Missoula Water Resources Regional Office
PO Box 5004
2705 Spurgin Road, Bldg. C
Missoula, MT 59806-5004
(406) 721-4284

December 26, 2025
David G. Miller & Susan E. Miller
6610 Mullan Rd
Missoula, MT 59808-5654

Subject: Correct and Complete Application for Beneficial Water Use Permit No. 76M 30164554

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,

Benjamin Thomas

Benjamin Thomas
Water Conservation Specialist II
Missoula Regional Office
benjamin.thomas@mt.gov | (406) 542-5883

CC:
Julie Merritt, WGM group

WGMGROUP
Community Values. Inspired Futures.

1111 East Broadway
Missoula, MT 59802
406.728.4611
www.wgmgroup.com

MEMORANDUM

DATE: November 26, 2025

TO: Benjamin Thomas, Alex Dalgleish, and Jim Nave
Montana Department of Natural Resources and Conservation

FROM: Patrick Doyle, Water Right Technician, WGM Group, Inc.

CC: David Miller and Susan Miller, Applicants
Julie Merritt, Water Rights Specialist III, WGM Group, Inc.

RE: Flynn Lowney Ditch Deficiency Letter Response

Below are the responses to the elements identified in the Deficiency Letter dated October 29, 2025 for Permit Application 76M 30164554

1. QUESTION 3.

If your application is for groundwater, not surface water, and one or more of your points of diversion are in a Basin Closure Area, then submit the Basin Closure Area Addendum (Form 600-BCA).

This Application meets both criteria listed in this question. Please submit Form 600-BCA.

The Form 600-BCA is attached.

2. QUESTION 23.a.

If yes, summarize how the supplemental and proposed water rights will be operated as a whole to serve the purpose.

Please provide an explanation as to how/why Statement of Claim 76M 149678 00 will not contribute to the proposed irrigation when there is significant overlap in their places of use.

The new well will supply a consistent and easily manageable source of water. The Applicant anticipates the well water will completely replace use of Statement of Claim 76M 149678 00.

3. QUESTION 24.

For each supplemental or overlapping water right, please list the water right number, typical period of diversion and use, flow rate, and the volume of water contributed to the shared place of sue.

Please describe any water rights with overlapping places of use, even if the water contributed amounts to 0AF.

Water Right #	Average Period of Diversion	Average Period of Use	Flow Rate	Volume Contributed
76M 149678 00	April 15 to October 15	April 15 to October 15	160 GPM	0AF

4. QUESTION 36

Provide a plan of operations, which includes 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.

The described operation appears to require 175 gpm, but you have requested a flow rate of 220 gpm. Please show how a flow rate of 220 gpm is required to operate the proposed system or reduce the proposed flow rate to match the requirements of the system.

The pump installed in the well is rated at 220 gpm per the pump curve that was submitted with the application. This exceeds the exact flow required for the combination of sprinkler heads. Additional flow at the wellhead is needed in order maintain enough pressure in the system to operate the big gun and the wheel line simultaneously. The distance between the well and the beginning of the field covered by the big gun is approximately 200 ft and there is 15 ft of elevation gain across this distance, contributing a substantial amount of pressure loss. The big gun travels about 300 ft on each pass.

The distance between the well and the first riser for the wheel line is approximately 400 ft and there is little, if any, elevation change over this distance. The mainline with the risers for the wheel line is approximately 600 ft long. The wheel line itself is approximately 1000 ft long. Again, additional flow is needed at the wellhead in order to maintain enough pressure to operate all 30 of the sprinkler heads, especially when the wheel line is operating from the last riser on the mainline.

Form No. 600-BCA *(02/2025)* **Applicant Name** DAVID AND SUSAN MILLER

APPLICATION FOR BENEFICIAL WATER USE PERMIT
BASIN CLOSURE ADDENDUM

§§ 85-2-360, 85-2-361, 85-2-362, MCA
ARM 36.12.120

The Department cannot process an application located in a basin closure area unless it qualifies as a basin closure exception. The Department will determine whether an application in a basin closure area can be processed based on the information received from the applicant and will document its findings before it will review the application to determine whether it is correct and complete. You will be required to mitigate the net depletion of water that may create an adverse effect to groundwater and hydraulically connected surface water rights.

Answer every question and applicable follow-up questions. Use the checkboxes to denote yes ("Y") or no ("N"). 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 Basin Closure Addendum. Label all submitted items with the question number for which they were submitted. Responses that are larger than the space provided can be answered in an attachment. If an attachment is used, specify "see attachment" on this form. Label all attachments with the question number.

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1. ☒ **Y** ☐ **N** For groundwater applications filed pursuant to § 85-2-360, MCA, did the Hydrogeologic Assessment Report indicate that the proposed groundwater use will affect a surface water source? If yes, continue through the addendum. If no, this addendum is complete.

To be clear, this project is in the Grant Creek Closure which is NOT subject to 85-2-360 so no HAR was conducted. There will be an impact to A surface water source but not THE surface water source included in the closure.

2. What surface water source will be affected by the groundwater use?
   CLARK FORK RIVER not GRANT CREEK

During the pre-application meeting, it was determined that GW in this area is not connected to Grant Creek.

3. ☒ **S** Submit a map showing the location of the effect on surface water. Create the map on an aerial photograph or topographic map and include the following: section corners, township and range, scale bar, and north arrow.

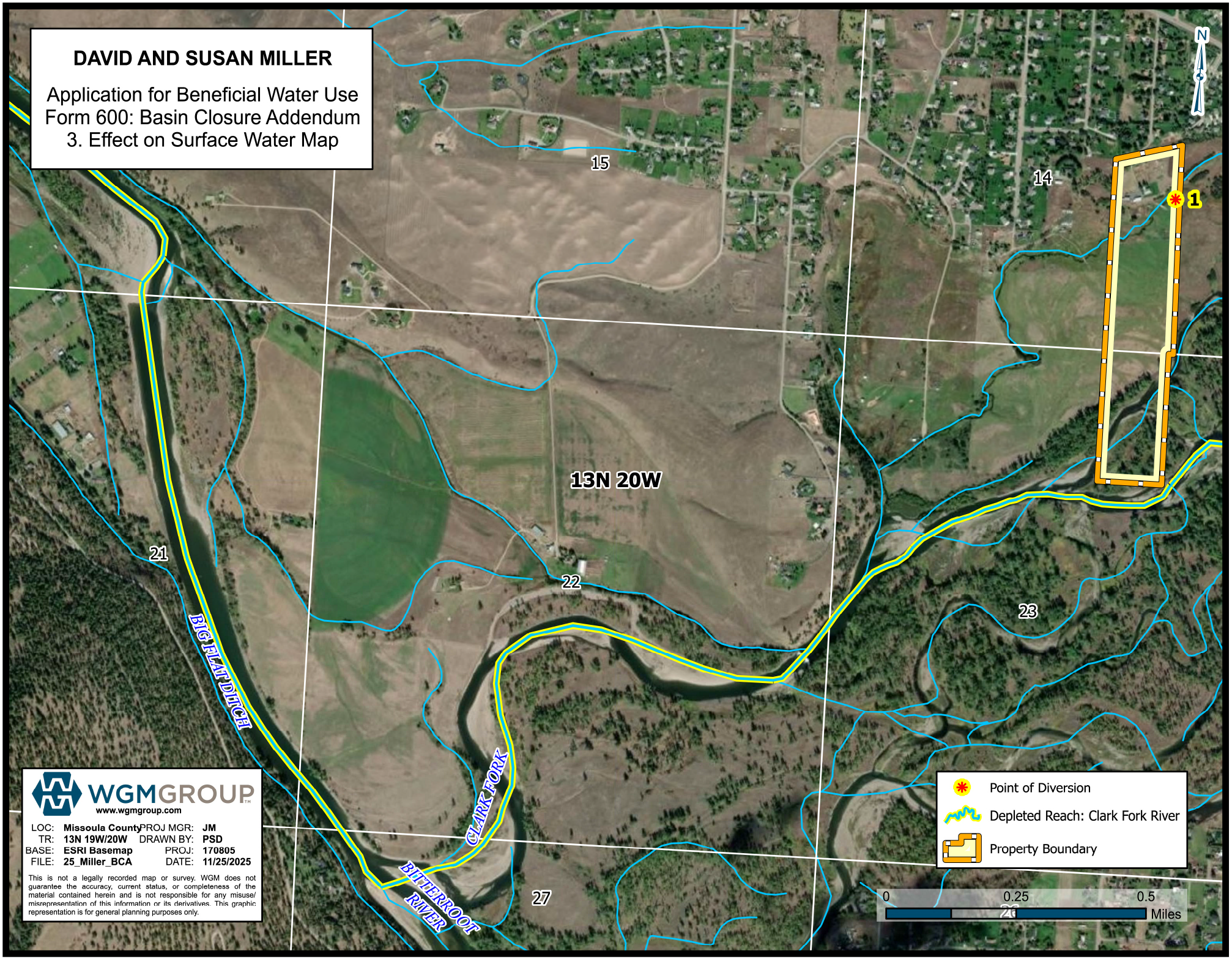
4. What amount of effect will occur to surface water? max in July: 63.6 ☒ GPM -or- ☐ CFS
   38.8 ☒ Acre-Feet

Again, this effect is to the Clark Fork NOT Grant Creek

5. What is your plan to mitigate the amount of water identified in question 4?
   a. ☒ One or more Applications to Change a Water Right (Form 606) to mitigate the adverse effect created. Applications to Change a Water Right must be submitted with the Application for Beneficial Water Use (Form 600).
   b. ☐ Alternative mitigation plan, in lieu of an Application to Change a Water Right, to mitigate the adverse effect created. Submit your alternative mitigation plan with Form 600/606-MIT.
   c. ☐ A mitigation plan is not required.
      i. ☐ **S** Submit all documentation to show a mitigation plan is not required.

6. ☐ **Y** ☒ **N** Are there existing documented hazards that could be affected or exacerbated by the proposed project, such as areas of subsidence? If yes, describe a plan to mitigate any of those conditions or impacts.

NOTE: Information required for the hydrogeologic assessment may not be sufficient to meet applicable criteria under § 85-2-311, MCA, including but not limited to adverse effect to a prior appropriator. The applicant for a beneficial water use permit pursuant to § 85-2-311, MCA, is responsible for providing sufficient evidence to meet all applicable criteria.


DAVID AND SUSAN MILLER
Application for Beneficial Water Use
Form 600: Basin Closure Addendum
3. Effect on Surface Water Map
N
15
14
1
13N 20W
21
22
23
27
BIG FLAT DITCH
CLARK FORK
BITTERROOT RIVER
Point of Diversion
Depleted Reach: Clark Fork River
Property Boundary
0
0.25
0.5
Miles
WGMGROUP
www.wgmgroup.com
LOC: Missoula County
TR: 13N 19W/20W
BASE: ESRI Basemap
FILE: 25_Miller_BCA
PROJ MGR: JM
DRAWN BY: PSD
PROJ: 170805
DATE: 11/25/2025
This is not a legally recorded map or survey. WGM does not guarantee the accuracy, current status, or completeness of the material contained herein and is not responsible for any misuse/ misrepresentation of this information or its derivatives. This graphic representation is for general planning purposes only.

Missoula Water Resources Regional Office
PO Box 5004
2705 Spurgin Road, Bldg. C
Missoula, MT 59806-5004
(406) 721-4284

October 29, 2025

David & Susan Miller
6610 Mullan Rd
Missoula, MT 59808-5654

Subject: Deficiency letter for Beneficial Water Use Permit Application No. 76M 30164554

Dear Applicant,

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

- ❑ *Question 3: If your application is for groundwater, not surface water, and one or more of your points of diversion are in a Basin Closure Area, then submit the Basin Closure Area Addendum (Form 600-BCA).*
  This Application meets both criteria listed in this question. Please submit Form 600-BCA.

- ❑ *Question 23.a: If yes, summarize how the supplemental and proposed water rights will be operated as a whole to serve the purpose(s).*
  Please provide an explanation as to how/why Statement of Claim 76M 149678-00 will not contribute to the proposed irrigation when there is significant overlap in their places of use.

- ❑ *Question 24: For each supplemental or overlapping water right, please list the water right number, typical period of version and use (MM/DD-MM/DD), flow rate (GPM or CFS), and the volume of water (AF) contributed to the shared place of use.*
  Please describe any water rights with overlapping places of use, even if the water contributed amounts to 0 AF.

- ❑ *Question 36: Provide a plan of operations, which includes 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.*
  The described operation appears to require 175 GPM (30 sprinkler heads × 5 GPM + 1 big gun × 25 GPM = 175 GPM), but you have requested a flow rate of 220 GPM. Please show how a flow rate of 220 GPM is required to operate the proposed system or reduce the proposed flow rate to match the requirements of the system.

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

Please submit the information specified above to the Missoula Regional Office by February 26, 2026. This is the only deficiency letter that will be sent. An application not corrected or completed within 120 days from the date of this letter is terminated per ARM 36.12.1501(2) and §85-2-302(6)(a), MCA.

Please let me know if you have any questions.

Best,

Benjamin Thomas

Benjamin Thomas
Water Conservation Specialist II
Missoula Regional Office
benjamin.thomas@mt.gov | (406) 542-5883

CC: Julie Merritt, WGM Group

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

APPLICATION FOR
BENEFICIAL WATER USE PERMIT
§ 85-2-302, MCA

Form No. 600 *(02/2025)*

For Department Use Only
RECEIVED

OCT 21 2025

MONTANA D.N.R.C
MISSOULA REGIONAL OFFICE

Application # 30164554 Basin 76M
Priority Date 10/21/25 Time 0855 AM/PM
Rec'd By AC
Fee Rec'd $ 700- Check # 83433
Deposit Receipt # MS52666818
Payor W6M Group
Refund $ _____ Date _____

FILING FEE

$2900/$1600 – Inside a Basin Closure Area, Controlled Groundwater Area or Compact Closure; without/with filing fee reduction.

$2500/$1200 – Outside a Basin Closure Area; Controlled Groundwater Area or Compact Closure; without/with filing fee reduction.

INFORMATION

An application will be eligible for a filing fee reduction and expedited timelines if the applicant completes a preapplication meeting with the Department (ARM 36.12.1302(1)), which includes submitting any follow-up information identified by the Department (ARM 36.12.1302(3)(c)) and receiving either Department-completed technical analyses or Department review of applicant-submitted technical analyses (ARM 36.12.1302(4) and (5)). An application for the proposed project also must be submitted within 180 days of delivery of Department technical analyses or scientific credibility review and no element on the submitted application can be changed from the completed preapplication meeting form (ARM 36.12.1302(6)). If application is eligible for a filing fee reduction, $500 paid for Form 600P-B will be credited toward filing fees shown above.

Applicant Information: ***Add more as necessary.***

Applicant Name DAVID AND SUSAN MILLER
Mailing Address 6610 MILLER RD City MISSOULA State MT Zip 59808
Phone Numbers: Home _____ Work _____ Cell _____
Email Address _____

Applicant Name _____
Mailing Address _____ City _____ State _____ Zip _____
Phone Numbers: Home _____ Work _____ Cell _____
Email Address _____

Applicant Name _____
Mailing Address _____ City _____ State _____ Zip _____
Phone Numbers: Home _____ Work _____ Cell _____
Email Address _____

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

Contact/Representative is: ☐ Applicant ☑ Consultant ☐ Attorney ☐ Other
Contact/Representative Name JULIE MERRITT
Mailing Address 1111 E BROADWAY City MISSOULA State MT Zip 59802
Phone Numbers: Home 406-728-4611 Work _____ Cell _____
Email Address jmerritt@wgmgroup.com

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

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

PREAPPLICATION AND TECHNICAL ANALYSES INFORMATION

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

2. ☑ **Y** ☐ **N** Did you have a preapplication meeting AND complete a Permit Preapplication Meeting Form Part A and Part B (Form 600P-A and 600P-B)?

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

2.a. ☐ **S** Submit the Technical Analyses Addendum (Form 600-TAA).

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

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

2.c. ☐ **Y** ☑ **N** Has any element of the project described in this application changed from the mandatory elements of the project described in the completed form 600P? **If yes:**
2.c.i. Please explain.

