"/> N
156. Will the proposed use change the ability for you to make call?	<input type="checkbox"/> Y <input type="checkbox"/> N

N/A



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. _____ _____	<input type="checkbox"/> A	
b.	Why a resumption of use will not adversely affect other water users. _____ _____	<input type="checkbox"/> A	
c.	Is the period of nonuse greater than 10 years?	<input type="checkbox"/> Y <input type="checkbox"/> N	N/A
d.	Have water rights been authorized to use the source during the period of nonuse?	<input type="checkbox"/> Y <input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N	N/A
c.	Does the proposed point of diversion allow for diverting water longer during times of shortage?	<input type="checkbox"/> Y <input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> 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.	<input type="checkbox"/> Y <input type="checkbox"/> N
5. Is the period of record greater than or equal to 10 years?	<input type="checkbox"/> Y <input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N
9. Were there requirements for maintaining a permanent gage datum and meeting specified accuracy limits?	<input type="checkbox"/> Y <input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N
4. Do the stream gages have similar periods of record?	<input type="checkbox"/> Y <input type="checkbox"/> N
5. Are the periods of record each greater than or equal to 10 years?	<input type="checkbox"/> Y <input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N
9. For each gage, were there requirements for maintaining a permanent gage datum and meeting specified accuracy limits?	<input type="checkbox"/> Y <input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N
i. If yes,	
1. Submit measurements to the Department.	<input type="checkbox"/> S
2. Who collected the measurements? _____	<input type="checkbox"/> A
3. With what method was the data collected? _____ _____	<input type="checkbox"/> A
4. What is the period of record? _____	
5. What is the frequency of measurement? _____	
6. Are there gaps in the data?	<input type="checkbox"/> Y <input type="checkbox"/> N
a. If yes, what is the nature of the gaps and how are gaps handled to ensure data quality? _____ _____ _____	<input type="checkbox"/> A
7. Is there a process for maintaining the data and meeting specified accuracy limits?	<input type="checkbox"/> Y <input type="checkbox"/> N



<p>a. If yes, explain.</p> <p>_____</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A
<p>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?</p>	<input type="checkbox"/> Y <input type="checkbox"/> N
<p>a. If yes, skip to question 163.</p>	
<p>b. If no, answer question 162.</p>	
<p>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?</p>	<input type="checkbox"/> Y <input type="checkbox"/> N
<p>a. If yes, describe the estimation technique.</p> <p>_____</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A
<p>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?</p>	<input type="checkbox"/> Y <input type="checkbox"/> N
<p>i. If yes,</p>	
<p>1. With what method will the data be collected?</p> <p>_____</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A
<p>2. What will be the interval of measurement?</p> <p>_____</p>	

N/A



<p>3. Describe the proposed estimation technique.</p> <p>_____</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A	
<p>ii. If no, describe your plan supply measurements for return flow receiving sources.</p> <p>_____</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A	
<p>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.</p> <p>_____</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A	N/A
<p>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.</p>		

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

<p>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.</p>		N/A
<p>166. For each hydraulically connected surface water source, is gage data available?</p>	<input type="checkbox"/> Y <input type="checkbox"/> N	
<p>a. If yes, answer the following questions for the number stream gages are available.</p>		
<p>i. One stream gage is available</p>		
<p>1. What is the gage name?</p> <p>_____</p>		



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.	<input type="checkbox"/> Y <input type="checkbox"/> N
5. Is the period of record greater than or equal to 10 years?	<input type="checkbox"/> Y <input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N
9. Were there requirements for maintaining a permanent gage datum and meeting specified accuracy limits?	<input type="checkbox"/> Y <input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N
4. Do the stream gages have similar periods of record?	<input type="checkbox"/> Y <input type="checkbox"/> N
5. Are the periods of record each greater than or equal to 10 years?	<input type="checkbox"/> Y <input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N
9. For each gage, were there requirements for maintaining a permanent gage datum and meeting specified accuracy limits?	<input type="checkbox"/> Y <input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> 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?	<input type="checkbox"/> Y <input type="checkbox"/> N
i. If yes,	
1. Submit available measurements to the Department	<input type="checkbox"/> S
2. Who collected the measurements? _____	<input type="checkbox"/> A
3. With what method was the data collected? _____ _____	<input type="checkbox"/> A
4. What is the period of record? _____	
5. What is the frequency of measurement? _____	
6. Are there gaps in the data?	<input type="checkbox"/> Y <input type="checkbox"/> N
a. If yes, what is the nature of the gaps and how are gaps handled to ensure data quality? _____ _____ _____	<input type="checkbox"/> A
7. Is there a process for maintaining the data and meeting specified accuracy limits?	<input type="checkbox"/> Y <input type="checkbox"/> N



<p>a. If yes, explain.</p> <p>_____</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A
<p>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?</p>	<input type="checkbox"/> Y <input type="checkbox"/> N
<p>a. If yes, skip to question 168.</p>	
<p>b. If no, answer question 167.</p>	
<p>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?</p>	<input type="checkbox"/> Y <input type="checkbox"/> N
<p>a. If yes, describe the estimation technique.</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A
<p>b. If no,</p>	
<p>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?</p>	<input type="checkbox"/> Y <input type="checkbox"/> N
<p>1. If yes,</p>	
<p>a. With what method will the data be collected?</p> <p>_____</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A
<p>b. What will be the interval of measurement?</p> <p>_____</p>	



<p>c. Describe the proposed estimation technique.</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A
<p>2. If no, describe your plan to comply with the measurement requirements for hydraulically connected surface water sources.</p> <p>_____</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A
<p>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.</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A
<p>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.</p>	

Adequate Means of Diversion and Operation

<p>170. Provide a diagram of how you will operate your system from the point of diversion to the place of use.</p>	<input type="checkbox"/> S
<p>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.</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A
<p>172. Is the diversion capable of providing the full amount requested through the period of diversion?</p>	<input type="checkbox"/> Y <input type="checkbox"/> N



<p>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.</p> <p>_____</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A
<p>174. Describe any losses related to conveyance.</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A
<p>175. Is the conveyance infrastructure capable of providing the required flow and volume and any losses?</p>	<input type="checkbox"/> Y <input type="checkbox"/> N
<p>176. Does the proposed conveyance require easements?</p> <p>a. If yes, explain.</p> <p>_____</p>	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> A
<p>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.</p> <p>_____</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A
<p>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.</p> <p>_____</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> A
<p>179. Is the water delivery system capable of providing the requested beneficial use?</p>	<input type="checkbox"/> Y <input type="checkbox"/> N
<p>180. Will your system be designed to discharge water from the project?</p> <p>a. If yes, explain the way water will be discharged and the wastewater disposal method.</p> <p>_____</p> <p>_____</p>	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> A



181. Provide a plan of operations. _____ _____ _____	<input type="checkbox"/> A
182. Can the plan of operations deliver the flow rate and volume for the beneficial use being requested?	<input type="checkbox"/> Y <input type="checkbox"/> N
183. Do you have any plans to measure your diversion and use?	<input type="checkbox"/> Y <input type="checkbox"/> N
a. If yes, describe the plan and the type of measurements you will take. _____ _____	<input type="checkbox"/> A
184. Is the means of diversion a well?	<input type="checkbox"/> Y <input type="checkbox"/> N
a. If yes, are well log(s) available?	<input type="checkbox"/> Y <input type="checkbox"/> N
i. If yes, submit well log(s) to DNRC	<input type="checkbox"/> 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? _____ _____	<input type="checkbox"/> 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.	<input type="checkbox"/> Y <input type="checkbox"/> N
a. If yes, does the proposed beneficial use fall within Department standards?	<input type="checkbox"/> Y <input type="checkbox"/> N
187. If no standard or if proposed beneficial use falls outside of Department standards, explain how the use is reasonable for the purpose. _____ _____ _____ _____	<input type="checkbox"/> A
188. Will your proposed project be subject to DEQ requirements for a public water supply (PWS) system or Certificate of Subdivision Approval (COSA)?	<input type="checkbox"/> Y <input type="checkbox"/> N

N/A



a. If yes,	
i. Have you researched or consulted with DEQ regarding those requirements?	<input type="checkbox"/> Y <input type="checkbox"/> N
189. Are you proposing to use surface water for in-house domestic use?	<input type="checkbox"/> Y <input type="checkbox"/> N
a. If yes, does a COSA exist for the proposed place of use?	<input type="checkbox"/> Y <input type="checkbox"/> N
i. If yes, please submit the COSA.	<input type="checkbox"/> S
ii. If no, have you researched or consulted with DEQ regarding their requirements?	<input type="checkbox"/> Y <input type="checkbox"/> 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.	<input type="checkbox"/> Y <input type="checkbox"/> N	N/A
a. If no, explain. _____ _____ _____	<input type="checkbox"/> 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))."

[Handwritten Signature] 2-26-2025
Applicant Signature *Richland County Conservation District* 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))."

[Handwritten Signature] 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

-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-



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

-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-



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 Date 3-13-2025

Applicant Signature Date

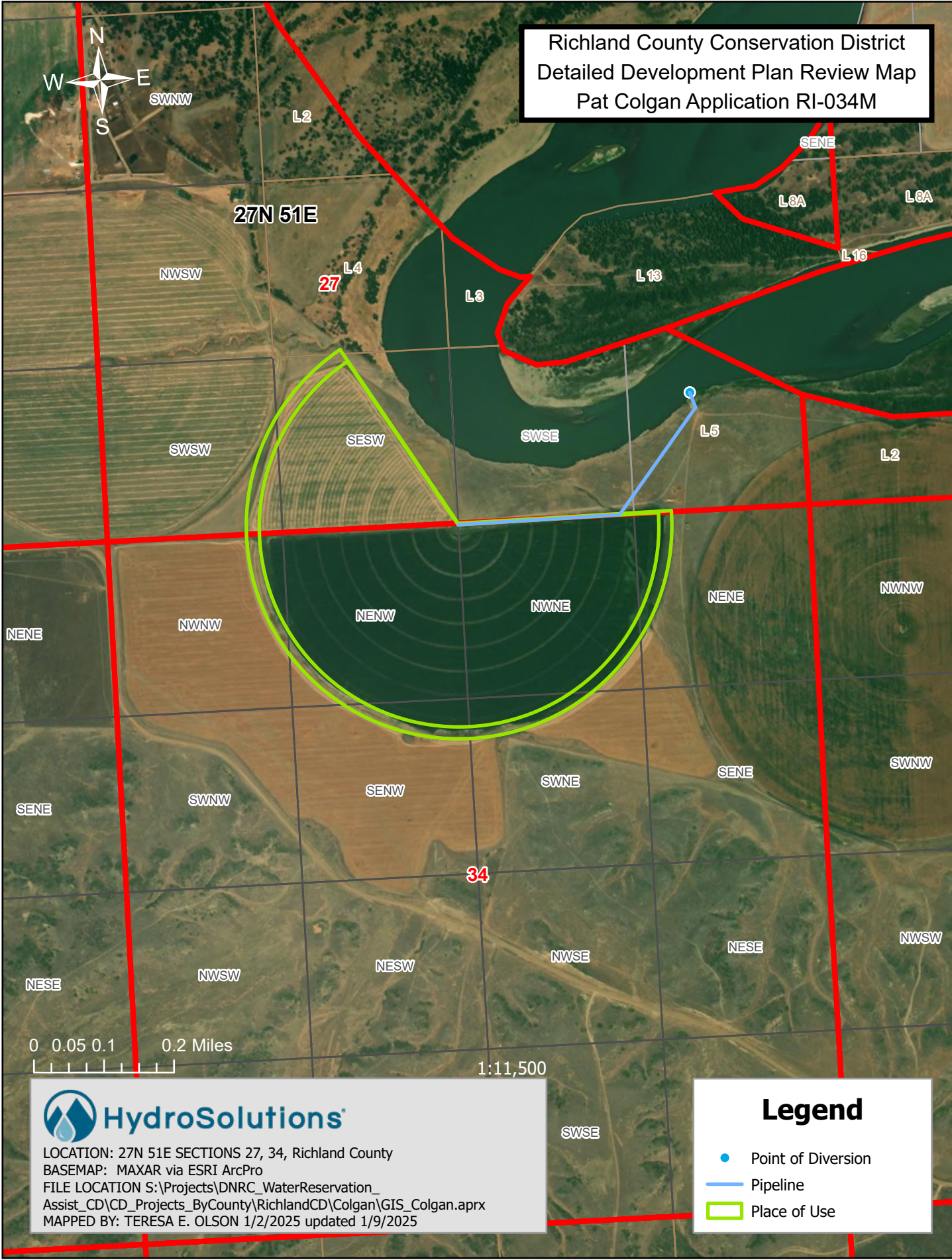
“We confirm that the preapplication form and follow-up information are adequate for the Department to proceed with technical analyses in ARM 36.12.1303. If the applicant has elected to complete technical analyses, we confirm they have submitted each piece of technical analysis required based on the proposed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


Department Signature Date 3/21/2025

Department Signature Date



Richland County Conservation District
 Detailed Development Plan Review Map
 Pat Colgan Application RI-034M



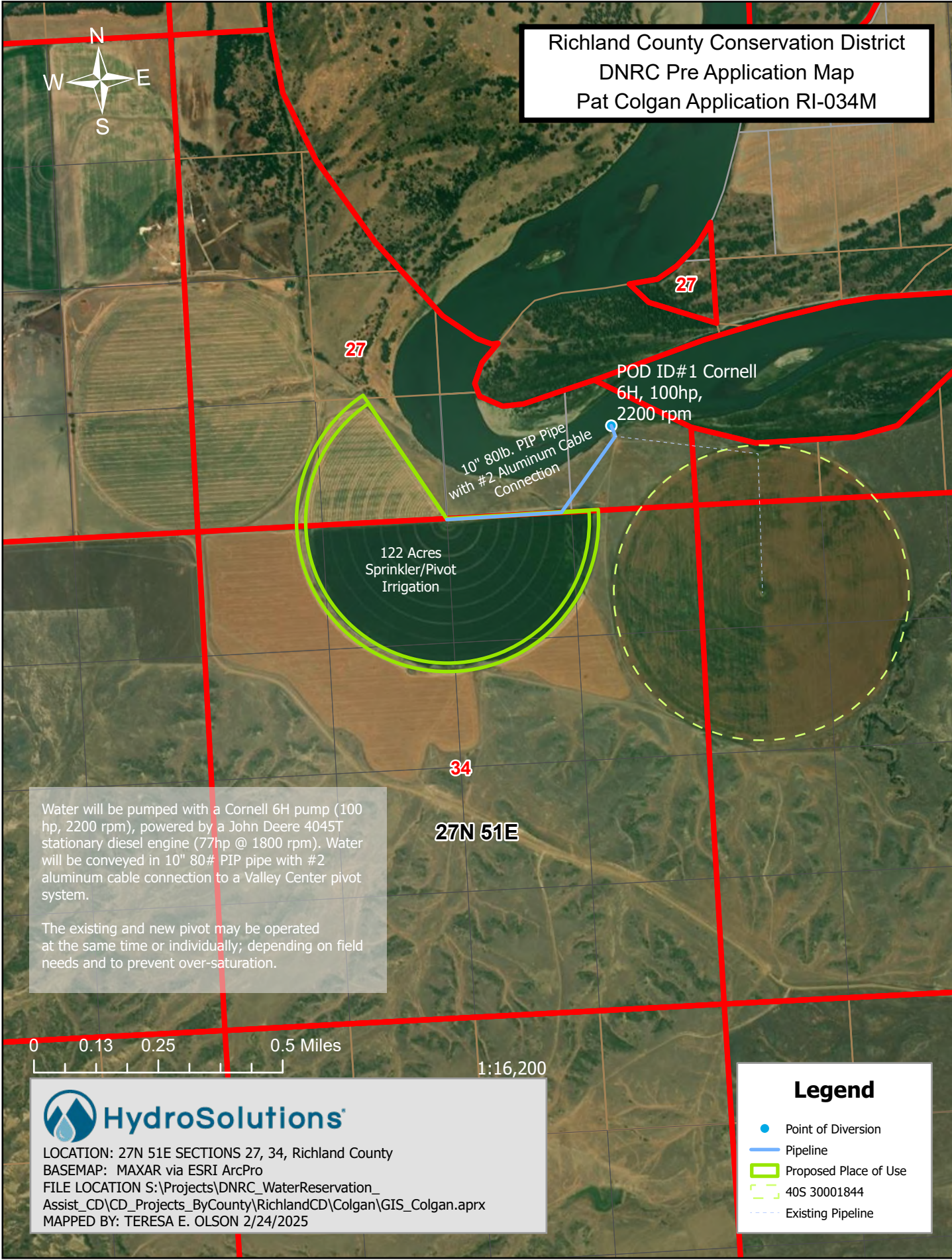
HydroSolutions

LOCATION: 27N 51E SECTIONS 27, 34, Richland County
 BASEMAP: MAXAR via ESRI ArcPro
 FILE LOCATION S:\Projects\DNRC_WaterReservation_
 Assist_CD\CD_Projects_ByCounty\RichlandCD\Colgan\GIS_Colgan.aprx
 MAPPED BY: TERESA E. OLSON 1/2/2025 updated 1/9/2025

Legend

- Point of Diversion
- Pipeline
- Place of Use

Richland County Conservation District
 DNRC Pre Application Map
 Pat Colgan Application RI-034M



122 Acres
 Sprinkler/Pivot
 Irrigation

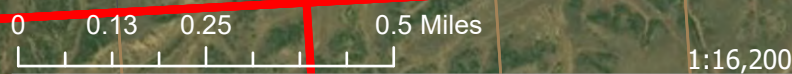
10" 80lb. PIP Pipe
 with #2 Aluminum Cable
 Connection

POD ID# 1 Cornell
 6H, 100hp,
 2200 rpm

Water will be pumped with a Cornell 6H pump (100 hp, 2200 rpm), powered by a John Deere 4045T stationary diesel engine (77hp @ 1800 rpm). Water will be conveyed in 10" 80# PIP pipe with #2 aluminum cable connection to a Valley Center pivot system.