_____
_____
_____
_____
_____
_____

2.c.ii. ☐ **S** Submit the Technical Analyses Addendum (Form 600-TAA).

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

_____
_____
_____
_____
_____

2.d.ii. ☐ **S** Submit the Technical Analyses Addendum (Form 600-TAA).

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

APPLICATION ADDENDA AND REVIEW

3. ☐ **S** ☑ **NA** If your application is for groundwater, not surface water, and one or more of your points of diversion are in a Basin Closure Area, then submit the Basin Closure Area Addendum (Form 600-BCA).

4. ☑ **S** ☐ **NA** If your application is for groundwater and one or more points of diversion are in a Basin Closure Area, then your project must have a Hydrogeologic Report that conforms with MCA 85-2-361 to comply with the requirements of § 85-2-360, MCA. A Hydrogeologic Report Addendum (Form 600-HRA) or Department Technical Analyses may be used to meet these requirements. Please mark the box below that best applies, then select "S" if submitting a Hydrogeologic Report or "NA" if one is not required. This question does not apply to surface water points of diversion in a Basin Closure Area.

- ☐ If you elected to conduct Technical Analyses, you must submit the Hydrogeologic Report Addendum (Form 600-HRA).
- ☐ If you elected for DNRC to conduct Technical Analyses but did not have a preapplication meeting AND complete a Form 600P Permit Preapplication Meeting Form (or changes have occurred since the completed Form 600P), you must submit the Hydrogeologic Report Addendum (Form 600-HRA).
- ☑ If you elected for DNRC to conduct Technical Analyses, had a preapplication meeting, completed a Form 600P, and the Technical Analyses remain unchanged since the preapplication meeting, you do not need to submit Form 600-HRA because the Department's Technical Analyses meet the report requirements of § 85-2-360 and § 85-2-361, MCA.

5. ☐ **S** ☑ **NA** If the project is for one or more groundwater points of diversion located in a Controlled Groundwater Area, then submit the Controlled Groundwater Area Addendum (Form 600-CGWA).

6. ☐ **S** ☑ **NA** If the project involves an appropriation that is greater than 5.5 CFS and 4,000 acre-feet, then submit a Criteria Addendum Application for Beneficial Water Use Permit for Appropriations Greater than 5.5 CFS and 4,000 AC-FT (Form 600-B).

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

8. ☑ **S** ☐ **NA** If you require mitigation water to meet the criteria of issuance, then submit a Mitigation Purpose Addendum (Form 600/606-MIT).

9. ☐ **S** ☑ **NA** If the proposed purposes include marketing or selling water, (not marketing for mitigation/ aquifer recharge), then submit the Marketing Purpose Addendum (Form 600/606-WMA).

10. ☐ **S** ☑ **NA** If the project involves one or more places of storage, then submit a Permit Storage Addendum (Form 600-SA). This does not include reservoirs, pits, pit-dams, or ponds with a capacity less than 0.1 AF; water tanks; or cisterns (ARM 36.12.113(6)).

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

12. ☐ **S** ☑ **NA** If the project includes a point of diversion and/or place of use on State of Montana Trust Land, submit documentation of consent from the DNRC Trust Lands Management Division.

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

PURPOSE AND DIVERSION INFORMATION

14. ☐ **Y** ☑ **N** Is the proposed use temporary?

14.a. If yes, when will the appropriation cease? _____

15. Is the proposed source surface water or groundwater? GROUNDWATER

16. What is the source name? GROUNDWATER

17. ☑ **S** Attach a map utilizing an aerial photograph or topographic map that shows the following: section corners; township and range; north arrow; scale bar; all proposed points of diversion labeled with a unique Point of Diversion (POD) ID number and, if applicable, GWIC number; all proposed places of use; all proposed conveyance facilities and or routes; all proposed places of storage labeled with a unique Storage ID number; and places of use (POU) for all overlapping water rights. More than one map may be submitted, if necessary to clearly convey all required information.

18. Fill out the table below. Means of diversion for surface water includes headgate, pump, dam, and others. Means of diversion for groundwater includes well, developed spring, pit pond, and others.

Purpose	**Means of Diversion**	**Acres Irrigated** (if appl.)	**Period of Diversion** *(Month/Day - Month/Day)*	**Period of Use** *(Month/Day - Month/Day)*	**Flow Rate** ☑ *GPM* ☐ *CFS*	**Volume** *(Acre-Feet)*
IRRIGATION	WELL	23	04/15 TO 10/15	04/15 TO 10/15	220GPM	55.43AF
				Total Flow Rate and Volume Required	220gpm	55.43AF

19. ☑ **Y** ☐ **N** Does the proposed use include on or more of the following purposes: domestic, multiple domestic, stock, or irrigation? If yes, fill out the following table, where applicable.

Purpose	**Requested Information**	**Response**
Domestic or multiple domestic	Number of dwellings	
Stock	Number of animal units	
Irrigation	Method of irrigation type (sprinkler or flood) and subtype (if flood: level border, graded border, furrow, contour ditch, or other; if sprinkler: center pivot, wheel line, or other)	SPRINKLER
Irrigation (flood only)	Design slope	

POINT(S) OF DIVERSION

20. Describe the proposed location of the point(s) diversion to the nearest ¼ ¼ ¼ Section. Label each POD with the POD ID number used for the project map (question 17).

POD #	¼	¼	¼	Sec.	Twp.	Rge.	County	Lot	Block	Tract	Subdivision	Gov. Lot
1	SW	NW	SE	14	13N	20W	MISSOULA					

PLACE OF USE

21. What are the geocodes of the place of use?

04219914402010000	
04219923101020000	

22. Describe the legal land description for the proposed place of use and, if applying for an irrigation or lawn and garden purpose, list the number of irrigated acres.

Acres	Gov. Lot	Block	¼	¼	¼	Sec.	Twp.	Rge.	County
0.5			SW	NW	SE	14	13N	20W	MISSOULA
17.5			W2	SW	SE	14	13N	20W	MISSOULA
5			NW	NW	NE	23	13N	20W	MISSOULA

SUPPLEMENTAL AND OVERLAPPING WATER RIGHTS

23. ☐ **Y** ☑ **N** Will other water rights supplement or overlap the place of use to contribute to the purpose(s)?

23.a. If yes, summarize how the supplemental and proposed water rights will be operated as a whole to serve the purpose(s).

The overlapping water right 76M 149678 00 will not contribute to the proposed irrigation.

24. For each supplemental or overlapping water right, please list the water right number, typical period of diversion and use (MM/DD-MM/DD), flow rate (GPM or CFS), and the volume of water (AF) contributed to the shared place of use.

Water Right #	Average Period of Diversion	Average Period of Use	Flow Rate	Volume Contributed

25. ☐ **Y** ☑ **N** Will this application supplement contract water from a Federal Project, ditch company, or other source?

25.a. If yes, explain.

ADVERSE EFFECT

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

The diversion consists of a well with a pump that can be shut off in response to a call being made.

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

Irrigation can be stopped by turning off the well pump to satisfy existing water rights during times of water shortage.

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

28.a. If yes, explain.

29. ☐ **Y** ☑ **N** Does a water commissioner distribute water or oversee water distribution on your proposed source?

29.a. If yes, list the source(s).

30. ☐ **Y** ☑ **N** Do other water rights share any of the proposed points of diversion?

30.a. If yes, describe how the proposed project will not adversely affect these water rights.

31. ☐ **Y** ☑ **N** Do other water rights share any conveyance infrastructure associated with the proposed project?

31.a. If yes, describe how the proposed project will not adversely affect these water rights.

ADEQUATE MEANS OF DIVERSION AND OPERATION

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

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

SEE ATTACHED

34. Describe the size, materials, capacity, and configuration of infrastructure to convey water from all proposed points of diversion to all proposed places of use. This may include but is not limited to, pipelines and ditches. Include a description of any losses related to the proposed conveyance. Ditch conveyance losses may be estimated numerous ways, which include a ditch loss rate or Department standard methods.

SEE ATTACHED

35. Describe how the proposed diversion and conveyance infrastructure can provide the required flow and volume, for the purposes plus any conveyance losses and storage, throughout the proposed period of diversion.

SEE ATTACHED

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

SEE ATTACHED

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

37.a. If yes, explain.

38. ☑ **Y** ☐ **N** Do you own the land where all proposed points of diversion are located?

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

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

IF YES,

39.a. Explain the wastewater disposal method.

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

40. ☑ **Y** ☐ **N** Do you have any plans to measure your diversion and use?

40.a. If yes, describe the plan and the type of measurements you will take.

Measurements will be taken of the electricity used by the pump.

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

IF YES,

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

41.b. For all wells that have been drilled, what is the name of the well driller and, if available, what is their license number?
COLE BRICK (ACE DRILLING) WWD-774

41.c. ☐ **Y** ☐ **N** For all wells yet to be drilled, will a licensed well driller construct the wells?

41.d. ☐ **S** ☑ **NA** Submit any well logs not yet submitted to the Department.

BENEFICIAL USE

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

42.a. ☑ **Y** ☐ **N** If yes, do all proposed beneficial uses fall within Department standards?

42.b. If no Department standard exists, or if any proposed beneficial use falls outside of Department standards, explain how the requested flow rate and volume are reasonable for the purpose.

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

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

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

44.a.i. ☐ **S** ☐ **NA** If yes, please submit the COSA.

44.a.ii. ☐ **Y** ☐ **N** If no, have you researched or consulted with DEQ regarding their requirements?

POSSESSORY INTEREST

45. ☐ **Y** ☑ **N** Do you meet one of the exceptions to possessory interest requirements, pursuant to ARM 36.12.1802? Exceptions include cases where the application is for sale, rental, distribution, or is a municipal use, or in any other context in which water is being supplied to another and it is clear that the ultimate user will not accept the supply without consenting to the use of water on the user's place of use.

45.a. If yes, explain.

46. ☑ **Y** ☐ **N** ☐ **NA** Do you own all proposed places of use? Mark "NA" if you meet one of the exceptions to the possessory interest requirement.

IF NO,

46.a. ☐ **S** Explain and submit documentation that shows you either have possessory interest or written permission of the parties with possessory interest of the place of use.

46.b. ☐ **Y** ☐ **N** Would you like the water right to be appurtenant to the land? Please note that if your water right is not appurtenant to land it will not transfer by default with the conveyance of the property, pursuant to § 85-2-403, MCA.

46.b.i. If no, explain.

PROPOSED COMPLETION PERIOD

47. How much time will be needed to complete this project and to submit to the DNRC a Project Completion Notice (Form 617)? 5 years

48. Please describe why this amount of time is needed to complete this project.
This amount of time is requested to ensure a variety of seasonal weather conditions are encountered during the project completion period to accurately reflect the irrigation needs on this property.

AFFIDAVIT & CERTIFICATION

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

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

I affirm I have possessory interest, or the written consent of the person with the possessory interest, in the property where the water is to be put to beneficial use, unless this application meets an exception to the possessory interest requirements in ARM 36.12.1802(1)(b).

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

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

Printed Name David G. Miller

Applicant Signature David G Miller Date: 10/20/25

Printed Name Susan Miller

Applicant Signature Susan Miller Date: 10/20/25

Printed Name _____

Applicant Signature _____ Date: _____

DAVID AND SUSAN MILLER
APPLICATION FOR BENEFICIAL WATER USE PERMIT
FORM NO. 600

Adequate Means of Diversion and Operation

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

The pump installed in the well is a Franklin Electric 5" STS pump. The pump curve can be viewed below. The diversion is capable of pumping the 220 gpm requested flow rate.

34. Describe the size, materials, capacity, and configuration of infrastructure to convey water from all proposed points of diversion to all proposed places of use. This may include but is not limited to, pipelines and ditches. Include a description of any losses related to the proposed conveyance. Ditch conveyance losses may be estimated numerous ways, which include a ditch loss rate or Department standard methods.

Water is pumped from a well into a buried 6-inch PVC pipeline that directs water both north and south. The water directed to the north is distributed using a movable big gun sprinkler. Water that is directed to the south is connected to a wheel line that distributes the water to the southern field.

35. Describe how the proposed diversion and conveyance infrastructure can provide the required flow and volume, for the purposes plus any conveyance losses and storage, throughout the proposed period of diversion.

There will be no conveyance loss as the water is transported through a buried pipeline. The well and pump have demonstrated that they are capable of producing the required flow rate and volume.

36. Provide a plan of operations, which includes 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.

Water in the northern place of use is delivered using a big gun sprinkler that has a flow rate of 25 gpm. The southern place of use distributes water through a wheel line sprinkler system with 30 sprinkler heads, each with a 5 gpm flow rate. The big gun sprinkler and the wheel line will be moved as necessary to obtain full coverage of the irrigated fields.

Pump Performance Datasheet

FS220STS5S6 0503CXX6

Company Name	
Company contact number	
Quote Number	1146232
Project name	Default

Model/Order No.	220 GPM 5" STS Sub-Turbine (Build Center)
Stages	5 (1 / 4x / 0x)
Quantity of pumps in parallel	1
Based on curve number	5STS-220-04
Saved Date	23 Oct 2023 10:32 PM

Operating Conditions

Flow, rated	: 220.0 USgpm
Differential head / pressure, rated (requested)	: 142.2 ft
Differential head / pressure, rated (actual)	: 142.2 ft
Suction pressure, rated / max	: 0.00 / 0.00 psi.g
NPSH available, rated	: Ample
Site Supply Frequency	: 60 Hz

Performance

Speed criteria	: Synchronous
Speed, rated	: 3450 rpm
Impeller diameter, rated	: 1A+4B
Impeller diameter, maximum	: A
Impeller diameter, minimum	: C
Efficiency	: 73.95 %
PEI (CL)	: 0.91
NPSH required / margin required	: 19.83 / 0.00 ft
Ns (imp. eye flow) / Nss (imp. eye flow)	: 3,795 / 5,448 US Units
MCSF	: 143.8 USgpm
Head, maximum, rated diameter	: 267.6 ft
Head rise to shutoff	: 88.16 %
Flow, best eff. point	: 205.4 USgpm
Flow ratio, rated / BEP	: 107.10 %
Diameter ratio (rated / max)	: 100.00 %
Head ratio (rated dia / max dia)	: 88.72 %
Cq/Ch/Ce/Cn [ANSI/HI 9.6.7-2010]	: 1.00 / 1.00 / 1.00 / 1.00
Selection status	: Acceptable

Liquid

Liquid type	: Water
Additional liquid description	:
Solids diameter, max	: 0.00 in
Solids concentration, by volume	: 0.00 %
Temperature, max	: 68.00 deg F
Fluid density, rated / max	: 1.000 / 1.000 SG
Viscosity, rated	: 1.00 cP
Vapor pressure, rated	: 0.34 psi.a

Material

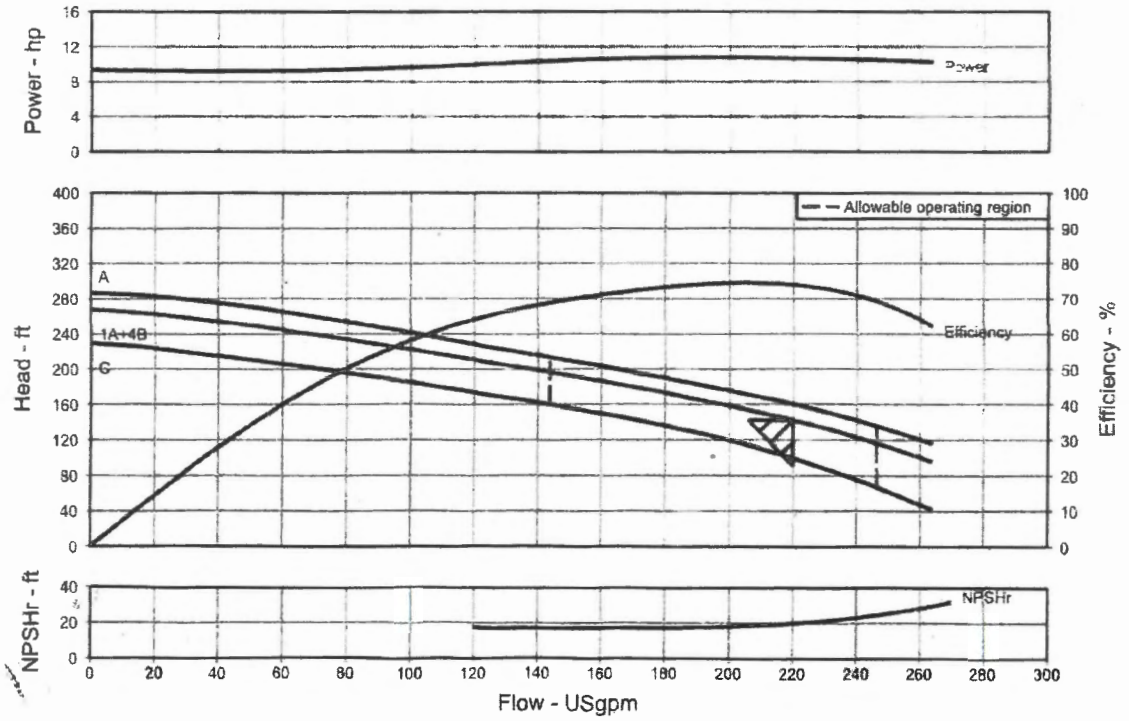
Material selected	: Standard

Pressure Data

Shut off pressure	: 115.8 psi.g
Maximum allowable working pressure	: N/A
Maximum allowable suction pressure	: N/A
Hydrostatic test pressure	: N/A