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

27N 51E



LOCATION: 27N 51E SECTIONS 27, 34, Richland County
 BASEMAP: MAXAR via ESRI ArcPro
 FILE LOCATION S:\Projects\DNRC_WaterReservation_
 Assist_CD\CD_Projects_ByCounty\RichlandCD\Colgan\GIS_Colgan.aprx
 MAPPED BY: TERESA E. OLSON 2/24/2025

Legend

- Point of Diversion
- Pipeline
- Proposed Place of Use
- 40S 30001844
- Existing Pipeline

November 15, 2024

To whom it may concern:

This is an agreement between Larry and Laurie Handy Trust and Patrick Colgan addressing the irrigation of 40 acres in Section 27, Twp 27 N, Range 51 E. Larry and Lauri Handy Trust own the property in Section 27, Twp 27N, Range 51E and Patrick Colgan owns the pivot to convey the irrigation water on the property. We agree that Patrick Colgan can apply for Reserved Water through the Richland County Conservation District on this property.

Larry and Lauri Handy Trust

Larry Handy 12-2-24
Larry Handy, Trustee Date

Lauri Handy 12/3/24
Lauri Handy, Trustee Date

We, Tom and Marquieta Colgan own the N2 of Sec 34, T27N, R51E in Richland County, Montana. Patrick Colgan has a lifetime lease on this property. He owns the pivot on the property. We agree that he can apply for reserved water through the Richland County Conservation District on this property.

Tom Colgan

10-31-24

Tom Colgan

Date

Marquieta Colgan

10-31-2024

Marquieta Colgan

Date



AVAILABLE MOUNTING CONFIGURATIONS	
6H-RP-F REDI-PRIME FRAME MOUNT	
6H-F FRAME MOUNT	
6H-RP-EM REDI-PRIME ENGINE MOUNT	
6H-EM ENGINE MOUNT	
6H-VF VERTICAL FRAME MOUNT	
6H-VC VERTICAL COUPLED	

OPERATING LEVELS		
MIN FLOW	500 GPM	113.5 m ³ /h
MAX FLOW	3350 GPM	760.5 m ³ /h
DISCHARGE SIZE	6"	152 mm
SUCTION SIZE	8"	203 mm
SOLIDS HANDLING	1.12"	2.8 cm
MAX SPEED	2200 RPM	2200 RPM
SHUT-OFF HEAD	365'	111.3 m
BEP HEAD	300'	91.4 m
BP FLOW	2600 GPM	590.2 m ³ /h
BEP PERCENT	86%	86%



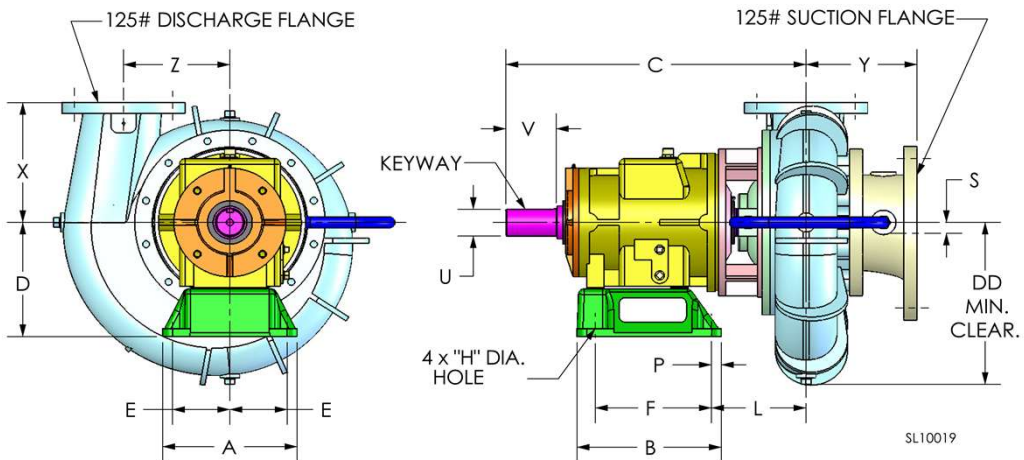
A typical picture of the pump is shown. Please contact Cornell Pump Company for further details. All information is approximate and for general guidance only.

PARTS	STANDARD MATERIAL (ALL IRON)	ALL IRON BRONZE FITTED
IMPELLER	CAST IRON ASTM A48 CL30	BRONZE SAE 40
VOLUTE	CAST IRON ASTM A48 CL30	CAST IRON ASTM A48 CL30
SHAFT	SAE 1144 "STRESSPROOF"	SAE 1144 "STRESSPROOF"
SHAFT SLEEVE	416 STAINLESS STEEL	BRONZE SAE 660
BEARING HOUSING	CAST IRON ASTM A48 CL30	CAST IRON ASTM A48 CL30
WEAR RINGS	CAST IRON ASTM A48 CL30	BRONZE SAE 660
SUCTION SPOOL	CAST IRON ASTM A48 CL30	CAST IRON ASTM A48 CL30
BACKPLATE	CAST IRON ASTM A48 CL30	CAST IRON ASTM A48 CL30
MECHANICAL SEAL (OPTIONAL)	T-1, BUNA, CARBON/CERAMIC/STAINLESS	T-1, BUNA, CARBON/CERAMIC/STAINLESS
PACKING	GRAPHITED ACRYLIC	GRAPHITED ACRYLIC

The 6H pump is designed with Cornell's renowned quality and durability. It features a 6" discharge, 8" suction, enclosed impeller, and flanged tangential double volute. Available in all-iron or bronze-fitted materials. Graphited acrylic packing is standard, with Cornell's patented Cycloseal available (with type 1 single mechanical seal). Grease lubrication standard - oil lubrication optional.

- External hydraulic balance line
- Back pullout design
- Replaceable hub & suction wear rings
- Replaceable shaft sleeve
- High efficiency hydraulics
- Low operating costs
- SAE #1, 2, 3, 4 & 5
- Modular bearing frame
- Oversized shaft and bearings
- Other mechanical seal (Cycloseal®) and material options available
- Two year warranty





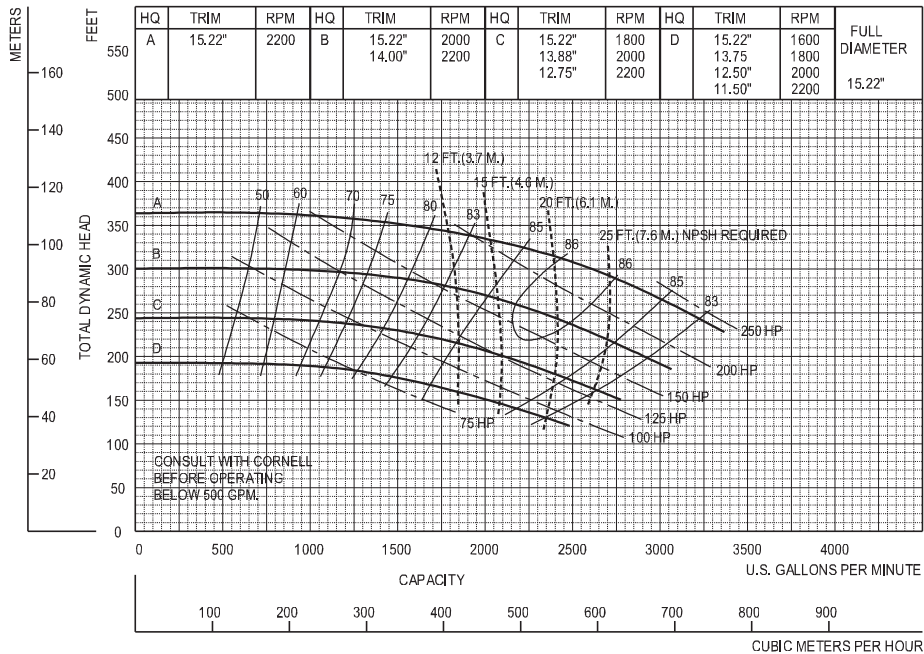
PUMP DIMENSIONS

MODEL	FRAME	CONNECTION		DISCH. INCR.	A	B	C	D	DD	E	F	H	L	P	S	U	V	X	Y	Z	KEYWAY
		DISCH.	SUCT.																		
3HA	F18	3	6	90°	12	12.88	29.11	10.5	11.12	5.12	10.38	0.81	10.74	0.88	0.44	2.5	4.5	10	8.53	8.5	.62X.31
3HC	F18	3	6	90°	12	12.88	25.88	10.5	11.12	5.12	10.38	0.81	7.5	0.88	0.44	2.5	4.5	10	8.53	8.5	.62X.31
4HC	F18	4	8	90°	12	12.88	26.97	10.5	12.62	5.12	10.38	0.81	8.6	0.88	0.88	2.5	4.5	11	10.88	9.75	.62X.31
4HH	F18	4	6	90°	12	12.88	29.14	10.5	15	5.12	10.38	0.81	10.77	0.88	0.44	2.5	4.5	9.5	8.97	11.25	.62X.31
5H	F18	5	8	90°	12	12.88	29.17	10.5	14.75	5.12	10.38	0.81	10.8	0.88	0.88	2.5	4.5	13	9.66	11.62	.62X.31
5HH	F18	5	8	90°	12	12.88	29.84	10.5	16.25	5.12	10.38	0.81	11.47	0.88	0.44	2.5	4.5	11	10.56	10.25	.62X.31
6H	F18	6	8	90°	12	12.88	29.14	10.5	14.75	5.12	10.38	0.81	10.77	0.88	0.44	2.5	4.5	14	10.18	11.62	.62X.31
6HH	F18	6	8	90°	12	12.88	30.13	10.5	17.12	5.12	10.38	0.81	11.91	0.88	0.44	2.5	4.5	12	10.43	12	.62X.31
8H	F18	8	10	90°	12	12.88	30.41	10.5	16.75	5.12	10.38	0.81	12.03	0.88	0.75	2.5	4.5	13	10.41	11.5	.62X.31

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	V ARIOUS	ENCLOSED	1.12	1587	8"	6"	6

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



Performance shown are for cool water, close to 60°F (15°C). Other mounting configurations, seal arrangements or liquids may require horsepower and/or performance adjustments.



Cornell Pump Company • Portland, Oregon

6H - VARIOUS RPM

NEW PAGE

6HVA

9/15/99

DS221-0930-GE



V-Chart

Valley Dealer

Agri Industries
1775 S CENTRAL AVE
Sidney, MT 59270-5524
UNITED STATES

Customer

PAT COLGAN
30678 COUNTY ROAD 149
POPLAR, MT 59255
UNITED STATES OF AMERICA

Dealer No.

00910337

Field Name

Parent Order No. 10996758
Sprinkler Order No. 10996845

Plant McCook Manufacturing

Dealer PO
Order Date 05/01/2013
Load Date 05/10/2013
Method Of Shipment W/SYS (10996758)

8 Span Valley Standard Pivot 7000
Machine Flow 800 GPM
Pivot Pressure 24 PSI

Valley Standard Pivot 7000 Machine Summary

Span and Overhang

Model	Qty	Length Pipe		Coupler		D. U.	
		Ft	O.D. In	Spacing	Qty	Profile	Tire
7000	8	180.0	6 5/8	108	20	Standard	11.2 x 38
7000	1	54.0	6 5/8	110	8		

Field Area

91.3 Acres Total
 80.8 Acres: Pivot 180°
 10.5 EG on 100%
 1497.3 Ft. Machine Length
 93.9 Ft. End Gun Radius

Flow

800 Gallons Per Minute
 8.76 GPM/Acre
 0.46 In/Day App Rate
 0.155 In. App Depth @ 100%
 91.6 GPM End Gun

Messages

Caution:
 None

Dealer:
 None





Pressure

24 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 1442.4 Ft.
 8.0 Hrs/180° @ 100% (9.45) Ft/Min

Sprinkler -- Computer Spacing

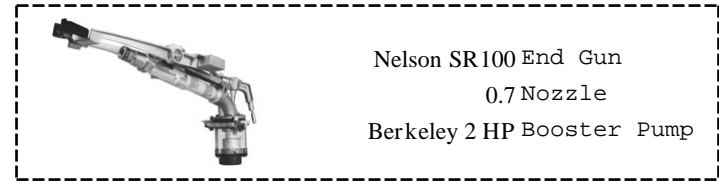
<u>Sprinkler Configuration</u>	<u>Range (ft)</u>	
Valley U-Pipe 6 Galvanized 3/4 M NPT x 3/4 M Hose	All	
Blue Premium Hose Drop Variable Length 48" Ground Clr		
Nelson Regulator Blue Acme 10 3/4 F NPT		
Valley Slip Weight 26 2.0 Poly		
Nelson S3000 D8 - Yellow 3/4 F Acme		

1893.05 Ft Total Drop Hose Length

Valley Standard Pivot 7000 Machine Summary

Pressure Loss

Pipe Length Ft	Pipe I.D. In	Pipe Finish	C-Factor	Loss PSI
1469.9	6.42	Galvanized	150	10.8
27.4	3.79	Galvanized	150	0.5
Total =				11.3



Nelson SR100 End Gun
 0.7 Nozzle
 Berkeley 2 HP Booster Pump

Span Flow

Span Number	Irrigated Length	Irrigated Acres	Rqd GPM	Act GPM	Rqd GPM/Acre	Act GPM/Acre	% Deviation
1	179.9	1.2	10.3	13.0	8.64	10.85	25.6
2	180.1	3.5	30.5	30.5	8.64	8.62	-0.2
3	180.1	5.9	50.8	50.9	8.64	8.66	0.2
4	180.1	8.2	71.0	71.0	8.64	8.64	-0.0
5	180.1	10.6	91.2	91.3	8.64	8.65	0.1
6	180.1	12.9	111.4	111.3	8.64	8.63	-0.1
7	180.1	15.2	131.6	131.5	8.64	8.63	-0.1
8	179.8	17.5	151.6	151.8	8.64	8.65	0.1
O/H	54.8	5.8	51.2	51.3	8.80	8.82	0.2
EG	93.9	10.5	91.7	91.6	8.77	8.76	0.0
Totals			91.3	794.2			
Drain Sprinkler			8.8	8.7			
Total Machine Flow				802.9			

Advanced Options

Drain Sprinkler = Senninger Directional
 Last Sprinkler Coverage = 1.0 ft
 Sprinkler Coverage Length = 1498.3 ft
 Use Last Coupler= YES
 Minimum Mainline Pressure = 6.0 PSI


Shipping Options

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

Customer PAT COLGAN

Field Name

Valley Standard Pivot 7000 Machine Sprinkler Chart

Cpl No	Dist From Pivot	Spk No	Dist Last Spk	Nozzle Size	Color	Spk Model	Wear Pad	Drop Length	Regulator	Line PSI	Spk PSI	Rqd GPM	Act GPM
1	6.5			Gauge						24.0			
				Sprinkler : Nelson Spinner									
													