Driver & Power Data (@Max density)

Driver sizing specification	: Rated power
Margin over specification	: 0.00 %
Service factor	: 1.15 (used)
Power, hydraulic	: 7.90 hp
Power, rated	: 10.68 hp
Power, maximum, rated diameter	: 10.76 hp
Minimum recommended motor rating	: 10.00 hp / 7.46 kW



Franklin Electric

Form No. 600/606-MIT (02/2025) Applicant Name DAVID AND SUSAN MILLER

APPLICATION FOR BENEFICIAL WATER USE PERMIT OR APPLICATION TO CHANGE A WATER RIGHT

MITIGATION ADDENDUM

§§ 85-2-420, 85-2-362, 85-2-402, 85-2-311, MCA

Answer every applicable question and use the prompts to craft a plan for mitigation, aquifer recharge, or marketing for mitigation/aquifer recharge. Use the checkboxes to denote yes ("Y") or no ("N"). Narrative responses that are larger than the space provided can be answered in an attachment. If an attachment is used, specify "see attachment" on this form. Label all attachments and submitted items with the question number. Label all units in tables and narrative responses.

In some cases, the information required to correctly and completely answer the questions on this form will not be available until technical analyses are completed. It is highly recommended all technical analyses required for the project are completed before filling out this form.

1. How many applications will you need to file with the Department for this project? Applications include Application for Beneficial Water Use Permit (Form 600) and Application to Change a Water Right (Form 606). 2

1.a. ☑ **Y** ☐ **N** Will you need to file more than one application with the Department for this project?

If yes,

1.a.i. ☑ **Y** ☐ **N** You are only required to answer the remaining questions on Form 600/606-MIT one time per project. The Department cannot begin criteria assessment for any application required for the project until you have submitted a completed Form 600/606-MIT, including answers to the remaining questions. Will you answer the remaining questions on a Form 600/606-MIT submitted with another application?

1.a.ii. If yes, briefly explain, then this form is complete.
The remaining questions will be answered in a Change Application filed by the City of Missoula with the application number 76M 30165370.

1.a.iii. If no, move on to question 2.

2. Which of the following scenarios best describes the proposed project? Check all that apply and answer the questions specific to each scenario; then answer question 6 and 7.

☐ **Identified need for mitigation/aquifer recharge water AND change application(s) to supply the mitigation/aquifer recharge water:** Mitigation or aquifer recharge water is required to meet the criteria of issuance for a project, which is either in the preapplication meeting stage or has a pending Application for Beneficial Water Use or Application to Change a Water Right, and is proposed to be made available through a change in purpose of one or more water rights to mitigation or aquifer recharge. Answer question 3.

☐ **Identified need for mitigation/aquifer recharge water AND water contract(s) to supply the mitigation/aquifer recharge water:** Mitigation and aquifer recharge water is required to meet the criteria of issuance for a project, which is either in the preapplication meeting stage or has a pending Application for Beneficial Water Use or Application to Change a Water Right, and is proposed to be made available through one or more contracts for water, such as from water with a marketing for mitigation purpose. Answer questions 3 and 4.

☐ **Marketing for mitigation/aquifer recharge:** Water right(s) being changed to a marketing for mitigation or marketing for aquifer recharge purpose that will be sold or leased to other entities. Answer question 5.

3. Will the proposed diversion and/or net depletions to surface water occur in an open or closed basin? Answer question 3.a for open basins or question 3.b for closed basins.

☐ **Open** ☐ **Closed**

If an open basin:

3.a. Submit an aquifer recharge or mitigation plan with sufficient detail to explain why the plan is adequate to offset the net depletions of the proposed new appropriation in an amount greater than the difference between the amount of water physically available and legal demands, on a monthly timestep. The plan must include:

3.a.i. description of the method by which water will be made available for aquifer recharge or mitigation purpose(s);

3.a.ii. the amount, timing, and location of mitigation water delivery and/or net accretions to the depleted source;

3.a.iii. comparison of the elements of 3.a.ii to the amount, timing, and location of the net depletions of the proposed new appropriation.

If a closed basin:

3.b. If the hydrogeologic report conducted pursuant to § 85-2-361, MCA, predicts a net depletion of surface water, submit an aquifer recharge or mitigation plan. Per § 85-2-362, MCA, the plan must include:

3.b.i. where and how the water in the plan will be put to beneficial use;
3.b.ii. when and where, generally, water for aquifer recharge or mitigation will be required;
3.b.iii. the amount of water that is required for aquifer recharge or mitigation;
3.b.iv. how the proposed project or beneficial use for which the aquifer recharge or mitigation plan is required will be operated;
3.b.v. evidence that an application for a change in appropriation right, if necessary, has been submitted;
3.b.vi. evidence of water availability;
3.b.vii. evidence of how the aquifer recharge or mitigation plan will offset the required amount of net depletion of surface water in a manner that will offset an adverse effect on a prior appropriator; and
3.b.viii. evidence that the appropriate water quality permits have been granted pursuant to Title 75, chapter 5, as required by § 75-5-410, MCA, and § 85-2-364, MCA.
3.b.ix. In addition to 3.b.i through 3.b.viii, an aquifer recharge plan must include a description of the process by which water will be reintroduced to the aquifer.

4. Describe details about the contract(s) for water and submit a copy of the contract(s). In doing so, be sure to address the following sub-questions:
4.a. Is the contract a lease or sale?
4.a.i. If a lease, what is the duration of the contract and what is the process to renew the lease?
4.b. Does the contract water have a marketing for mitigation or marketing for aquifer recharge purpose? If yes,
4.b.i. What are the water right numbers with a marketing for mitigation or marketing for aquifer recharge purpose?
4.b.ii. What is the change authorization number that authorized the marketing for mitigation purpose?
4.b.iii. What is the mitigation reach identified in the change authorization?

5. Submit a marketing for mitigation/aquifer recharge plan that addresses the following:
5.a. Describe your ability to measure and operate all existing diversions to adjust flow rate as water is sold or leased.
5.b. How will you cease diversions for the existing beneficial use of the water right(s) as water is sold or leased for the purpose of marketing for mitigation/ aquifer recharge?
5.c. Describe the need for mitigation water within the proposed place of use of the new appropriation.

6. How do the priority dates of the water rights proposed for change to mitigation, aquifer recharge, and/or marketing for mitigation/aquifer recharge purpose(s) compare to other water rights on the source?

_____

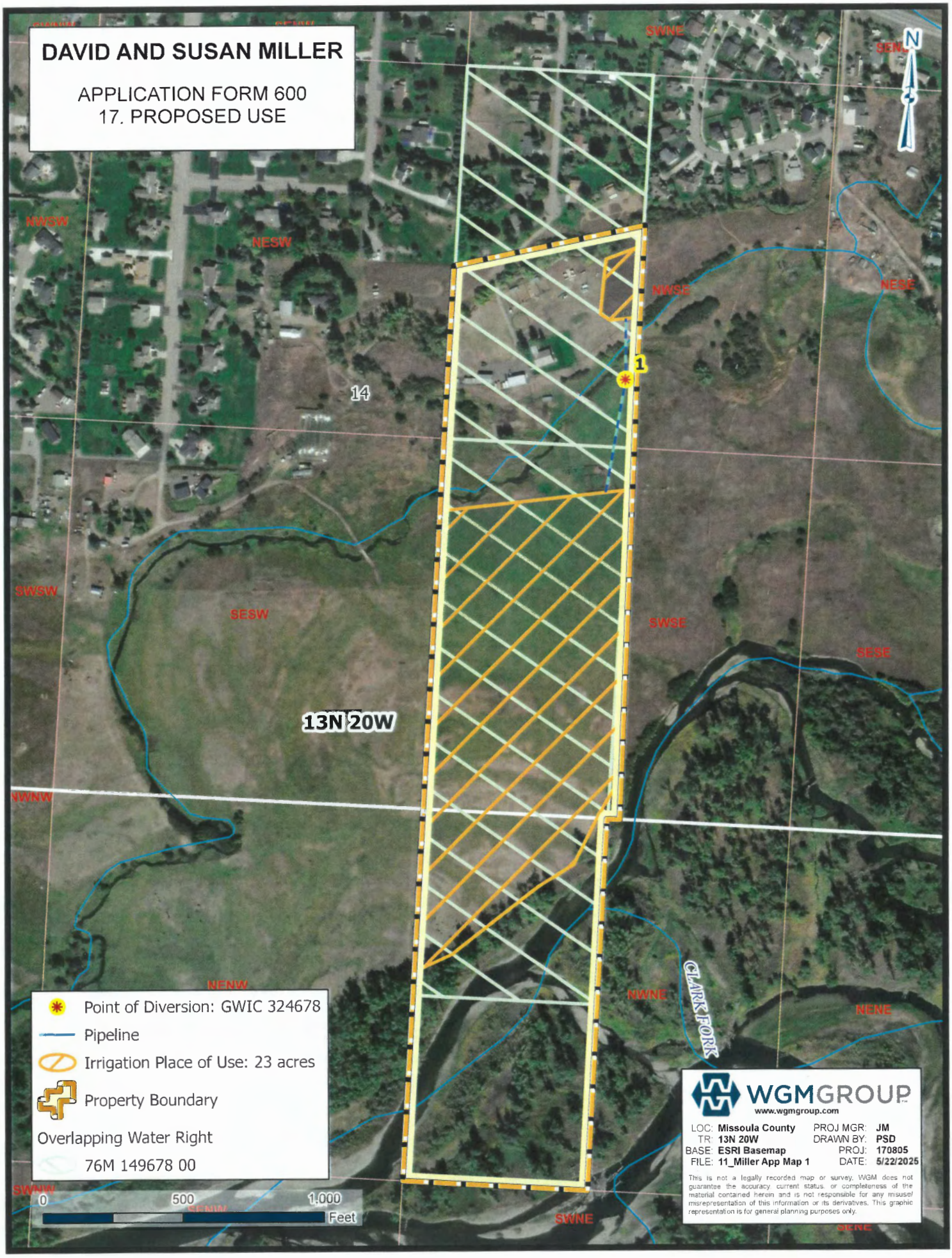
_____

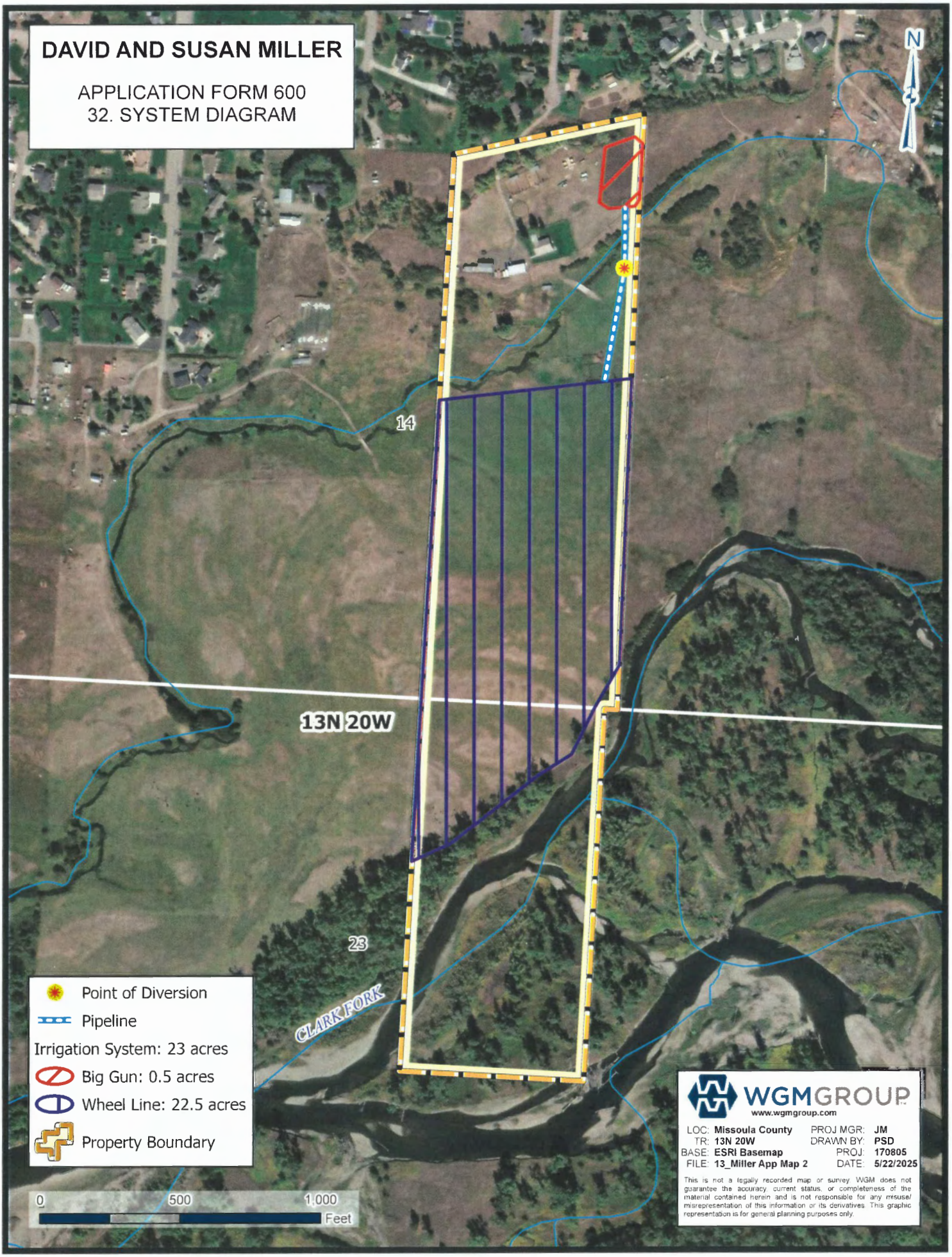
_____

_____

_____

7. ☐ **Y** ☐ **N** Do you have measurement records or Water Commissioner records that show the reliability of the water rights proposed for change to mitigation, aquifer recharge, and/or marketing for mitigation/aquifer recharge? If yes, submit them to the Department.


DAVID AND SUSAN MILLER
APPLICATION FORM 600
17. PROPOSED USE
N
SWNE
SENE
NWSW
NESW
NWSE
NESE
1
14
SWSW
SESW
SWSE
SESE
13N 20W
NWNW
NENW
NWNE
NENE
CLARK FORK
SWNW
SENW
SWNE
SENE
Point of Diversion: GWIC 324678
Pipeline
Irrigation Place of Use: 23 acres
Property Boundary
Overlapping Water Right
76M 149678 00
0
500
1,000
Feet
WGMGROUP
www.wgmgroup.com
LOC: Missoula County
TR: 13N 20W
BASE: ESRI Basemap
FILE: 11_Miller App Map 1
PROJ MGR: JM
DRAWN BY: PSD
PROJ: 170805
DATE: 5/22/2025
This is not a legally recorded map or survey. WGM does not guarantee the accuracy, current status, or completeness of the material contained herein and is not responsible for any misuse/misrepresentation of this information or its derivatives. This graphic representation is for general planning purposes only.