2	15.5	1		10	Beige	S3000	Beige	116	Blue Acme 10L	23.6	11.6	0.1	0.6
3	24.5	2	9.0	10	Beige	S3000	Beige	123	Blue Acme 10L	23.3	11.6	0.1	0.6
4	33.5	3	9.0	10	Beige	S3000	Beige	129	Blue Acme 10L	22.9	11.6	0.2	0.6
5	42.5	4	9.0	10	Beige	S3000	Beige	134	Blue Acme 10L	22.7	11.6	0.2	0.6
6	51.5	5	9.0	10	Beige	S3000	Beige	138	Blue Acme 10L	22.4	11.6	0.3	0.6
7	60.5	6	9.0	10	Beige	S3000	Beige	142	Blue Acme 10L	22.2	11.6	0.3	0.6
8	69.5	7	9.0	10	Beige	S3000	Beige	145	Blue Acme 10L	22.0	11.6	0.4	0.6
9	78.5	8	9.0	10	Beige	S3000	Beige	147	Blue Acme 10L	21.8	11.6	0.4	0.6
10	87.5	9	9.0	10	Beige	S3000	Beige	148	Blue Acme 10L	21.6	11.6	0.5	0.6
11	96.4	10	8.9	10	Beige	S3000	Beige	148	Blue Acme 10L	21.5	11.6	0.5	0.6
12	105.4	11	9.0	10	Beige	S3000	Beige	148	Blue Acme 10L	21.4	11.6	0.6	0.6
13	114.4	12	9.0	11	Beige/Gold	S3000	Beige	146	Blue Acme 10L	21.4	11.5	0.6	0.7
14	123.4	13	9.0	11	Beige/Gold	S3000	Beige	144	Blue Acme 10L	21.3	11.5	0.7	0.7
15	132.4	14	9.0	11	Beige/Gold	S3000	Beige	142	Blue Acme 10L	21.3	11.5	0.7	0.7
16	141.3	15	8.9	12	Gold	S3000	Beige	138	Blue Acme 10L	21.4	11.5	0.8	0.8
17	150.3	16	9.0	12	Gold	S3000	Beige	134	Blue Acme 10L	21.4	11.5	0.8	0.8
18	159.3	17	9.0	12	Gold	S3000	Beige	128	Blue Acme 10L	21.5	11.5	0.9	0.8
19	168.3	18	9.0	13	Gold/Lime	S3000	Beige	122	Blue Acme 10L	21.6	11.5	0.9	1.0
20	177.3	19	9.0	13	Gold/Lime	S3000	Beige	116	Blue Acme 10L	21.8	11.4	1.0	1.0
	182.0			Tower Number : 1		Span Length : 179.9							
21	186.6	20	9.3	13	Gold/Lime	S3000	Beige	116	Blue Acme 10L	21.6	11.4	1.1	1.0
22	195.6	21	9.0	14	Lime	S3000	Beige	123	Blue Acme 10L	21.3	11.4	1.1	1.1
23	204.6	22	9.0	14	Lime	S3000	Beige	129	Blue Acme 10L	20.9	11.4	1.1	1.1
24	213.6	23	9.0	15	Lime/Lavender	S3000	Beige	135	Blue Acme 10L	20.6	11.4	1.2	1.3
25	222.6	24	9.0	14	Lime	S3000	Beige	140	Blue Acme 10L	20.4	11.4	1.2	1.1
26	231.6	25	9.0	15	Lime/Lavender	S3000	Beige	144	Blue Acme 10L	20.1	11.4	1.3	1.3
27	240.6	26	9.0	15	Lime/Lavender	S3000	Beige	147	Blue Acme 10L	19.9	11.3	1.3	1.3
28	249.6	27	9.0	16	Lavender	S3000	D8 - Yellow	149	Blue Acme 10L	19.7	11.3	1.4	1.5
29	258.6	28	9.0	16	Lavender	S3000	D8 - Yellow	151	Blue Acme 10L	19.6	11.3	1.5	1.5

Customer PAT COLGAN

Field Name

Valley Standard Pivot 7000 Machine Sprinkler Chart

Cpl No	Dist From Pivot	Spk No	Dist Last Spk	Nozzle Size	Color	Spk Model	Wear Pad	Drop Length	Regulator	Line PSI	Spk PSI	Rqd GPM	Act GPM
30	267.6	29	9.0	16	Lavender	S3000	D8 - Yellow	152	Blue Acme 10L	19.4	11.3	1.5	1.5
31	276.5	30	8.9	16	Lavender	S3000	D8 - Yellow	152	Blue Acme 10L	19.3	11.3	1.5	1.5
32	285.5	31	9.0	17	Lavender/Gray	S3000	D8 - Yellow	151	Blue Acme 10L	19.3	11.3	1.6	1.7
33	294.5	32	9.0	17	Lavender/Gray	S3000	D8 - Yellow	149	Blue Acme 10L	19.2	11.3	1.7	1.7
34	303.5	33	9.0	17	Lavender/Gray	S3000	D8 - Yellow	147	Blue Acme 10L	19.2	11.3	1.7	1.7
35	312.5	34	9.0	17	Lavender/Gray	S3000	D8 - Yellow	144	Blue Acme 10L	19.2	11.3	1.7	1.7
36	321.4	35	8.9	18	Gray	S3000	D8 - Yellow	140	Blue Acme 10L	19.3	11.2	1.8	1.9
37	330.4	36	9.0	18	Gray	S3000	D8 - Yellow	135	Blue Acme 10L	19.4	11.2	1.9	1.9
38	339.4	37	9.0	18	Gray	S3000	D8 - Yellow	129	Blue Acme 10L	19.5	11.2	1.9	1.9
39	348.4	38	9.0	18	Gray	S3000	D8 - Yellow	123	Blue Acme 10L	19.6	11.2	2.0	1.9
40	357.4	39	9.0	19	Gray/Turquoise	S3000	D8 - Yellow	116	Blue Acme 10L	19.8	11.2	2.0	2.1
362.1		Tower Number : 2		Span Length : 180.1									
41	366.7	40	9.3	19	Gray/Turquoise	S3000	D8 - Yellow	116	Blue Acme 10L	19.7	11.2	2.1	2.1
42	375.7	41	9.0	19	Gray/Turquoise	S3000	D8 - Yellow	123	Blue Acme 10L	19.3	11.2	2.1	2.1
43	384.7	42	9.0	20	Turquoise	S3000	D8 - Yellow	129	Blue Acme 10L	19.0	11.2	2.2	2.3
44	393.7	43	9.0	19	Gray/Turquoise	S3000	D8 - Yellow	135	Blue Acme 10L	18.7	11.2	2.2	2.1
45	402.7	44	9.0	20	Turquoise	S3000	D8 - Yellow	140	Blue Acme 10L	18.4	11.1	2.3	2.3
46	411.7	45	9.0	20	Turquoise	S3000	D8 - Yellow	144	Blue Acme 10L	18.2	11.1	2.3	2.3
47	420.7	46	9.0	20	Turquoise	S3000	D8 - Yellow	147	Blue Acme 10L	18.0	11.1	2.4	2.3
48	429.7	47	9.0	21	Turq/Yellow	S3000	D8 - Yellow	149	Blue Acme 10L	17.8	11.1	2.4	2.5
49	438.7	48	9.0	21	Turq/Yellow	S3000	D8 - Yellow	151	Blue Acme 10L	17.6	11.1	2.5	2.5
50	447.7	49	9.0	21	Turq/Yellow	S3000	D8 - Yellow	152	Blue Acme 10L	17.5	11.1	2.5	2.5
51	456.6	50	8.9	21	Turq/Yellow	S3000	D8 - Yellow	152	Blue Acme 10L	17.4	11.1	2.5	2.5
52	465.6	51	9.0	21	Turq/Yellow	S3000	D8 - Yellow	151	Blue Acme 10L	17.4	11.1	2.6	2.5
53	474.6	52	9.0	22	Yellow	S3000	D8 - Yellow	149	Blue Acme 10L	17.3	11.1	2.7	2.8
54	483.6	53	9.0	22	Yellow	S3000	D8 - Yellow	147	Blue Acme 10L	17.3	11.1	2.7	2.8
55	492.6	54	9.0	22	Yellow	S3000	D8 - Yellow	144	Blue Acme 10L	17.4	11.1	2.7	2.8
56	501.5	55	8.9	22	Yellow	S3000	D8 - Yellow	140	Blue Acme 10L	17.4	11.0	2.8	2.8
57	510.5	56	9.0	22	Yellow	S3000	D8 - Yellow	135	Blue Acme 10L	17.5	11.0	2.9	2.8
58	519.5	57	9.0	23	Yellow/Red	S3000	D8 - Yellow	129	Blue Acme 10L	17.6	11.0	2.9	3.0
59	528.5	58	9.0	23	Yellow/Red	S3000	D8 - Yellow	123	Blue Acme 10L	17.8	11.0	3.0	3.0
60	537.5	59	9.0	23	Yellow/Red	S3000	D8 - Yellow	116	Blue Acme 10L	17.9	11.0	3.1	3.0
542.2		Tower Number : 3		Span Length : 180.1									
61	546.8	60	9.3	23	Yellow/Red	S3000	D8 - Yellow	116	Blue Acme 10L	17.9	11.0	3.1	3.0

Customer PAT COLGAN

Field Name

Valley Standard Pivot 7000 Machine Sprinkler Chart

Cpl No	Dist From Pivot	Spk No	Dist Last Spk	Nozzle Size	Color	Spk Model	Wear Pad	Drop Length	Regulator	Line PSI	Spk PSI	Rqd GPM	Act GPM
62	555.8	61	9.0	23	Yellow/Red	S3000	D8 - Yellow	123	Blue Acme 10L	17.5	11.0	3.1	3.0
63	564.8	62	9.0	24	Red	S3000	D8 - Yellow	129	Blue Acme 10L	17.2	11.0	3.2	3.3
64	573.8	63	9.0	24	Red	S3000	D8 - Yellow	135	Blue Acme 10L	16.9	11.0	3.2	3.3
65	582.8	64	9.0	24	Red	S3000	D8 - Yellow	140	Blue Acme 10L	16.7	11.0	3.3	3.3
66	591.8	65	9.0	24	Red	S3000	D8 - Yellow	144	Blue Acme 10L	16.4	10.9	3.3	3.3
67	600.8	66	9.0	24	Red	S3000	D8 - Yellow	147	Blue Acme 10L	16.2	10.9	3.4	3.3
68	609.8	67	9.0	25	Red/White	S3000	D8 - Yellow	149	Blue Acme 10L	16.1	10.9	3.4	3.6
69	618.8	68	9.0	24	Red	S3000	D8 - Yellow	151	Blue Acme 10L	15.9	10.9	3.5	3.3
70	627.8	69	9.0	25	Red/White	S3000	D8 - Yellow	152	Blue Acme 10L	15.8	10.9	3.5	3.6
71	636.7	70	8.9	25	Red/White	S3000	D8 - Yellow	152	Blue Acme 10L	15.8	10.9	3.6	3.5
72	645.7	71	9.0	25	Red/White	S3000	D8 - Yellow	151	Blue Acme 10L	15.7	10.8	3.6	3.5
73	654.7	72	9.0	26	White	S3000	D8 - Yellow	149	Blue Acme 10L	15.7	10.8	3.7	3.8
74	663.7	73	9.0	25	Red/White	S3000	D8 - Yellow	147	Blue Acme 10L	15.7	10.8	3.7	3.5
75	672.7	74	9.0	26	White	S3000	D8 - Yellow	144	Blue Acme 10L	15.7	10.8	3.8	3.8
76	681.6	75	8.9	26	White	S3000	D8 - Yellow	140	Blue Acme 10L	15.8	10.8	3.8	3.8
77	690.6	76	9.0	26	White	S3000	D8 - Yellow	135	Blue Acme 10L	15.9	10.8	3.9	3.8
78	699.6	77	9.0	26	White	S3000	D8 - Yellow	129	Blue Acme 10L	16.0	10.7	3.9	3.8
79	708.6	78	9.0	27	White/Blue	S3000	D8 - Yellow	123	Blue Acme 10L	16.2	10.7	4.0	4.1
80	717.6	79	9.0	27	White/Blue	S3000	D8 - Yellow	116	Blue Acme 10L	16.4	10.7	4.1	4.1
	722.3		Tower Number : 4		Span Length : 180.1								
81	726.9	80	9.3	27	White/Blue	S3000	D8 - Yellow	116	Blue Acme 10L	16.3	10.7	4.1	4.1
82	735.9	81	9.0	27	White/Blue	S3000	D8 - Yellow	123	Blue Acme 10L	16.0	10.7	4.1	4.1
83	744.9	82	9.0	27	White/Blue	S3000	D8 - Yellow	129	Blue Acme 10L	15.7	10.6	4.2	4.1
84	753.9	83	9.0	28	Blue	S3000	D8 - Yellow	135	Blue Acme 10L	15.4	10.6	4.2	4.5
85	762.9	84	9.0	27	White/Blue	S3000	D8 - Yellow	140	Blue Acme 10L	15.2	10.6	4.3	4.1
86	771.9	85	9.0	28	Blue	S3000	D8 - Yellow	144	Blue Acme 10L	15.0	10.6	4.3	4.4
87	780.9	86	9.0	28	Blue	S3000	D8 - Yellow	147	Blue Acme 10L	14.8	10.6	4.4	4.4
88	789.9	87	9.0	28	Blue	S3000	D8 - Yellow	149	Blue Acme 10L	14.7	10.6	4.4	4.4
89	798.9	88	9.0	28	Blue	S3000	D8 - Yellow	151	Blue Acme 10L	14.5	10.6	4.5	4.4
90	807.9	89	9.0	28	Blue	S3000	D8 - Yellow	152	Blue Acme 10L	14.4	10.6	4.5	4.4
91	816.8	90	8.9	28	Blue	S3000	D8 - Yellow	152	Blue Acme 10L	14.4	10.5	4.6	4.4
92	825.8	91	9.0	29	Blue/Dark Brown	S3000	D8 - Yellow	151	Blue Acme 10L	14.4	10.5	4.6	4.7
93	834.8	92	9.0	29	Blue/Dark Brown	S3000	D8 - Yellow	149	Blue Acme 10L	14.4	10.5	4.7	4.7
94	843.8	93	9.0	29	Blue/Dark Brown	S3000	D8 - Yellow	147	Blue Acme 10L	14.4	10.5	4.7	4.7

Customer PAT COLGAN

Field Name

Valley Standard Pivot 7000 Machine Sprinkler Chart

Cpl No	Dist From Pivot	Spk No	Dist Last Spk	Nozzle Size	Color	Spk Model	Wear Pad	Drop Length	Regulator	Line PSI	Spk PSI	Rqd GPM	Act GPM
95	852.8	94	9.0	29	Blue/Dark Brown	S3000	D8 - Yellow	144	Blue Acme 10L	14.4	10.5	4.8	4.7
96	861.7	95	8.9	29	Blue/Dark Brown	S3000	D8 - Yellow	140	Blue Acme 10L	14.5	10.4	4.8	4.7
97	870.7	96	9.0	30	Dark Brown	S3000	D8 - Yellow	135	Blue Acme 10L	14.6	10.4	4.9	5.0
98	879.7	97	9.0	30	Dark Brown	S3000	D8 - Yellow	129	Blue Acme 10L	14.8	10.4	4.9	5.0
99	888.7	98	9.0	30	Dark Brown	S3000	D8 - Yellow	123	Blue Acme 10L	15.0	10.4	5.0	5.0
100	897.7	99	9.0	30	Dark Brown	S3000	D8 - Yellow	116	Blue Acme 10L	15.2	10.4	5.1	5.0
	902.4		Tower Number : 5		Span Length : 180.1								
101	907.0	100	9.3	30	Dark Brown	S3000	D8 - Yellow	116	Blue Acme 10L	15.1	10.3	5.2	5.0
102	916.0	101	9.0	30	Dark Brown	S3000	D8 - Yellow	123	Blue Acme 10L	14.8	10.3	5.1	5.0
103	925.0	102	9.0	31	Dk Brown/Orange	S3000	D8 - Yellow	129	Blue Acme 10L	14.5	10.3	5.2	5.3
104	934.0	103	9.0	31	Dk Brown/Orange	S3000	D8 - Yellow	135	Blue Acme 10L	14.3	10.3	5.2	5.3
105	943.0	104	9.0	31	Dk Brown/Orange	S3000	D8 - Yellow	140	Blue Acme 10L	14.1	10.3	5.3	5.3
106	952.0	105	9.0	31	Dk Brown/Orange	S3000	D8 - Yellow	144	Blue Acme 10L	13.9	10.3	5.3	5.3
107	961.0	106	9.0	31	Dk Brown/Orange	S3000	D8 - Yellow	147	Blue Acme 10L	13.7	10.2	5.4	5.3
108	970.0	107	9.0	31	Dk Brown/Orange	S3000	D8 - Yellow	149	Blue Acme 10L	13.6	10.2	5.4	5.3
109	979.0	108	9.0	32	Orange	S3000	D8 - Yellow	151	Blue Acme 10L	13.5	10.2	5.5	5.7
110	988.0	109	9.0	32	Orange	S3000	D8 - Yellow	152	Blue Acme 10L	13.4	10.2	5.5	5.7
111	996.9	110	8.9	31	Dk Brown/Orange	S3000	D8 - Yellow	152	Blue Acme 10L	13.4	10.2	5.6	5.3
112	1005.9	111	9.0	32	Orange	S3000	D8 - Yellow	151	Blue Acme 10L	13.3	10.1	5.6	5.7
113	1014.9	112	9.0	32	Orange	S3000	D8 - Yellow	149	Blue Acme 10L	13.4	10.1	5.7	5.7
114	1023.9	113	9.0	32	Orange	S3000	D8 - Yellow	147	Blue Acme 10L	13.4	10.1	5.7	5.7
115	1032.9	114	9.0	33	Orange/Dk Green	S3000	D8 - Yellow	144	Blue Acme 10L	13.5	10.1	5.8	6.0
116	1041.8	115	8.9	32	Orange	S3000	D8 - Yellow	140	Blue Acme 10L	13.6	10.1	5.8	5.7
117	1050.8	116	9.0	33	Orange/Dk Green	S3000	D8 - Yellow	135	Blue Acme 10L	13.7	10.1	5.9	6.0
118	1059.8	117	9.0	33	Orange/Dk Green	S3000	D8 - Yellow	129	Blue Acme 10L	13.9	10.1	5.9	6.0
119	1068.8	118	9.0	33	Orange/Dk Green	S3000	D8 - Yellow	123	Blue Acme 10L	14.1	10.1	6.0	6.0
120	1077.8	119	9.0	33	Orange/Dk Green	S3000	D8 - Yellow	116	Blue Acme 10L	14.3	10.0	6.2	6.0
	1082.5		Tower Number : 6		Span Length : 180.1								
121	1087.1	120	9.3	34	Dark Green	S3000	D8 - Yellow	116	Blue Acme 10L	14.3	10.0	6.2	6.4
122	1096.1	121	9.0	33	Orange/Dk Green	S3000	D8 - Yellow	123	Blue Acme 10L	14.0	10.0	6.1	6.0
123	1105.1	122	9.0	34	Dark Green	S3000	D8 - Yellow	129	Blue Acme 10L	13.7	10.0	6.2	6.4
124	1114.1	123	9.0	33	Orange/Dk Green	S3000	D8 - Yellow	135	Blue Acme 10L	13.5	10.0	6.3	6.0
125	1123.1	124	9.0	34	Dark Green	S3000	D8 - Yellow	140	Blue Acme 10L	13.3	9.9	6.3	6.4
126	1132.1	125	9.0	34	Dark Green	S3000	D8 - Yellow	144	Blue Acme 10L	13.1	9.9	6.4	6.3