DAVID AND SUSAN MILLER
APPLICATION FORM 600
32. SYSTEM DIAGRAM
N
14
13N 20W
23
CLARK FORK
Point of Diversion
Pipeline
Irrigation System: 23 acres
Big Gun: 0.5 acres
Wheel Line: 22.5 acres
Property Boundary
0
500
1,000
Feet
WGMGROUP
www.wgmgroup.com
LOC: Missoula County
TR: 13N 20W
BASE: ESRI Basemap
FILE: 13_Miller App Map 2
PROJ MGR: JM
DRAWN BY: PSD
PROJ: 170805
DATE: 5/22/2025
This is not a legally recorded map or survey. WGM does not guarantee the accuracy, current status, or completeness of the material contained herein and is not responsible for any misuse/misrepresentation of this information or its derivatives. This graphic representation is for general planning purposes only.

ATTACHEMENT 1

Missoula Water Resources Regional Office
PO Box 5004
2705 Spurgin Road, Bldg. C
Missoula, MT 59806-5004
(406) 721-4284

May 1, 2025

David and Susan Miller
6610 Mullan Rd
Missoula, MT 59808

Subject: Completed Technical Analyses Report for Beneficial Water Use Permit Preapplication No. 76M 30164554

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 Permit Preapplication No. 76M 30164554 based on the information provided in your Preapplication Meeting Form accepted by the Department on March 19, 2025. The technical analyses can be found in the attached report. Please note this Groundwater Permit Technical Analyses Report is a two-part publication, comprised of a Part A completed by Melissa Brickl from Water Sciences Bureau, and a Part B completed by Benjamin Thomas from the Missoula Regional Office.

This Technical Analyses Report **IS**: A collection of facts that the DNRC has gathered, including content provided in the Preapplication Meeting Form materials. The Department will use these data to analyze the criteria in §85-2-311, 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 (§85-2-311, MCA).

You have 180 days to submit the Beneficial Water Use Permit Application Form 600 considering the information provided in the technical analyses and Preapplication Meeting Form. If the Application Form is not submitted to the Missoula Regional Office by October 28, 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,

Benjamin Thomas

Benjamin Thomas
Water Conservation Specialist
Missoula Regional Office
benjamin.thomas@mt.gov | (406) 542-5883

CC:
Julie Merritt, WGM Group

Missoula Water Resources Regional Office
PO Box 5004
2705 Spurgin Road, Bldg. C
Missoula, MT 59806-5004
(406) 721-4284

May 1, 2025

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Please let me know if you have any questions.

Best,

Benjamin Thomas

Benjamin Thomas
Water Conservation Specialist
Missoula Regional Office
benjamin.thomas@mt.gov | (406) 542-5883

CC:
Julie Merritt, WGM Group

Groundwater Permit Technical Analyses Report - Part A

Department of Natural Resources and Conservation (DNRC)
Water Resources Division
Melissa Brickl, Groundwater Hydrologist, Water Sciences Bureau (WSB)

Application No.	76M 30164554	**Point of Diversion Legal Land Description**	Section 14, Township 13 North, Range 20 West
Applicant	David Miller		

Overview

This report is Part A of a two-part publication which 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). For applications in closed basins, this report fulfills the requirements of MCA 85-2-361.

This Groundwater Permit Technical Analyses Report – Part A contains the following sections:

1.0 Executive Summary

Application Details

The Applicant requests to divert 220.0 gallons per minute (gpm) and up to 55.4 acre-feet (AF) of groundwater from one well for the purpose of irrigation of 23 acres. The period of diversion and use is April 15 to October 15. Statement of Claim No. 76M 149678-00 is supplemental to the proposed use. However, the surface water source associated with the supplemental claim is unreliable and as such the Applicant has proposed the use of a new well.

Approved Variances from ARM 36.12.121

A recommendation to grant variances from 3(a), 3(d), 3(d)(i), 3(e), 3(e)(i), 3(e)(ii), and 3(e)(iii) aquifer test requirements in ARM 36.12.121 was sent to the Missoula Regional Office from the WSB on December 20, 2024. Information regarding variances requests is found in that review. Variances were granted by the DNRC on January 8, 2025.

WSB Technical Findings

Based on information submitted, the WSB estimated aquifer properties, evaluated the production well(s) available water column, quantified the water available in the source aquifer, and evaluated potential impacts to existing groundwater and surface water rights. These technical analyses are in support of the following criteria assessment: adequacy of diversion, physical availability, and adverse effect. A summary of WSB findings described in subsequent sections are listed below.

TECHNICAL ANALYSES FINDINGS

AQUIFER TEST ANALYSIS	In lieu of an aquifer test on the proposed well, the estimation of Transmissivity (T) of 150,000 ft^2/day was derived from nearby estimates of hydraulic conductivity (K) and the saturated aquifer thickness (b). The Specific Yield (S_y) of 0.1 is defined from literature for sand and gravel aquifers (Lohman, 1972).
MODELING INPUTS	The following aquifer properties were used to complete adequacy of diversion, physical availability and adverse effect technical analyses: T of 150,000 ft^2/day and S_y of 0.1 from Lohman (1972). Pumping schedules and boundaries used to model each criterion are identified within the document.
ADEQUACY OF DIVERSION	The proposed well would experience 3.7 feet (ft) of drawdown after the first year, leaving approximately 92.3 ft of available water column above the bottom of the perforated interval.
PHYSICAL AVAILABILITY	The 0.01-foot drawdown contour, or zone of influence (ZOI), occurs 4,617 ft from the proposed well. Groundwater flux through the ZOI is equal to 46,421 AF/year. There are 321 active or severed groundwater rights completed within the ZOI and source aquifer that need to be evaluated as a legal demand (**Appendix A**).

ADVERSE EFFECT (DRAWDOWN IN EXISTING WELLS)	After five years, assuming the proposed well is pumped according to the schedule identified in **Table 3,** zero groundwater rights in the source aquifer are predicted to experience drawdown equal to or greater than one foot (**Figure 5**).
ADVERSE EFFECT (NET DEPLETION TO SURFACE WATER)	The Clark Fork River, center point approximately 4,209 ft south of the proposed well, is identified as being hydraulically connected to the source aquifer. Monthly net depletions resulting from the proposed use of groundwater are identified in **Table 1** and the starting point of the depleted reach in **Figure 6**.

Table 1: Total consumed volume and net depletion to surface water for the production well.

Month	Irrigation Diverted Volume (AF)	Total Consumed Volume (AF)	Clark Fork River Depletions (AF)	Clark Fork River Depletions (gpm)
January	0.00	0.00	0.7	5.1
February	0.00	0.00	0.5	4.4
March	0.00	0.00	0.5	3.9
April	1.6	1.1	1.2	9.2
May	7.1	5.0	4.0	29.2
June	11.1	7.8	6.2	47.1
July	15.4	10.7	8.7	63.6
August	12.9	9.0	8.0	58.3
September	6.5	4.5	4.9	37.1
October	0.9	0.6	2.0	14.4
November	0.00	0.00	1.1	8.1
December	0.00	0.00	0.8	6.2
Total	**55.4**	**38.8**	**38.8**	

2.0 Hydrogeologic Setting

As identified in **Figure 1**, the Production Well GWIC ID 324678 (aquifer code: 110ALVM), is completed 100 ft below ground surface (bgs) with a perforated interval between 90 and 100 ft bgs.

The Missoula Valley Aquifer is a highly transmissive, unconfined, fluvial-deposited sand and gravel aquifer. The primary Missoula Valley Aquifer delineated by Clark (1986) is within the Quaternary fill of the Missoula Valley. The saturated aquifer thickness ranges from 50 feet to 120 feet. The well derives water from an alluvial sedimentary package known as the Missoula Valley Aquifer of the Clark Fork River (Clark, 1986).

The Missoula Valley is an elongated intermontane depression resultant of basin and range extension coupled with right-lateral movement along the Ninemile fault system (Fields et al., 1985; Woessner, 1988). The valley is bound by the Belt Supergroup to the east, and by Tertiary sediments to the north and southeast. The valley is composed of Tertiary and Quaternary sediments which are estimated to be over a mile thick at its center (Woessner, 1988). Water supplies in the Missoula Valley are derived from the younger, fluvial-deposited sand, gravel, and cobble sediments that dominate the upper few hundred feet of the valley fill material.

A groundwater model by Miller (1991) and water level measurements by LaFave (2006) and Smith et al. (2013) suggest that the basin fill sediments in the Missoula Valley respond as a single connected aquifer system and not as a group of separate aquifers. Hydrographs from wells completed in the shallow and deep basin-fill sediments within the Missoula Valley show seasonal groundwater recharge from Clark Fork River high flows (Woessner, 1988). Tritium was detected at concentrations indicative of recharge less than 50 years old in all the samples from the shallow basin-fill aquifers (Smith et al., 2013). Records from MBMG show that 4,931 wells have been drilled into the Missoula Valley Aquifer. The median reported well yield is 40 gpm, but 76 wells have reported well yields greater than 1,000 gpm (Smith et al., 2013).

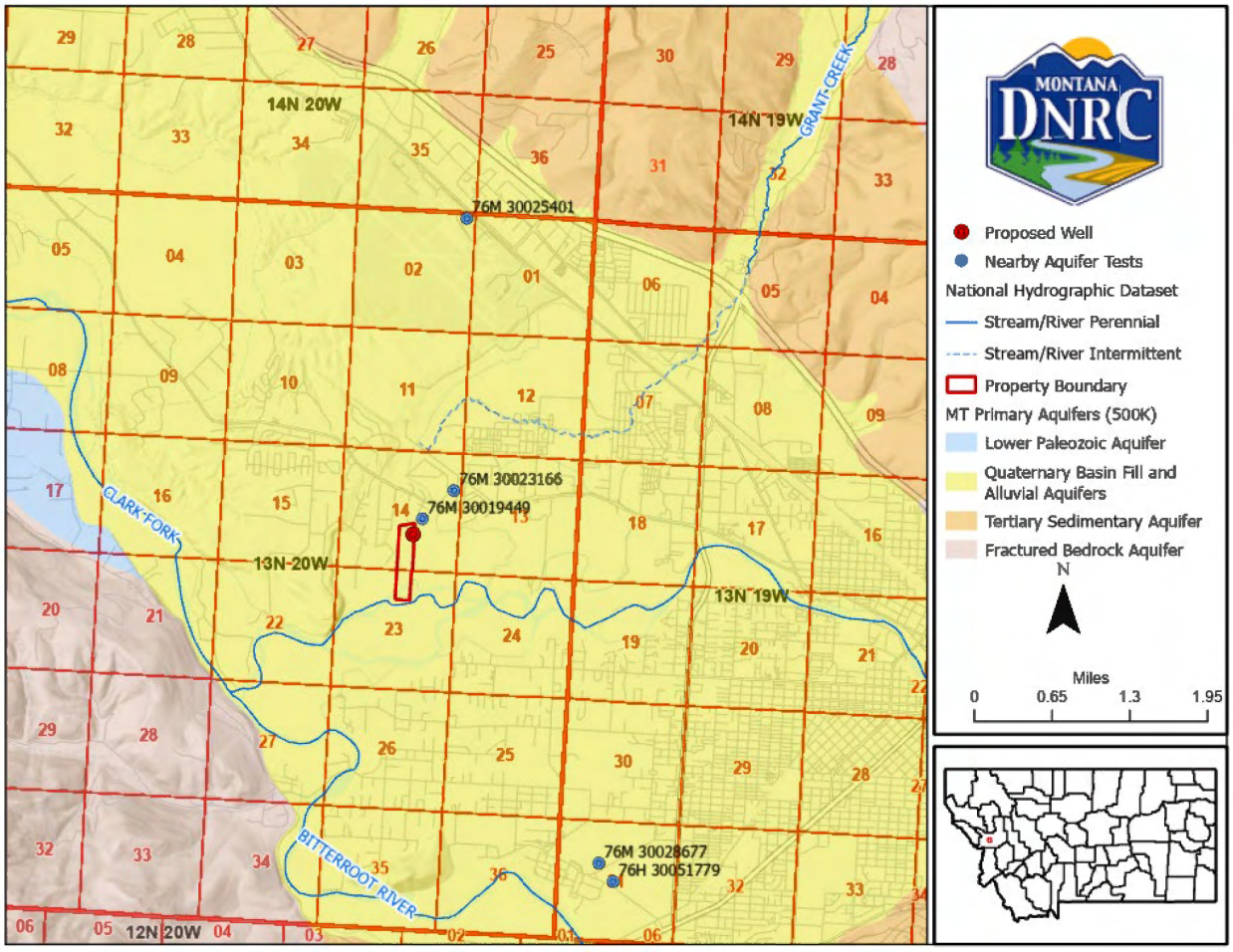

Figure 1: Map of the Applicant's proposed well and other nearby aquifer tests.

3.0 Drawdown and Yield Test Summary

DNRC requires two different types of tests, "Aquifer Tests" and "Drawdown and Yield Tests."

- An "Aquifer Test" is a pumping test that is meant to provide data to model aquifer properties. The minimum duration of these tests is either 24 hours or 72 hours, depending on the proposed flow rate and volume (AMR 36.12.121(3)(e)), and DNRC only requires one of these tests per application. Aquifer Tests must include observation well data, and pre-test monitoring data as well as post-test recovery data.
- A "Drawdown and Yield Test" is a pumping test that is meant to evaluate well construction and the ability of the aquifer to yield water to the well. This is also known as demonstrating "adequacy of diversion." The minimum duration of these tests is 8 hours, and every well that is a part of the application must be tested for at least 8 hours. Observation wells, pre-test data, and post-test data are not required for Drawdown and Yield Tests.

The Applicant was granted a variance from completing an aquifer test. Existing publications and nearby aquifer tests were used to derive aquifer properties instead. The Applicant fulfilled the requirements of completing a drawdown and yield test.

Field Methods and Equipment
An 8.0-hour drawdown and yield test was conducted on the Production Well, GWIC ID 324678. Water levels during the test were collected using an In-situ Level meter 500 transducer. The discharge rate was not measured. Instead, pumped water was applied to a field via 15 sprinklers with an output of 6.0 gpm each and one big gun sprinkler with an output 25.0 gpm.

Background Data
Background data is not required as part of drawdown and yield tests and was not collected.

Drawdown Data
The 8.0-hour drawdown and yield test started on July 18, 2024, at 08:33 A.M. on the Production Well and is considered (t = 0) for the computation of drawdown. Discharge was not measured but applied to a field using 16 sprinklers with a total output of 115.0 gpm. The maximum drawdown in the Production Well was 2.91 ft below the static water level (swl) of 6.01 ft below top of casing (btc), leaving 91.08 ft of available water column above the bottom of the perforated interval. A plot of drawdown and recovery data is provided in **Figure 2**.

Recovery Data
Recovery groundwater level data were monitored for 35 minutes after the cessation of pumping. At the end of the recovery period, the Production Well swl was 0.78 ft above the pre-test swl.