Customer PAT COLGAN

Field Name

Valley Standard Pivot 7000 Machine Sprinkler Chart

Cpl No	Dist From Pivot	Spk No	Dist Last Spk	Nozzle Size	Color	Spk Model	Wear Pad	Drop Length	Regulator	Line PSI	Spk PSI	Rqd GPM	Act GPM
127	1141.1	126	9.0	34	Dark Green	S3000	D8 - Yellow	147	Blue Acme 10L	13.0	9.9	6.4	6.3
128	1150.1	127	9.0	35	Dk Green/Purple	S3000	D8 - Yellow	149	Blue Acme 10L	12.9	9.9	6.5	6.7
129	1159.1	128	9.0	34	Dark Green	S3000	D8 - Yellow	151	Blue Acme 10L	12.8	9.9	6.5	6.3
130	1168.1	129	9.0	35	Dk Green/Purple	S3000	D8 - Yellow	152	Blue Acme 10L	12.7	9.9	6.5	6.7
131	1177.0	130	8.9	35	Dk Green/Purple	S3000	D8 - Yellow	152	Blue Acme 10L	12.7	9.9	6.6	6.7
132	1186.0	131	9.0	35	Dk Green/Purple	S3000	D8 - Yellow	151	Blue Acme 10L	12.7	9.9	6.7	6.7
133	1195.0	132	9.0	35	Dk Green/Purple	S3000	D8 - Yellow	149	Blue Acme 10L	12.7	9.8	6.7	6.7
134	1204.0	133	9.0	35	Dk Green/Purple	S3000	D8 - Yellow	147	Blue Acme 10L	12.8	9.8	6.8	6.7
135	1213.0	134	9.0	35	Dk Green/Purple	S3000	D8 - Yellow	144	Blue Acme 10L	12.9	9.8	6.8	6.7
136	1221.9	135	8.9	35	Dk Green/Purple	S3000	D8 - Yellow	140	Blue Acme 10L	13.0	9.8	6.8	6.7
137	1230.9	136	9.0	36	Purple	S3000	D8 - Yellow	135	Blue Acme 10L	13.2	9.9	6.9	7.0
138	1239.9	137	9.0	36	Purple	S3000	D8 - Yellow	129	Blue Acme 10L	13.3	9.9	7.0	7.0
139	1248.9	138	9.0	36	Purple	S3000	D8 - Yellow	123	Blue Acme 10L	13.6	9.9	7.0	7.0
140	1257.9	139	9.0	36	Purple	S3000	D8 - Yellow	116	Blue Acme 10L	13.8	9.9	7.2	7.0
1262.6		Tower Number : 7		Span Length : 180.1									
141	1267.2	140	9.3	37	Purple/Black	S3000	D8 - Yellow	116	Blue Acme 10L	13.8	9.9	7.2	7.5
142	1276.2	141	9.0	36	Purple	S3000	D8 - Yellow	123	Blue Acme 10L	13.5	9.9	7.2	7.0
143	1285.2	142	9.0	37	Purple/Black	S3000	D8 - Yellow	129	Blue Acme 10L	13.3	9.9	7.2	7.5
144	1294.2	143	9.0	36	Purple	S3000	D8 - Yellow	135	Blue Acme 10L	13.0	9.9	7.3	7.0
145	1303.2	144	9.0	37	Purple/Black	S3000	D8 - Yellow	140	Blue Acme 10L	12.9	9.9	7.3	7.5
146	1312.2	145	9.0	37	Purple/Black	S3000	D8 - Yellow	144	Blue Acme 10L	12.7	9.9	7.4	7.5
147	1321.2	146	9.0	37	Purple/Black	S3000	D8 - Yellow	147	Blue Acme 10L	12.6	9.9	7.4	7.5
148	1330.2	147	9.0	37	Purple/Black	S3000	D8 - Yellow	149	Blue Acme 10L	12.5	9.9	7.5	7.5
149	1339.2	148	9.0	37	Purple/Black	S3000	D8 - Yellow	151	Blue Acme 10L	12.4	9.9	7.5	7.5
150	1348.2	149	9.0	37	Purple/Black	S3000	D8 - Yellow	152	Blue Acme 10L	12.4	9.9	7.5	7.5
151	1357.1	150	8.9	37	Purple/Black	S3000	D8 - Yellow	152	Blue Acme 10L	12.4	9.9	7.6	7.5
152	1366.1	151	9.0	37	Purple/Black	S3000	D8 - Yellow	151	Blue Acme 10L	12.4	9.9	7.7	7.5
153	1375.1	152	9.0	37	Purple/Black	S3000	D8 - Yellow	149	Blue Acme 10L	12.4	9.9	7.7	7.5
154	1384.1	153	9.0	38	Black	S3000	D8 - Yellow	147	Blue Acme 10L	12.5	9.9	7.8	7.9
155	1393.1	154	9.0	38	Black	S3000	D8 - Yellow	144	Blue Acme 10L	12.6	9.9	7.8	7.9
156	1402.0	155	8.9	38	Black	S3000	D8 - Yellow	140	Blue Acme 10L	12.7	9.9	7.8	7.9
157	1411.0	156	9.0	38	Black	S3000	D8 - Yellow	135	Blue Acme 10L	12.9	9.9	7.9	7.9
158	1420.0	157	9.0	38	Black	S3000	D8 - Yellow	129	Blue Acme 10L	13.1	9.9	8.0	7.9
159	1429.0	158	9.0	38	Black	S3000	D8 - Yellow	123	Blue Acme 10L	13.3	9.9	8.0	7.9

Valley Standard Pivot 7000 Machine Sprinkler Chart

Cpl No	Dist From Pivot	Spk No	Dist Last Spk	Nozzle Size	Color	Spk Model	Wear Pad	Drop Length	Regulator	Line PSI	Spk PSI	Rqd GPM	Act GPM
160	1438.0	159	9.0	38	Black	S3000	D8 - Yellow	116	Blue Acme 10L	13.6	9.9	8.1	7.9
161	1441.8		3.8	B.P.									
	1442.4		Tower Number : 8		Span Length : 179.8								
162	1447.0	160	9.0	39	Black/Dk Turq	S3000	D8 - Yellow	114	Blue Acme 10L	13.6	9.9	8.2	8.4
163	1456.1	161	9.1	39	Black/Dk Turq	S3000	D8 - Yellow	118	Blue Acme 10L	13.5	9.9	8.3	8.4
164	1465.3	162	9.2	39	Black/Dk Turq	S3000	D8 - Yellow	123	Blue Acme 10L	13.3	9.9	8.3	8.4
165	1468.9		3.5	Plug									
166	1474.4	163	9.1	39	Black/Dk Turq	S3000	D8 - Yellow	127	Blue Acme 10L	13.1	9.9	8.4	8.4
167	1483.6	164	9.1	39	Black/Dk Turq	S3000	D8 - Yellow	131	Blue Acme 10L	12.9	9.9	8.5	8.4
168	1492.7	165	9.2	41	Dk Turq/Mustard	S3000	D8 - Yellow	136	Blue Acme 10L	12.7	9.9	9.4	9.3
Sprinkler : Senninger Spray													
169	1496.3	166	3.5	19	Black	Directional				12.4	12.4	8.8	8.7
	1497.3		Overhang		Span Length : 54.8								
Sprinkler : Nelson Endgun													
170	1497.3	167	1.0	0.7		SR100				12.4	43.1	91.7	91.6

Endgun Arc Settings: Forward Angle: 45 Reverse Angle: 85

802.7

Valley Standard Pivot 7000 Percent Timer Data

Setup Information - Valley Computer Control Panel Water Application Constants: Minimum Application = 0.155 Hours Per Revolution = 8.0

Based on Inches

Inches Per 180 Degrees	Pivot % Timer	Hours Per 180 Degrees
0.155	100.0	8.0
0.20	77.4	10.3
0.30	51.6	15.5
0.40	38.7	20.7
0.50	31.0	25.8
0.60	25.8	31.0
0.70	22.1	36.2
0.80	19.4	41.2
0.90	17.2	46.5
1.00	15.5	51.6
1.25	12.4	64.5
1.50	10.3	77.7
1.75	8.9	89.9
2.00	7.7	103.9
2.50	6.2	129.0
3.00	5.2	153.8

Based on % Timer

Pivot % Timer	Inches Per 180 Degrees	Hours Per 180 Degrees
100.0	0.155	8.0
90.0	0.17	8.9
80.0	0.19	10.0
70.0	0.22	11.4
60.0	0.26	13.3
50.0	0.31	16.0
45.0	0.34	17.8
40.0	0.39	20.0
35.0	0.44	22.9
30.0	0.52	26.7
25.0	0.62	32.0
20.0	0.77	40.0
17.5	0.89	45.7
15.0	1.03	53.3
12.5	1.24	64.0
10.0	1.55	80.0
7.5	2.07	106.7
5.0	3.10	160.0

Field Area

91.3 Acres Total
 80.8 Acres: Pivot 180°
 10.5 EG on 100%
 1497.3 Ft. Machine Length
 93.9 Ft. End Gun Radius

Flow

800 Gallons Per Minute
 8.76 GPM/Acre
 0.46 In/Day App Rate
 0.155 In. App Depth @ 100%
 91.6 GPM End Gun

Pressure

24 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 1447.4 Ft.
 8.0 Hrs/180 @ 100% (9.45)Ft/Min

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.nacdnet.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 1.8 GPM CFS Volume 294 Acre-Feet

b) The point of diversion:

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

Lot/Tract Gov Lt 5 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:

93 Acres _____ Lot _____ Block _____ 1/4 _____ 1/4 N2 1/4 Sec 34, Twp 27 N S, Rge 51 E W

29 Acres _____ Lot _____ Block _____ 1/4 S2 1/4 SW 1/4 Sec 27, Twp 27 N S, Rge 51 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

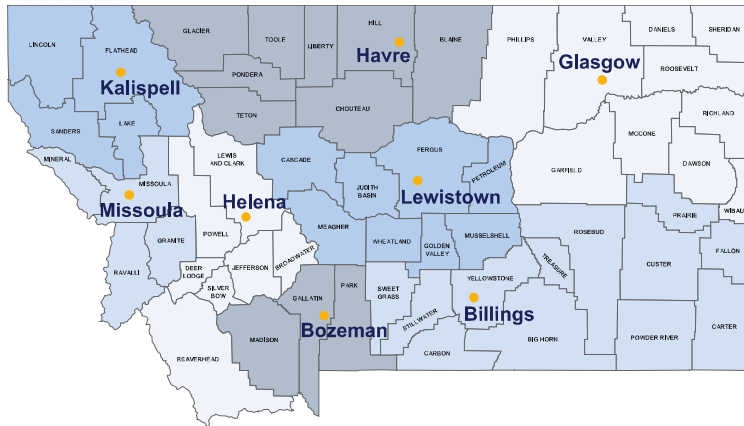
New Well #2 _____ 1/4 _____ 1/4 _____ 1/4 Section _____, Township _____ N S, Range _____ E W
County _____

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

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

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

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

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

KALISPELL

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

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

Flathead, Lake, Lincoln, and Sanders 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

MISSOULA

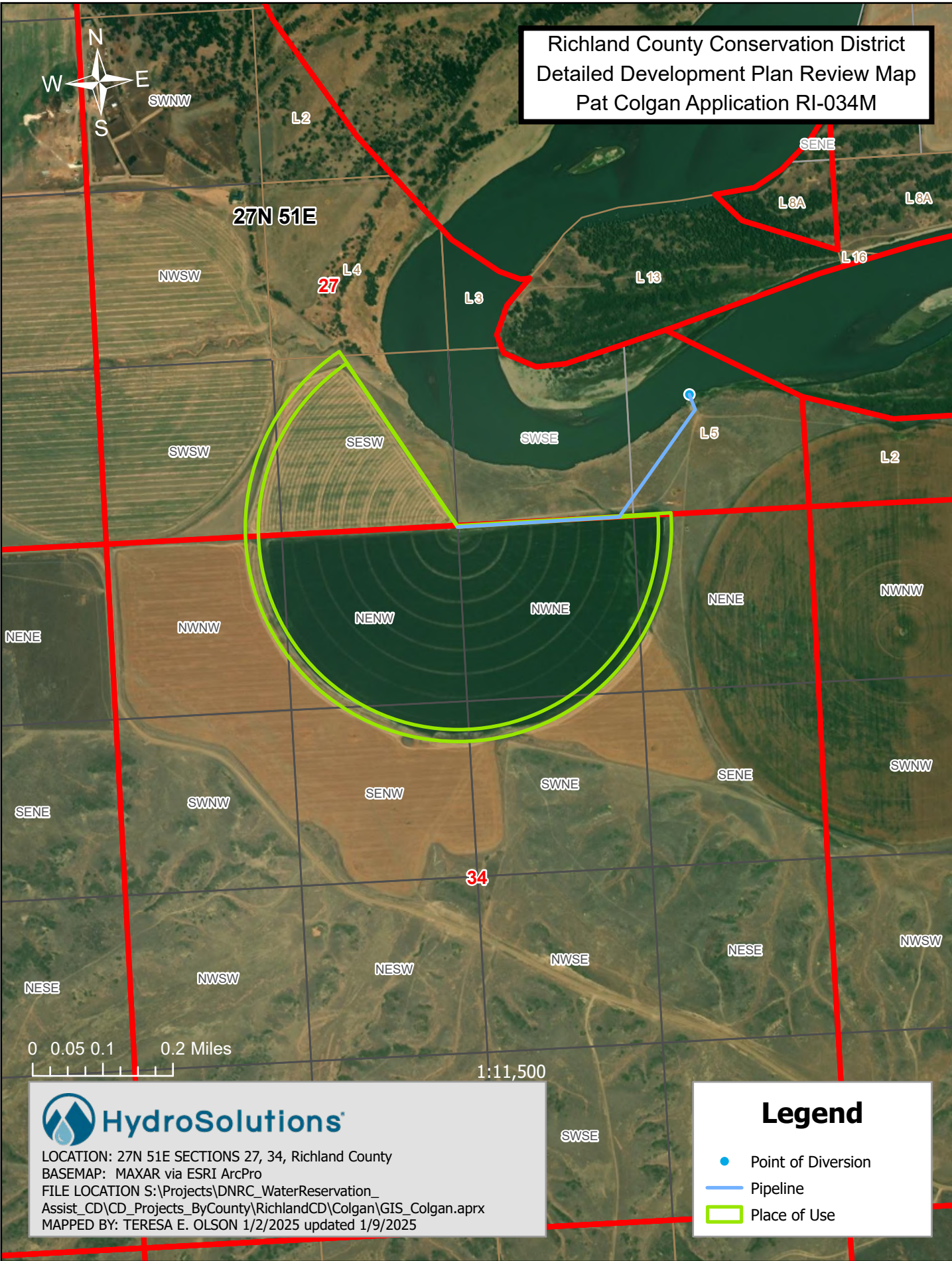
2705 Spurgin Rd. Bldg. C, PO Box 5004
Missoula, MT 59806-5004

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

Granite, Mineral, Missoula, and Ravalli Counties



Richland County Conservation District Detailed Development Plan Review Map Pat Colgan Application RI-034M



HydroSolutions
LOCATION: 27N 51E SECTIONS 27, 34, Richland County
BASEMAP: MAXAR via ESRI ArcPro
FILE LOCATION S:\Projects\DNRC_WaterReservation_
Assist_CD\CD_Projects_ByCounty\RichlandCD\Colgan\GIS_Colgan.aprx
MAPPED BY: TERESA E. OLSON 1/2/2025 updated 1/9/2025

Legend

- Point of Diversion
- Pipeline
- Place of Use

CONSERVATION DISTRICT RESERVED WATER USE AUTHORIZATION

§85-2-316, 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: Pat Colgan
 Mailing Address: 30678 County Rd 149 City Poplar State MT Zip 59255
 Phone Numbers: 406-525-3515 Cell 406-688-9435
 Email Address: _____

2. Authorization Number: RI-034M Internal Priority Date: 04-17-2023 9:40am

3. Source of Water Supply: Missouri River

A tributary of _____

4. Total Amount: 800 gpm (1.8 cfs) up to 294 acre-ft per Anum

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

6. Point of Diversion:

LOT	¼	¼	¼	SEC	TWP N/S	RGE E/W	COUNTY
5	NW	SE	SE	27	27N	51E	Richland

7. Place of Use:

N = New S = Supplemental

ACRES	LOT	¼	¼	¼	SEC	TWP N/S	RGE E/W	COUNTY	N/S
93				N2	34	27N	51E	Richland	N
29				S2SW	27	27N	51E	Richland	N

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-017 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 Conradson
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