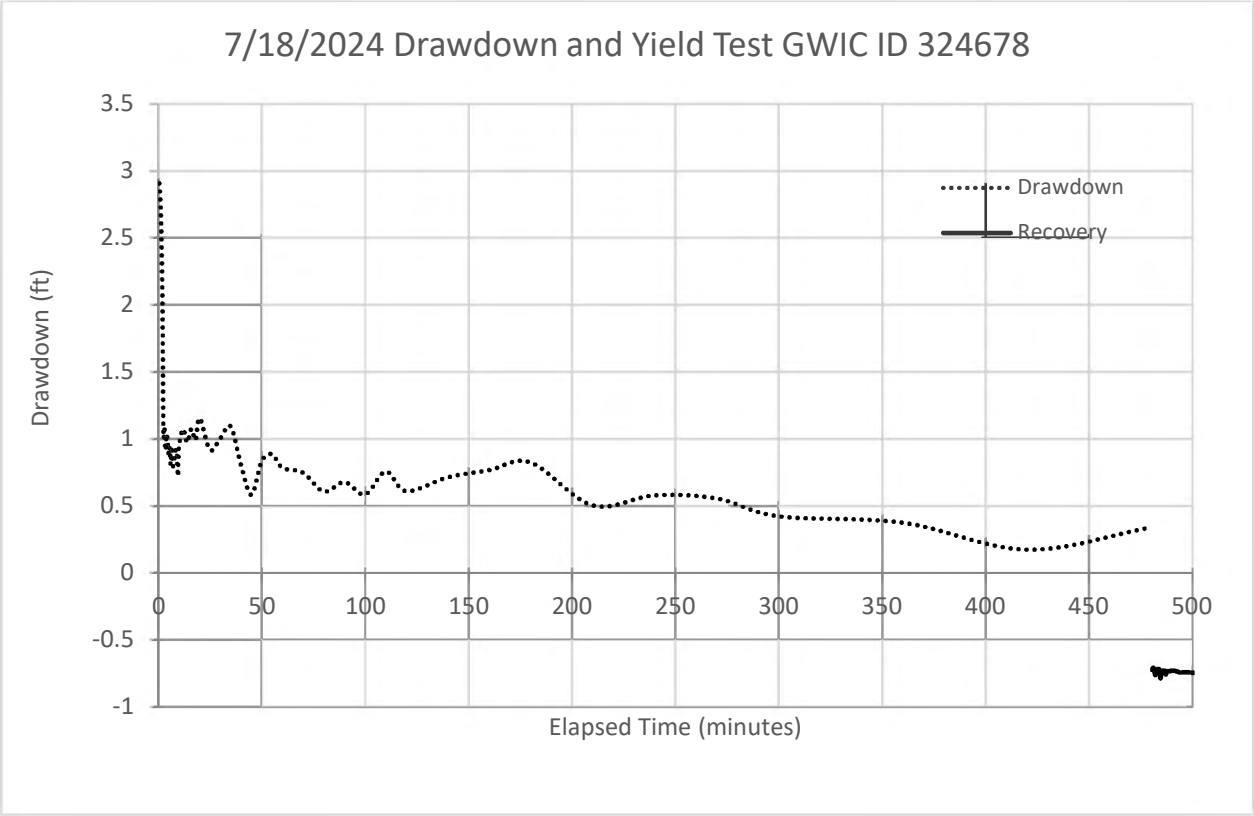

Figure 2: Drawdown and recovery data for the 8-hour drawdown and yield test on the Production Well.

4.0 Aquifer Properties

Information submitted by the Applicant, existing publications (**Table 2**), and nearby aquifer tests greater than 24 hours (**Figure 1**; **Table 3**) were used to derive and support the aquifer properties recommended for forward modeling. The recommended K of 1,500 ft/day is the approximate value from Maxim Technologies (2006), and on the lower end of the range of values from Woessner (1988). The saturated aquifer thickness of 100 ft was determined from an average swl of 25 ft from wells within one mile of the proposed well, and mapped thickness of Quaternary unconsolidated deposits from Smith (2006) of approximately 125 ft. The recommended T value of 150,000 ft^2/day (**Eq. 1**) is within the range of values in **Table 2** and **Table 3**.

$$T = K \cdot b \qquad \textbf{Eq. 1}$$

Table 2: Reported Missoula Valley Aquifer Properties.

Source	T (ft^2/day)	Estimated K (ft/day)
Woessner (1988)	100,261 – 228,594	1,380 - 3,417
Smith (1992)	116,918	2,790
Geomatrix Consultants (2006)	138,396	4,210
Maxim Technologies (2006)	142,000	1,520
DNRC (2010)	50,000	---
WGM (2012)	140,000 – 300,000	---

Table 3: Nearby Missoula Valley Aquifer Tests (Note: T = Transmissivity; NA = Not available).

Water Right No.	GWIC ID	Well Completion Depth (feet)	Distance from Applicant Well (miles)	Aquifer Test Length (hours)	Pumping Rate (gpm)	T (ft^2/day)
76M 30023166	227593	110	0.7	72	330	204,782
76M 30023166	227602	112	0.7	39	327	143,353
76M 30019449	227675	121	0.7	72	318	142,000
76M 30025401	228086	233	2.6	25	150	54,430
76M 30028677	237277	60	2.9	24	125	46,000
76H 30051779	69327	120	3.1	72	1,194	45,000
76M 114446 00	182404	140	3.9	72	800	269,041
76M 30041556	243834	146	3.9	68	1,050	151,000
76M 30025519	NA	120	3.9	24	139	63,179

5.0 Modeling Inputs

Technical analyses in support of the following criteria assessment: adequacy of diversion, physical availability, and adverse effect were modeled in FWD:SOLV (HydroSOLVE INC., 2024) using the following inputs:

- Theis (1935) solution for fully penetrating wells in isotropic single-porosity aquifer.
- Well radius of 0.36 ft and screened interval of 10 ft for the proposed well.
- T = 150,000 ft^2/day
- Sy = 0.1 (Lohman, 1972)

Monthly pumping schedules and boundaries used to complete technical analyses are identified in subsequent criteria sections.

6.0 Adequacy of Diversion Analysis

The potential available water column remaining in the proposed well was assessed. The predicted theoretical drawdown was modeled in FWD:SOLV (HydroSOLVE INC., 2024) using the modeling inputs found in Section 5 of this report and following pumping schedule:

- Monthly pumping schedule of GWIC ID 324678 identified in column 4 of **Table 4** for the period of diversion.

The Applicant requested volume was apportioned based on the monthly percent of the total net irrigation requirement for alfalfa hay calculated using the using the Missoula WSO Airport Station (MT5747) listed in the Irrigation Water Requirement (IWR) program (NRCS, 2003).

Table 4: Monthly pumping schedule for adequacy of diversion and adverse effect analysis.

Month	IWR Missoula WSO Airport (inches)	Diverted Volume (AF)	Diverted Flow Rate (gpm)
January	0.0	0.00	0.0
February	0.0	0.00	0.0
March	0.0	0.00	0.0
April	0.7	1.6	11.8
May	3.2	7.1	52.1
June	5.0	11.1	84.1
July	6.9	15.4	112.3
August	5.8	12.9	94.4
September	2.9	6.5	48.8
October	0.4	0.9	6.5
November	0.0	0.00	0.0
December	0.0	0.00	0.0
Total	**24.9**	**55.4**	

Table 5 identifies the total drawdown as the sum of interference drawdown and predicted drawdown with well loss. One well is proposed, therefore there is no interference drawdown. Well loss is calculated by dividing the predicted theoretical maximum drawdown (**Figure 3**) by a well efficiency value. Well efficiency is calculated by dividing the FWD:SOLV modeled maximum drawdown for the drawdown and yield test by the maximum observed drawdown of the test (2.91 ft).

Table 5 also identifies the predicted total drawdown and remaining available water column after July of the first year of pumping in GWIC ID 324678. The remaining available water column for the proposed well is equal to the available drawdown above the bottom of the perforations minus total drawdown including any interference drawdown.

Table 5: Remaining available water column for proposed wells.

Drawdown Estimate	GWIC ID 324678
Total Depth at Bottom of Perforated Interval (ft btc)[1]	102.0
Pre-Test Static Water Level (ft btc)	6.01
Available Drawdown Above Bottom of Perforations(ft)	96.0
Drawdown & Yield Test Observed Drawdown (ft)	2.91
Modeled Drawdown Using Average Test Rate (ft)	0.19
Well Efficiency (%)	6.5
Predicted Theoretical Maximum Drawdown from assumed monthly pumping schedule (ft)	0.24
Predicted Drawdown with Well Loss (ft)	3.68
Interference Drawdown (ft)	0.0
Total Drawdown (ft)	3.68
Remaining Available Water Column (ft)	**92.3**

[1]The total well depth measuring point (bgs) was adjusted to the top of well casing based on a 2.0 ft well casing stickup reported on the well log. 2.0 ft was added.

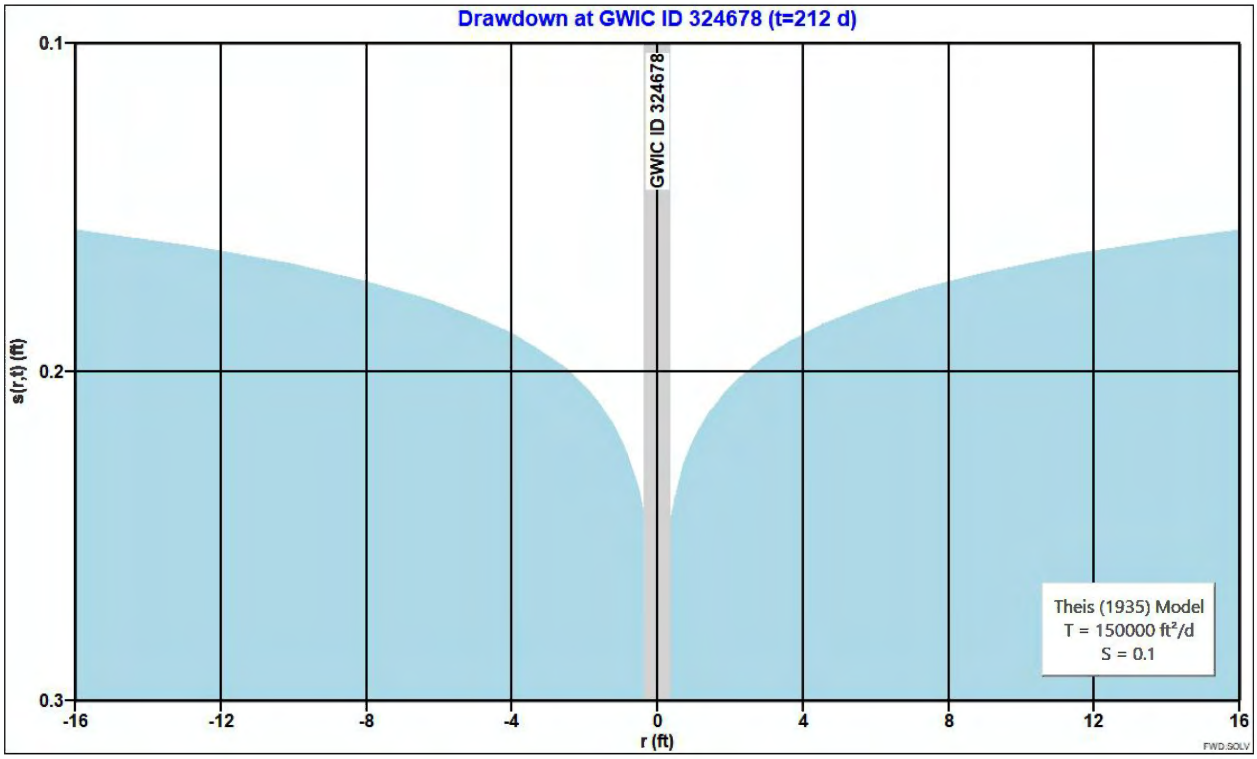

Figure 3: Theis (1935) radial plot of the theoretical drawdown at the end of the first July of the assumed monthly pumping schedule for GWIC ID 324678.

7.0 Physical Availability Analysis

An evaluation of groundwater availability in the source aquifer for the purpose of evaluating physical and legal availability was done by calculating groundwater flux through a zone of influence (ZOI) corresponding to the 0.01-foot drawdown contour. The 0.01-foot drawdown contour was modeled in FWD:SOLV (HydroSOLVE INC., 2024) using the modeling inputs found in Section 5 of this report and the following pumping schedule and boundaries:

- Constant pumping rate of 68.1 gpm April 15 – October 15 for GWIC ID 324678, which is a normalized rate derived from the requested volume of 55.4 AF and period of diversion.
- Constant head boundary 4,209 ft south of GWIC ID 324678 to represent the center point of the Clark Fork River.

As identified in **Figure 4**, the 0.01-foot drawdown extends 4,617 ft from GWIC ID 324678. The direction of groundwater flow is predominantly to the southwest and west (LaFave, 2006), as such the width of the ZOI that is perpendicular to groundwater flow equals 9,234 ft. **Appendix A** lists the 321 groundwater rights in the Missoula Valley Aquifer that need to be evaluated as a legal demand. The calculation for groundwater flux (Q) through the delineated area is given by Eq. 2 and is 5,540,400 ft^3/day or 46,421 AF/year:

$$Q = Twi \qquad \textbf{Eq. 2}$$

where:
T = Transmissivity = 150,000 ft^2/day
W = Width of Zone of Influence = 9,234 ft
i = Groundwater Gradient (LaFave, 2006, potentiometric surface map) = 0.004 ft/ft.

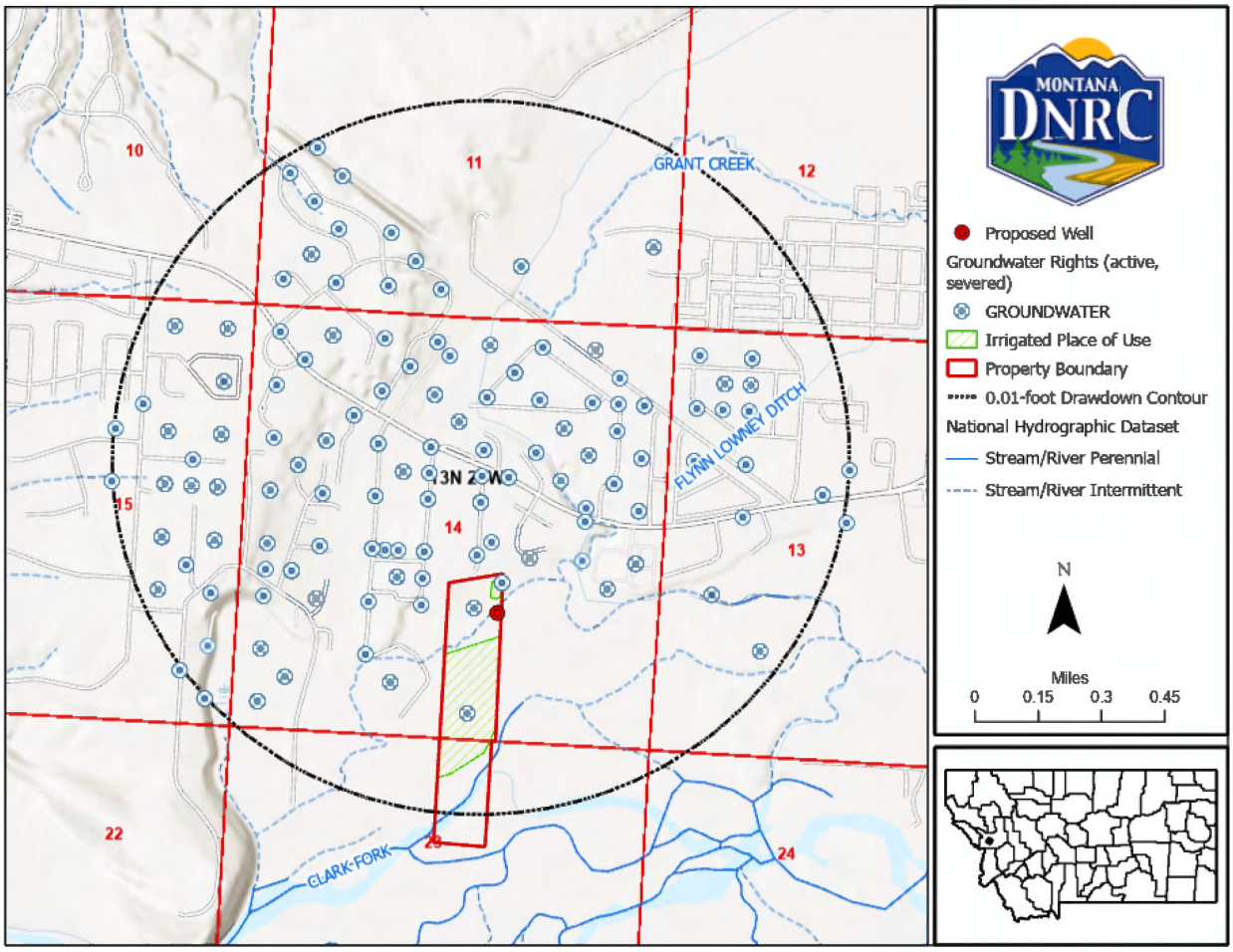

Figure 4: Existing groundwater rights within the 0.01-foot drawdown contour for Application No. 76M 30164554.

8.0 Adverse Effect Analysis

Using the Applicant's proposed pumping schedule and associated annual volume, potential impacts to existing water rights is evaluated by modeling drawdown in nearby wells and net depletions to surface water(s).

8.1 Groundwater - Drawdown in Existing Wells

The drawdown in existing wells was modeled in FWD:SOLV (HydroSOLVE INC., 2024) using the modeling inputs found in Section 5 of this report and following pumping schedule and boundaries.

- The monthly pumping schedule for GWIC ID 324678 as identified in column 4 of **Table 4** for a period of five years.
- Constant head boundary 4,209 ft south of GWIC ID 324678 to represent the center point of the Clark Fork River.

The drawdown is the largest at the end of July of the fifth year using the proposed pumping schedule. As identified in **Figure 5,** the maximum modeled drawdown at GWIC ID 324678 is 0.23 ft at the end of July of the fifth year. As such zero water rights are predicted to experience drawdown equal to or greater than one foot.

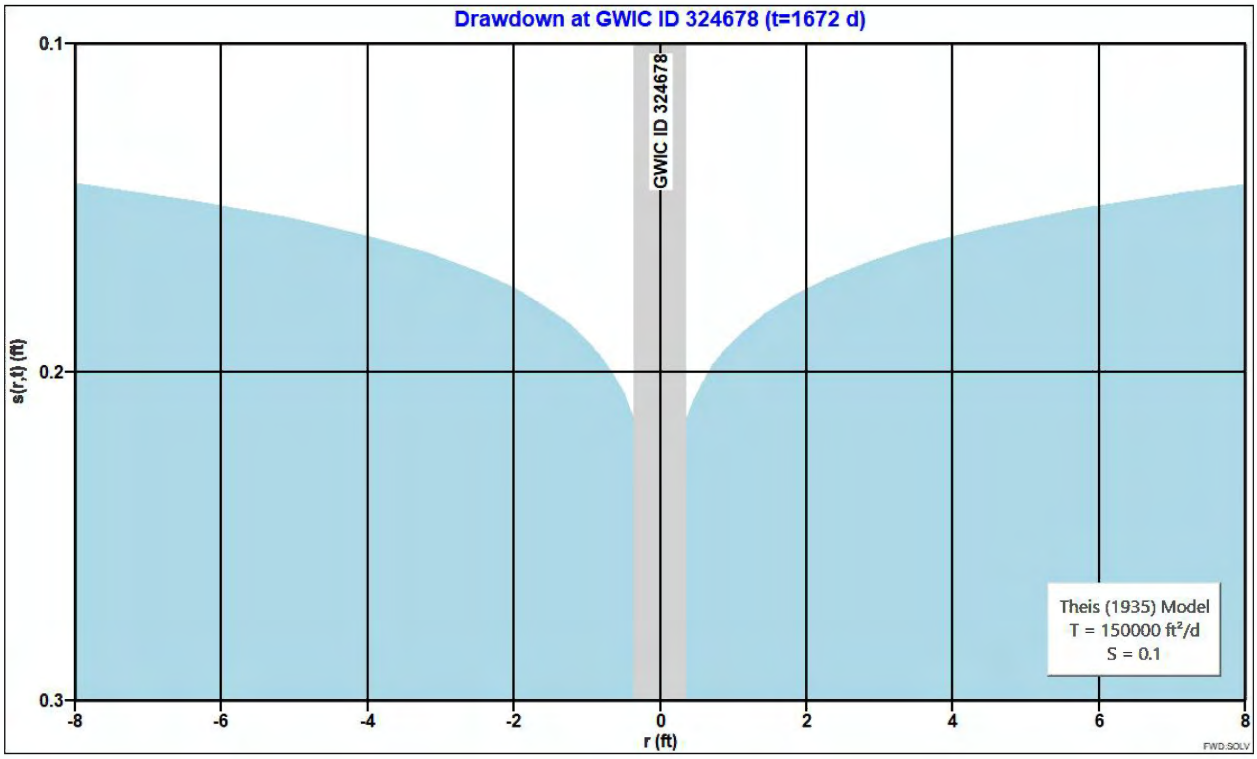

Figure 5: Theis (1935) radial plot at the end of the fifth July of the assumed monthly pumping schedule for GWIC ID 324678.

8.2 Surface Water - Net Depletion

Pursuant to *Montana Trout Unlimited v. DNRC*, 2006 MT 72, 331 Mont. 483, 133 P.3d 224, the DNRC recognizes the connection between surface water and groundwater, and the effect of pre-stream capture and induced infiltration on surface waters.

Net depletions to surface water depend on propagation of drawdown to areas of the aquifer from which water can be captured. Captured water consists of two possible sources – a reduction in the natural discharge (outflow) rate of groundwater from the aquifer (pre-stream capture) or an increase in the natural/artificial recharge (inflow) rate to the aquifer (e.g. induced infiltration). Two important assumptions are made when evaluating net depletions: first, the stream and underlying aquifer remain hydraulically connected by a continuous saturated zone, and second, the stream does not become dry. In addition, net depletion is not a function of groundwater flow rate or direction (Theis, 1938; Leake, 2011) and drawdown from pumping can propagate through the entire thickness of the confining layer to overlying aquifers or surface waters (Konikow and Neuzil, 2007).

As such, net depletions are identified for hydraulically connected surface water sources, not including ditches or ephemeral streams. Net depletion is equal to consumption for a proposed groundwater use and is described as the calculated volume, rate, timing, and location of reductions to surface water that are offset by return flows (non-consumed water). Net depletion is evaluated by 1) quantifying the consumed volume associated with the proposed use; 2) identifying hydraulically connected surface waters; and 3) calculating the monthly rate and timing of net depletions to affected surface water(s).

1. Consumed Volume

Consumed groundwater does not return to the source aquifer. Consumed volume depends on the proposed use and its associated percentage of known consumption. Depletion is assumed to be equivalent to consumption on an annual basis unless return flows do not accrete to the potentially affected surface water.

Monthly consumption for irrigation, not including turf grass, can be calculated using ARM 36.12.115 irrigation standards and associated efficiency values or the net irrigation requirement (dry year 80% chance) calculated using the USDA Natural Resources Conservation Service (NRCS) IWR program with inputs consistent with DNRC consumptive use rules in ARM 36.12.1902. Monthly consumption for irrigation of turf grass (lawns) is calculated using either a minimum efficiency value of 70% and ARM 36.12.115 lawn and garden standards or the net irrigation requirement from IWR with inputs consistent with DNRC (2010) Consumptive Use Methodology for turf grass.

Consumption for other purposes are listed in **Table 6** and are based on the results of studies by Kimsey and Flood (1987), Vanslyke and Simpson (1974), Paul, Poeter, and Laws (2007), DNRC (2018), wastewater treatment method, operation of systems, or DNRC policy. Net evaporation is calculated using gridded monthly net evaporation values and methodologies associated with DNRC (2023).

Table 6: Percent consumption by purpose.

Purpose	Method of treatment/Use	Consumed
Domestic/Municipal*/Commercial	Individual drain fields	10%
Domestic/Municipal*/Commercial	Central treatment facility with minimal consumption	5%
Domestic/Municipal*/Commercial	Evaporation basin or land application	100%
Municipal Use for Municipality	Variable	100%
Water Marketing/Agriculture Spraying/Stock Water/some Industrial Uses	Variable	100%
Commercial/Industrial	Aggregate Washing – construction standard for moisture allowed in the finished aggregate product.	5%
Commercial	Snow Making – depends on time of day, machine, weather at time of operation, etc.	10-30%
Fisheries, Recreation, Storage for Irrigation	Net evaporation off reservoir surface, gridded monthly net evaporation values and methodologies	AF/acre

**Municipal use for a non-municipality, such as a Water District.*

WSB Findings

For the subject application, the proposed use is irrigation. Following DNRC standards in ARM 36.12.115(2)(e) for 70% efficient sprinkler irrigation in Climatic Area III the Applicant requested 55.4 AF for 23 acres. Assuming a 70% efficiency the total consumed volume is 38.8 AF (**Table 1**).

2. Hydraulically Connected Surface Water(s)

Potentially affected surface waters in a net depletion evaluation are identified by their hydraulic connection, both direct and indirect, to the source aquifer of a proposed groundwater diversion. Hydraulic connection depends on the depth to groundwater beneath the beds of surface waters, connection between deep and overlying shallow aquifers, vertical gradients, and can vary along a reach and with time of year.

Procedures for evaluating hydraulic connection and identifying one or more potentially affected surface water(s) for a proposed well in an unconfined/confined aquifer or regional bedrock aquifer can be found in DNRC (2018) and DNRC (2019), respectively. Net depletion is apportioned between multiple potentially affected surface waters generally following procedures described in Section 3.2 of a guidance document developed by the Province of British Columbia (2016) for determining the effect of groundwater diversion on specific streams.

Following protocols in DNRC (2018), **Table 7** identifies published information used to assess hydraulically connected surface water(s). Not all data may be available for each project and is noted as "NA" when that occurs.

Table 7: Published information used to identify hydraulically connected surface water(s). See **Figure 6** for location of NHD, GWIC wells, and soil survey data (NA = not available)

Data Source	Surface Water Source	Surface Water Source
	Grant Creek	Clark Fork River
USGS National Hydrographic Dataset (NHD)[1]	Intermittent	Perennial
USGS PROSPER Dataset[2]	No*	Yes
GWIC wells (< 1,000 ft from surface waters, < 50 ft deep, < 10 ft swl from elevation of streambed (DNRC, 2018))[3]	No	Yes
Published Water Table Maps, Publications, Previous Water Rights.	LaFave (2006)	
Gridded National Soil Survey Geographic Database[4]	Hydric conditions mapped along small length of reach	Hydric conditions mapped along majority of reach
Aerial imagery	Dry and wet channel segments (NAIP, 2013-2023)	Wet channel (NAIP, 2013-2023)
Affidavits, photographs, etc.	NA	

[1] Review NHD to identify perennial, intermittent, and ephemeral classifications for surface water sources most proximal to the proposed diversion(s). North of I-90 Grant Creek is considered perennial, near project site intermittent.

[2] USGS PROSPER probability of streamflow permanence (50 percent or greater chance of streamflow). *Grant Creek near project site is mapped as 0.52 perennial with error bars overlapping 0.50, indicating high probability of classification error.

[3] Per DNRC (2018) hydraulic connection of individual stream reaches to ground water is evaluated by comparing streambed elevations to static ground water elevations measured in MBMG GWIC wells less than 50 ft deep and within 1,000 ft of surface water or from published water table maps. Surface water within that area is considered hydraulically connected to the unconfined aquifer if static ground water elevations are above or within 10 ft of the elevation of the stream bed.

[4] Gridded National Soil Survey Geographic Database to identify hydric soils or shallow water tables near surface water sources.

Additional Hydraulic Connection Information

Permit Application Nos. 76M 30019449 and 76M 30023166 state there is an unsaturated zone between Grant Creek and Missoula Valley Aquifer water table as Grant Creek flows onto the valley floor sediments. The previous permits and a review of well logs on the valley margin near Grant Creek show a thick layer of fine-grained deposits. This evidence indicates that Grant Creek is hydraulically disconnected from the Missoula Valley Aquifer.

Evidence supporting the Clark Fork River as hydraulically connected to the Missoula Valley Aquifer from Clark (1986) and Woessner (1988) show that the river incises into the alluvium. Further, Clark (1986) indicates that the Clark Fork River loses water to the Missoula Valley

Aquifer as it flows out of Hellgate Canyon in the east and then gains water from the alluvium at the western edge of the Missoula Valley.

WSB Findings

Based on the review of the published information in **Table 7**, the source aquifer is hydraulically connected to the Clark Fork River, a perennial surface water source and not connected to Grant Creek. The Clark Fork River is considered hydraulically connected to the Missoula Valley Aquifer starting at the northern edge of the SWNE of Section 23, Range 13 North, Township 20 West (**Figure 6**).

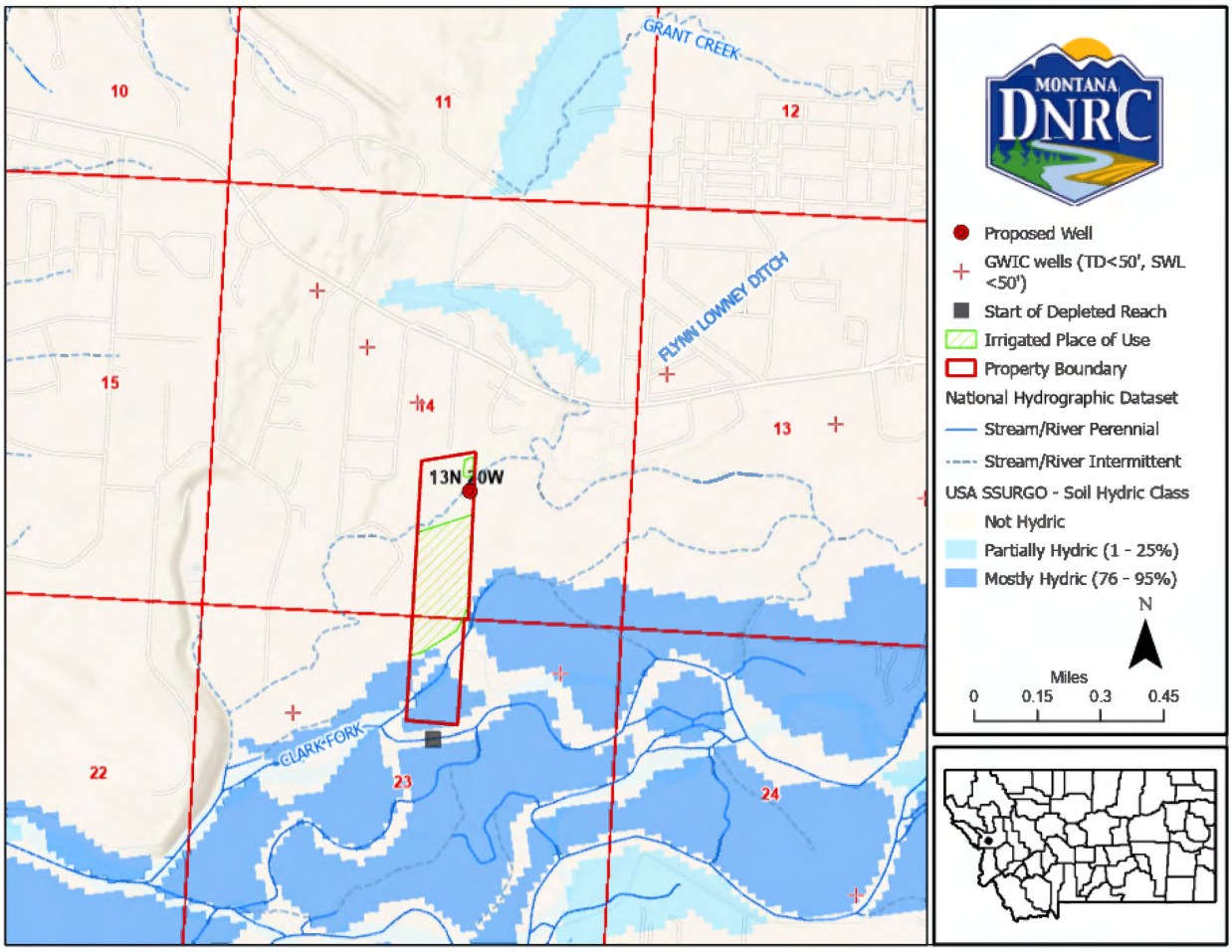

Figure 6: Information used to evaluate hydraulic connectivity and starting point of the depleted reach for Permit Application No.76M 30164554.

3. Rate and Timing of Depletions

Evaluations of the rate and timing of depletions caused by pumping are based on the basic concept that groundwater pumping eventually is offset by an equivalent increase in recharge or decrease in discharge (Theis, 1940; Leake et al., 2008), a process defined as capture by Lohman (1972). Capture occurs as drawdown propagates to surface water and areas of phreatophyte vegetation

(areas of groundwater discharge) that takes water directly from groundwater. In the absence of credible evidence to the contrary, capture of ET by phreatophytes is neglected and net depletion is assumed to equal total capture. This assumption is justified because published estimates for conditions common in Montana alluvial valleys indicate capture of ET generally is less than 10 percent of total capture (Xunhong, 2006). Capture of ET in ephemeral drainages may be significant and will be evaluated on an application-by-application basis.

The rate and timing of net depletion caused by pumping may be modeled using a variety of analytical and numerical models selected to fit site-specific conditions and needs. Simple models including the Alluvial Water Accounting System (AWAS), the Well Pumping Depletion Model (WPDM) or FWD:SOLV (HydroSOLVE, 2024) typically are used by DNRC to model depletions to one source with simple aquifer boundaries. Adjustments may be made for more complex conditions or multiple sources using methods like those described by Contor (2011), analytical models by Hunt (2003) and Butler et al. (2001) or a superposition numerical groundwater flow model.

Modeling may not be necessary in some situations such as where a proposed use is constant year-round, the source aquifer is confined, or the distance to potentially affected stream reaches is greater than one mile. Modeling of net depletions can be simplified if the proposed place of use is located the same relative distance from the potentially affected surface water as the proposed wells and all non-consumed water infiltrates the source aquifer and returns to the potentially affected surface water as return flows. Under those simplifying assumptions, net depletion can be modeled based on withdrawal of the monthly consumed amounts. Otherwise, net depletion by the full withdrawals and return flows need to be modeled separately with net depletion calculated as depletion minus return flows.

Net depletion by pumping in the source aquifer primarily occurs through propagation of drawdown through the unconfined aquifer to the potentially affected reach of the Clark Fork River. This process is modeled in FWD:SOLV (HydroSOLVE, 2024) using the modeling inputs found in Section 5 of this report and following pumping schedule and boundaries:

- Theis (1941)/Glover and Balmer (1954) solution for unconfined aquifer and fully penetrating stream.
- The monthly consumed volume schedule for GWIC ID 324678 as identified in **Table 1** modeled for 100 years.
- Stream boundary 4,209 ft south of GWIC ID 324678 to represent the center point of the Clark Fork River (**Figure 7**).

The solution and plan view of modeling inputs is identified in **Figure 7.** The timing and rate of net depletion to the Clark Fork River can be found in **Table 1.**

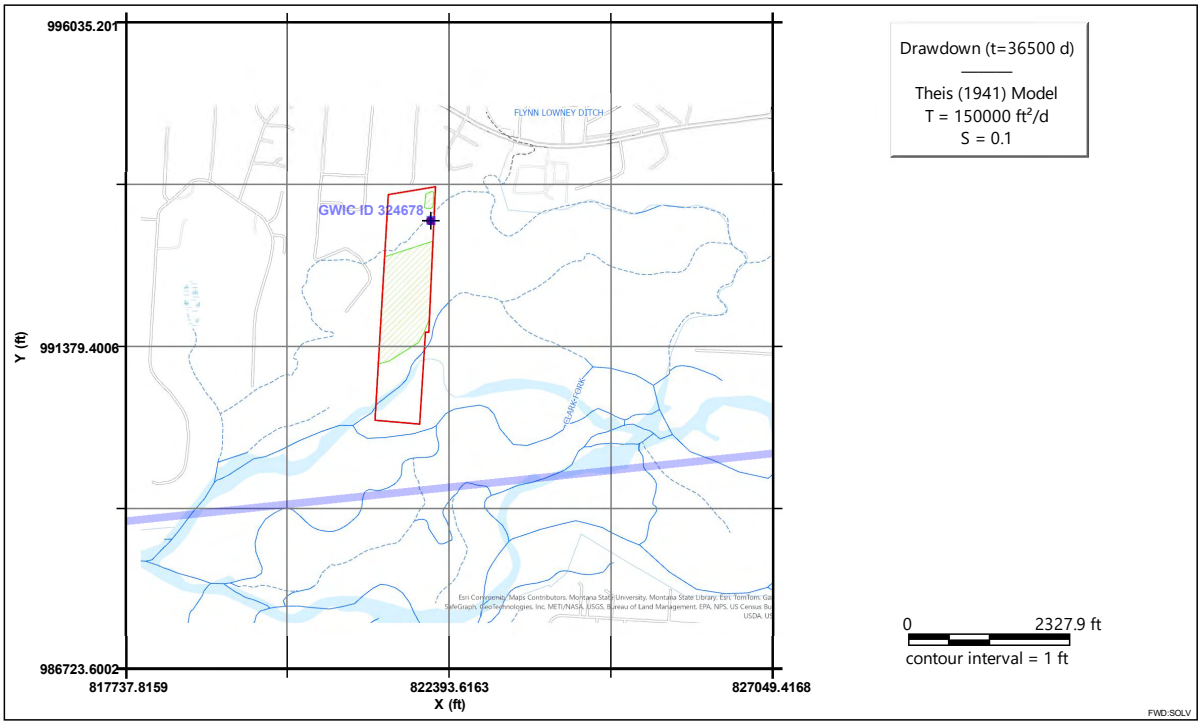

Figure 7: Clark Fork River**, s**tream boundary (light blue line) and pumping well (GWIC ID 324678) for modeling net depletions to hydraulically connected surface waters in FWD:SOLV (HydroSOLVE, 2024).

Review

This document has been reviewed on 4/24/2025 in accordance with Category 7 of DNRC's Water Sciences Bureau Minimum Standards of Review, Version 2, February 2024.

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Appendix A: Groundwater Rights within Area of Potential Impact

WRNUMBER	WRTYPE	ALL_OWNERS
76M 96913 00	PROVISIONAL PERMIT	AX MHC KATOONAH LODGES LLC
76M 215134 00	STATEMENT OF CLAIM	GREENFIELD PROPERTIES LLC
76M 30008993	PROVISIONAL PERMIT	W EDWIN STAHL LLC
76M 45452 00	GROUND WATER CERTIFICATE	REED C PORTER; TAMMY PORTER
76M 20881 00	PROVISIONAL PERMIT	MISSOULA COUNTY ATTORNEYS OFFICE
76M 123877 00	STATEMENT OF CLAIM	OLD HELLGATE VILLAGE, INC
76M 62564 00	EXEMPT RIGHT	ROBERT G DAHL; BETTY I LA BELLE
76M 16467 00	GROUND WATER CERTIFICATE	JOHN WESTER
76M 30153196	PROVISIONAL PERMIT	EMOE NET INC
76M 22803 00	GROUND WATER CERTIFICATE	MEGHAN BABBITT; OBEDIAH BABBITT
76M 16844 00	GROUND WATER CERTIFICATE	RANDY S ROSENQUIST; ROBIN R ROSENQUIST; WORKEES LLC
76M 57802 00	GROUND WATER CERTIFICATE	JAMES F MCCALLUM
76M 82182 00	PROVISIONAL PERMIT	ROBERT G DAHL; BETTY I LA BELLE
76M 70438 00	GROUND WATER CERTIFICATE	CLAUDINE M SHELDEN; JAMES P SHELDEN
76M 22506 00	GROUND WATER CERTIFICATE	BRANDON PETERSON
76M 47093 00	GROUND WATER CERTIFICATE	JOYCE J LOOMIS; MICHAEL E LOOMIS
76M 23578 00	GROUND WATER CERTIFICATE	MARGARET BAACK; MATTHEW BAACK
76M 14030 00	GROUND WATER CERTIFICATE	COWART, GILBERT & SANDRA LIVING TRUST 7/14/23
76M 62511 00	GROUND WATER CERTIFICATE	BOBBI BEARD; MARK J BRADY
76M 82084 00	GROUND WATER CERTIFICATE	SEAN N GARNER; WENDY T GARNER
76M 151537 00	STATEMENT OF CLAIM	JOSEPH HEITT; ESTHER P MCLATCHY; PATRICK H MCLATCHY; SONIA SHEARER
76M 95964 00	GROUND WATER CERTIFICATE	LANGE STEWART FAMILY TRUST
76M 30001001	GROUND WATER CERTIFICATE	ANDREE A VAN NICE; DONALD W VAN NICE
76M 30104224	GROUND WATER CERTIFICATE	KRIS SCHULTE
76M 30163356	GROUND WATER CERTIFICATE	W EDWIN STAHL LLC
76M 100940 00	GROUND WATER CERTIFICATE	ROBERT N SKOGLEY
76M 30069580	GROUND WATER CERTIFICATE	C FREDRICK FREY
76M 82059 00	GROUND WATER CERTIFICATE	ANNE BROOKS; CURTIS M BROOKS
76M 81779 00	GROUND WATER CERTIFICATE	JESSICA M ROUSE; SCOTT W ROUSE
76M 30102999	GROUND WATER CERTIFICATE	BARRY MISEVIC; WENDY MISEVIC
76M 112318 00	GROUND WATER CERTIFICATE	BRENDA M COGAR
76M 69614 00	GROUND WATER CERTIFICATE	DEBRA S BRAULT; KELLY J BRAULT
76M 85261 00	GROUND WATER CERTIFICATE	ALEXANDRIA HANSON
76M 25662 00	GROUND WATER CERTIFICATE	CATHERINE C KIRGAN; STEVEN C KIRGAN
76M 48136 00	GROUND WATER CERTIFICATE	JENNY L WARREN; MARK WARREN
76M 94973 00	GROUND WATER CERTIFICATE	KERRY J KELLY
76M 117405 00	GROUND WATER CERTIFICATE	JENNIFER BERNHART; JOSHUA R BERNHART
76M 80994 00	GROUND WATER CERTIFICATE	LAUREN B ERICKSON; LEE T ERICKSON

76M 81441 00	GROUND WATER CERTIFICATE	PETER A BORN-ROPP; VICKIE BORN-ROPP
76M 94201 00	GROUND WATER CERTIFICATE	DENNIS W GREENO
76M 84545 00	GROUND WATER CERTIFICATE	CHRISTINE HOVDEY; DALE R HOVDEY
76M 83749 00	GROUND WATER CERTIFICATE	RICK D KAMURA
76M 81735 00	GROUND WATER CERTIFICATE	KEVIN P LAMEY; PAULA F LAMEY
76M 92153 00	GROUND WATER CERTIFICATE	KIM BENNETT; WILLIAM D BENNETT
76M 30150621	GROUND WATER CERTIFICATE	LOUIS VAN BLARIGAN
76M 109634 00	GROUND WATER CERTIFICATE	KATHRYN R DOUCETTE
76M 94256 00	GROUND WATER CERTIFICATE	GARD, NORMAN C & CAROLYN J JOINT REV TRUST 7/27/16
76M 86771 00	GROUND WATER CERTIFICATE	SUSAN MATHIS
76M 84580 00	GROUND WATER CERTIFICATE	ANGELA N JONES; KEVIN C JONES
76M 100496 00	GROUND WATER CERTIFICATE	CAROL KNIEPER; KENNETH KNIEPER
76M 83621 00	GROUND WATER CERTIFICATE	JOEL T WOODRUFF
76M 93411 00	GROUND WATER CERTIFICATE	JACK A DARK; LOREE E DARK
76M 98054 00	GROUND WATER CERTIFICATE	DANIEL BROWDER; PHYLLIS E BROWDER
76M 82812 00	GROUND WATER CERTIFICATE	DENNIS GEORGE; RICK GEORGE
76M 93260 00	GROUND WATER CERTIFICATE	LINDA K GUTHRIE; VINTON R GUTHRIE
76M 85859 00	GROUND WATER CERTIFICATE	JAYLA FOWKE; JOSHUA A FOWKE
76M 30062778	GROUND WATER CERTIFICATE	KENT E MCDERMOTT; LORA K YATES
76M 81397 00	GROUND WATER CERTIFICATE	RODNEY HARRIS; SHAWN HARRIS
76M 62585 00	GROUND WATER CERTIFICATE	JOHN E NYBERG; MYRNA M NYBERG
76M 87738 00	GROUND WATER CERTIFICATE	PATRICIA A BOWMAN; ROBERT R BOWMAN
76M 52101 00	GROUND WATER CERTIFICATE	CAROLINE B ANDERSON; JAMES R ANDERSON
76M 96982 00	GROUND WATER CERTIFICATE	JASON LONG
76M 103898 00	GROUND WATER CERTIFICATE	FUNK FAMILY TRUST
76M 83671 00	GROUND WATER CERTIFICATE	KATHERINE ONEILL; JACK WOLDTVEDT
76M 89381 00	GROUND WATER CERTIFICATE	RICHARD A BOOTH
76M 94176 00	GROUND WATER CERTIFICATE	LEROY J OLESON; PEGGY A OLESON
76M 89471 00	GROUND WATER CERTIFICATE	LEANNA GREEN
76M 80936 00	GROUND WATER CERTIFICATE	JAMES D SCHNEITER; PAMELA L SCHNEITER
76M 75743 00	GROUND WATER CERTIFICATE	DAWN FULKERSON; JAMES A FULKERSON
76M 82062 00	GROUND WATER CERTIFICATE	GREG MALONE; JILL MALONE
76M 108679 00	GROUND WATER CERTIFICATE	LINDA JO MILLER
76M 82107 00	GROUND WATER CERTIFICATE	ARNOLD E KIMMEL; DOUGLAS R KIMMEL; EDDIE H KIMMEL
76M 94236 00	GROUND WATER CERTIFICATE	FRANCES A SCHMIDT
76M 30000015	GROUND WATER CERTIFICATE	LISA R HELEAN; MICHAEL J HELEAN
76H 104150 00	GROUND WATER CERTIFICATE	MARK D BANCALE; SUZANNE J BANCALE
76M 87790 00	GROUND WATER CERTIFICATE	LOPEZ LIVING TRUST
76M 87748 00	GROUND WATER CERTIFICATE	ALLAN D FREY
76M 30125857	GROUND WATER CERTIFICATE	JOHN J ERICKSON

76M 30151747	GROUND WATER CERTIFICATE	ROBERT W MING; CAROL D NELSON
76M 30042658	GROUND WATER CERTIFICATE	CHRISTINA HORTON; SHAWN HORTON
76M 100374 00	GROUND WATER CERTIFICATE	YOUNGBAUER FAMILY TRUST
76M 99697 00	GROUND WATER CERTIFICATE	JOEL J GAERTIG; STEPHANIE A GAERTIG
76M 30135079	GROUND WATER CERTIFICATE	ERIC S POWELL; JUDITH N POWELL
76M 93369 00	GROUND WATER CERTIFICATE	SCOTT A ESSERT; LAURA L HENNING
76M 30051609	GROUND WATER CERTIFICATE	CORAL E BECK; KEVIN D BROWN
76M 53925 00	EXEMPT RIGHT	ALFRED S TULLY; ALICE M TULLY
76M 108609 00	GROUND WATER CERTIFICATE	LARA A PORRINI; NICK PORRINI
76M 30001671	GROUND WATER CERTIFICATE	STACY L JOHNSON
76M 30069843	GROUND WATER CERTIFICATE	JONATHAN GREEN; KRISTIN GREEN
76M 30149149	GROUND WATER CERTIFICATE	HOLLY M GRATTON; SAMUEL GRATTON
76M 93254 00	GROUND WATER CERTIFICATE	MOLLIE A AILENE; ZACH B PEO
76M 98034 00	GROUND WATER CERTIFICATE	MICHELLE CLEMENT
76M 88539 00	GROUND WATER CERTIFICATE	SARA K SHELDON
76M 105226 00	GROUND WATER CERTIFICATE	BARBARA M FOSSEN
76M 89379 00	GROUND WATER CERTIFICATE	CONNIE FRAZIER; DOUG FRAZIER
76M 70306 00	GROUND WATER CERTIFICATE	MARION DAVIDSON; WILLIAM L DAVIDSON
76M 102460 00	GROUND WATER CERTIFICATE	CHAD F BOWKER; JANET M BOWKER
76M 98487 00	GROUND WATER CERTIFICATE	ANDREA HREN; LUCAS HREN
76M 100393 00	GROUND WATER CERTIFICATE	DARCY A TRENT; WILLIAM A TRENT
76M 73882 00	GROUND WATER CERTIFICATE	DEBRA GARRIN; LARRY GARRIN
76M 72200 00	GROUND WATER CERTIFICATE	JEFRFREY R CROONENBERGHS
76M 74782 00	GROUND WATER CERTIFICATE	JAMES W BURFEIND; LINDA I BURFEIND
76M 87723 00	GROUND WATER CERTIFICATE	HUMPHREYS REVOCABLE LIVING TRUST 3/18/04
76M 30160612	GROUND WATER CERTIFICATE	JEFF R SMITH
76M 30162300	GROUND WATER CERTIFICATE	NANCY ARNOLD; STEPHEN LARANCE
76M 30135067	STATEMENT OF CLAIM	KATHY S LEE
76M 93265 00	GROUND WATER CERTIFICATE	JORGEN D LAURSEN
76M 30152013	GROUND WATER CERTIFICATE	YOUNGGREN, RODNEY & JULIE FAMILY TRUST
76M 30112636	GROUND WATER CERTIFICATE	JENNIFER E MUSEE; JOEL M MUSEE
76M 86715 00	GROUND WATER CERTIFICATE	ANN O CARVER; CLINTON O CARVER
76M 30063109	GROUND WATER CERTIFICATE	JEREMY HARGIS; KAREN L HARGIS
76M 30121562	GROUND WATER CERTIFICATE	EILEEN BROWN; HAYWOOD BROWN
76M 30159422	GROUND WATER CERTIFICATE	ADRIAN AYERS; ANN SELTZER
76M 30136072	GROUND WATER CERTIFICATE	HANH CHAU; MINH HUYNH
76M 86772 00	GROUND WATER CERTIFICATE	KENNETH J AULT
76M 30108402	GROUND WATER CERTIFICATE	BRANDON D BRETZ
76M 30104146	GROUND WATER CERTIFICATE	LAURA KEATING; PHILIP R KEATING
76M 30070080	GROUND WATER CERTIFICATE	REBEKAH J BLEECKER; STEVEN M BLEECKER
76M 108573 00	GROUND WATER CERTIFICATE	LARRY LACKNER; LISA M LACKNER

76M 30150508	GROUND WATER CERTIFICATE	FRANK J DINENNA; JULIE A WULF
76M 41233 00	GROUND WATER CERTIFICATE	JESSE LAFLESCH
76M 63643 00	GROUND WATER CERTIFICATE	SHAWN MORTENSEN
76M 103723 00	GROUND WATER CERTIFICATE	BECKY HARRIS; JOHN J HARRIS; KAYCEE G HARRIS; KELLY HARRIS; MICHAEL G HARRIS; WINDI G HARRIS UMLAND
76M 30108768	GROUND WATER CERTIFICATE	YER THAO; MAI SHOUA VANG
76M 95012 00	GROUND WATER CERTIFICATE	THOMAS R COMBS
76M 30072092	GROUND WATER CERTIFICATE	KORY J GARMAN; MELISSA R GARMAN
76M 30114250	GROUND WATER CERTIFICATE	THERESE R ALBEE
76M 93303 00	GROUND WATER CERTIFICATE	SCOTT W OCHSNER; SELENA V OCHSNER
76M 30049454	GROUND WATER CERTIFICATE	JAMIE L SPARR; MICHAEL J SPARR
76M 102376 00	GROUND WATER CERTIFICATE	JULIE MCMAHON; WILLIAM A STAVERS
76M 92198 00	GROUND WATER CERTIFICATE	OSCAR ALLESTAD; SHEILA ALLESTAD
76M 90475 00	GROUND WATER CERTIFICATE	APRYL A LANGE; SHANNON L LANGE
76M 91271 00	GROUND WATER CERTIFICATE	KEELY M MARKUSON; RYAN L MARKUSON
76M 94266 00	GROUND WATER CERTIFICATE	RYSON G SPARACINO
76M 91209 00	GROUND WATER CERTIFICATE	BECKY WALTERS; BRUCE WALTERS
76M 99613 00	GROUND WATER CERTIFICATE	COLLIN R JONES; TAWNI G JONES
76M 100888 00	GROUND WATER CERTIFICATE	ERIC HAMER; SARINA J HAMER
76M 83699 00	GROUND WATER CERTIFICATE	DENNIS L CHAPEL; JEANNETTE M CHAPEL
76M 110681 00	GROUND WATER CERTIFICATE	DOUGLAS ERNST; YIZHOU ERNST
76M 107033 00	GROUND WATER CERTIFICATE	CORY S SOVA; SHERRY L SOVA
76M 87765 00	GROUND WATER CERTIFICATE	LARRY T GARRISON
76M 86750 00	GROUND WATER CERTIFICATE	CAROL J STOVALL; DALE E STOVALL
76M 30104028	GROUND WATER CERTIFICATE	MORGAN MARTIN
76M 103404 00	GROUND WATER CERTIFICATE	DARRYL I JUDEN
76M 87824 00	EXEMPT RIGHT	OWINGS FAMILY TRUST
76M 30148758	GROUND WATER CERTIFICATE	ALI KELLY; MYLES KELLY
76M 30154821	GROUND WATER CERTIFICATE	SNEAD, IDA M REVOCABLE TRUST
76M 92154 00	GROUND WATER CERTIFICATE	KRYSTAL L GUILHEMOTONIA; SEBASTIEN M GUILHEMOTONIA
76M 67721 00	GROUND WATER CERTIFICATE	RICHARD A VARNER
76M 30109159	GROUND WATER CERTIFICATE	KEVIN C BANDY; KRISTI L BANDY
76M 89359 00	GROUND WATER CERTIFICATE	CRAIG STEVENS; KRISTIN STEVENS
76M 100433 00	GROUND WATER CERTIFICATE	JONATHAN CARL; MONICA CARL
76M 92110 00	GROUND WATER CERTIFICATE	LINDA E SWANSON; MATHEW E SWANSON
76M 87829 00	GROUND WATER CERTIFICATE	JANIS FONTAINE; SHAWN FONTAINE
76M 30070472	GROUND WATER CERTIFICATE	CASSANDRA MURPHY; JACOB MURPHY
76M 30117021	GROUND WATER CERTIFICATE	DREW MERTEN; MADELINE A MERTEN
76M 94230 00	GROUND WATER CERTIFICATE	CHRISTOPHER W ROBERTS; TERESA M ROBERTS

76M 30105180	GROUND WATER CERTIFICATE	CAROLYN UNDERWOOD; GERALD E UNDERWOOD
76M 30161281	GROUND WATER CERTIFICATE	BRANDON RIGONI; KATHRYN J RIGONI
76M 123876 00	STATEMENT OF CLAIM	OLD HELLGATE VILLAGE, INC
76M 30107040	GROUND WATER CERTIFICATE	LINDA REDFERN; SAM REDFERN
76M 87851 00	GROUND WATER CERTIFICATE	TIM A WITTMIER
76M 87717 00	GROUND WATER CERTIFICATE	SAUL MCMEEKIN; MEGAN TAYLOR
76M 94267 00	GROUND WATER CERTIFICATE	CANTU, OCTAVIO P REVOCABLE INTER-VIVOS TRUST
76M 83896 00	GROUND WATER CERTIFICATE	DEAN H MIKES
76M 30068626	GROUND WATER CERTIFICATE	JENNIFER L FRITZ
76M 30160812	GROUND WATER CERTIFICATE	NICOLE K HERMOSO; WESLEY Q THOMAS
76M 93289 00	GROUND WATER CERTIFICATE	CHARLES H RODGERS
76M 30159319	GROUND WATER CERTIFICATE	BAO LEE VANG; NOR JAR VANG
76M 95021 00	GROUND WATER CERTIFICATE	ERIK R HAMILTON
76M 93288 00	GROUND WATER CERTIFICATE	DONI L ULLAND; IAN M ULLAND
76M 95966 00	GROUND WATER CERTIFICATE	LUCY WEEDER
76M 30046702	GROUND WATER CERTIFICATE	MICHAEL VALAHU
76M 30124803	GROUND WATER CERTIFICATE	DURRANT, MICHAEL T REVOCABLE LIVING TRUST
76M 92159 00	GROUND WATER CERTIFICATE	CYNTHIA S CHESEMORE; JAMES R CHESEMORE; KAITLYNN H CHESEMORE
76M 30160735	GROUND WATER CERTIFICATE	CODY FREY; TIFFANY FREY
76M 30118271	GROUND WATER CERTIFICATE	WILLIAM M & LOIS M ST PETER REV LIV TRST 3/10/2025
76M 30063203	GROUND WATER CERTIFICATE	JEFFREY D SCHAFFER; TRACI J SCHAFFER
76M 30124718	GROUND WATER CERTIFICATE	GRETCHEN MORITZ; KARL J MORITZ
76M 62647 00	GROUND WATER CERTIFICATE	SUSAN M VUKE
76M 91359 00	GROUND WATER CERTIFICATE	CASEY MEIDINGER; JUSTIN MEIDINGER
76M 30046356	GROUND WATER CERTIFICATE	SHATTUCK FAMILY TRUST
76M 30001282	GROUND WATER CERTIFICATE	KELLUM FAMILY REVOCABLE TRUST DATED 9/26/2024
76M 97038 00	GROUND WATER CERTIFICATE	COLIN HILLIS; DALAYNA L HILLIS
76M 112996 00	GROUND WATER CERTIFICATE	HAROLD E PINKSTON
76M 30072660	GROUND WATER CERTIFICATE	ANN MCHUGH; JAMES MCHUGH
76M 100981 00	GROUND WATER CERTIFICATE	AUSTIN H OLSEN; KACY C OLSEN
76M 91381 00	GROUND WATER CERTIFICATE	HAROLD H POLAKOW
76M 98542 00	GROUND WATER CERTIFICATE	BRIAN L WALKER; LILIANA R WALKER
76M 102082 00	GROUND WATER CERTIFICATE	SCOTT PROVOST
76M 81426 00	GROUND WATER CERTIFICATE	JAMES M BEECHER; CHAD J HARBERD; KAYE A HARBERD
76M 87730 00	GROUND WATER CERTIFICATE	ERIK C RODIN
76M 114479 00	GROUND WATER CERTIFICATE	CARROL J KARLSGODT; GREGORY B KARLSGODT
76M 100439 00	GROUND WATER CERTIFICATE	DONALD C SCOTT

76M 95984 00	GROUND WATER CERTIFICATE	KATIE COTNER; KEVIN COTNER
76M 98501 00	GROUND WATER CERTIFICATE	PEGGY Z FRAME; RALPH A FRAME
76M 107372 00	GROUND WATER CERTIFICATE	TOM D PETERSON
76M 30045725	GROUND WATER CERTIFICATE	BRIAN J LIPPY; JENNIFER L LIPPY
76M 100446 00	GROUND WATER CERTIFICATE	MARVEL CARVER
76M 78471 00	GROUND WATER CERTIFICATE	BACKSTROM RAYMOND C & MARY T LIVING TRUST
76M 98472 00	GROUND WATER CERTIFICATE	CLIFFORD L WALKER
76M 98182 00	GROUND WATER CERTIFICATE	BRIAN BOURGEOIS
76M 30071618	GROUND WATER CERTIFICATE	ALICE BAUTZ; DALE BAUTZ
76M 100996 00	GROUND WATER CERTIFICATE	CAMI THOMPSON; REX THOMPSON
76M 89463 00	GROUND WATER CERTIFICATE	COLEY M JONES
76M 30045236	GROUND WATER CERTIFICATE	LONNIE MURPHY; NICOLE MURPHY
76M 110712 00	GROUND WATER CERTIFICATE	NATHAN HAMPSON; ERICA WESTLING
76M 100458 00	GROUND WATER CERTIFICATE	ALLAN B TIMS; LISA K TIMS
76M 26375 00	GROUND WATER CERTIFICATE	JON B CUSKER; PATRICIA J CUSKER
76M 19249 00	GROUND WATER CERTIFICATE	ALEKSEY A CHINIKAYLO; ERINA CHINIKAYLO; LYUBOV I CHINIKAYLO; YEVGENIY A CHINIKAYLO
76M 69623 00	GROUND WATER CERTIFICATE	DANI C MCLAUGHLIN; THOMAS H MCLAUGHLIN
76M 74810 00	GROUND WATER CERTIFICATE	AMBER BEAUDETTE; RANDY BEAUDETTE
76M 34371 00	GROUND WATER CERTIFICATE	ERIK D SKILLMAN; LESIA M SKILLMAN
76M 19248 00	GROUND WATER CERTIFICATE	CASTLE CREIGHTON; CARLIE GEHRMAN
76M 41667 00	EXEMPT RIGHT	NELLIE J BOONE; WILLIAM J BOONE
76M 49142 00	GROUND WATER CERTIFICATE	BENJAMIN M MINEO
76M 16413 00	GROUND WATER CERTIFICATE	ARLEN ARENDS; LISA ARENDS
76M 63655 00	GROUND WATER CERTIFICATE	CHARLES P WILSON; TRACY L WILSON
76M 19246 00	GROUND WATER CERTIFICATE	STACY L JOHNSON
76M 36557 00	GROUND WATER CERTIFICATE	FLYNN, KATHRYN R FAMILY LTD PARTNERSHIP
76M 28514 00	GROUND WATER CERTIFICATE	TIMOTHY M CRIDER
76M 19247 00	GROUND WATER CERTIFICATE	KIM D RIGGLEMAN
76M 67724 00	GROUND WATER CERTIFICATE	JOHN DRAKE PROPERTIES LLC
76M 24202 00	GROUND WATER CERTIFICATE	THOMAS C DZOMBA
76M 12849 00	GROUND WATER CERTIFICATE	ANTONY CROONENBERGHS
76M 15763 00	GROUND WATER CERTIFICATE	CHRISTINE M WATSON; DOUGLAS B WATSON
76M 23214 00	GROUND WATER CERTIFICATE	MEGAN A BUGONI; PETER T BUGONI
76M 43642 00	EXEMPT RIGHT	ALFRED S TULLY; ALICE M TULLY
76M 22529 00	GROUND WATER CERTIFICATE	JERRY D COVAULT
76M 23217 00	GROUND WATER CERTIFICATE	JOHN BORGIALLI
76M 11138 00	GROUND WATER CERTIFICATE	CASEY M BLACK; JENNIFER A BLACK
76M 17987 00	GROUND WATER CERTIFICATE	HANS J ANDERSEN
76M 40038 00	GROUND WATER CERTIFICATE	DALE R HANSON; JANET HANSON
76M 19245 00	GROUND WATER CERTIFICATE	MARIJANE THOMAS

76M 75237 00	GROUND WATER CERTIFICATE	DORETHA M LUMPRY; DUANE E LUMPRY
76M 57703 00	GROUND WATER CERTIFICATE	PAUL D WIMBERLY; PAULA WIMBERLY
76M 149677 00	STATEMENT OF CLAIM	SUSAN EDWARDS-MILLER; DAVID G MILLER
76M 30106260	GROUND WATER CERTIFICATE	SHANAHAN, TIFFANY M LIVING TRUST
76M 67710 00	GROUND WATER CERTIFICATE	SUNSET MEMORIAL CEMETARY AND FUNERAL HOME
76M 30154477	GROUND WATER CERTIFICATE	HEIDI L LEE; MICHAEL R LEE
76M 84639 00	GROUND WATER CERTIFICATE	MARTI A LEIBENGUTH
76M 91346 00	GROUND WATER CERTIFICATE	DAVID R SCOTT; GLENDA L SCOTT
76M 30159091	GROUND WATER CERTIFICATE	LAURA A HUNTER-MICHELS; JAMES K MICHELS
76M 30051379	GROUND WATER CERTIFICATE	KARI A CRONK; SHANE H CRONK
76M 30114171	GROUND WATER CERTIFICATE	JAMIE M SCHLIESMAN; JOSEPH R SCHLIESMAN
76M 80966 00	GROUND WATER CERTIFICATE	JASON J LOMAN; NATASHA L LOMAN
76M 30157855	GROUND WATER CERTIFICATE	ALEXA RAUSER; JADE RAUSER
76M 30052397	GROUND WATER CERTIFICATE	ALEXANDER W MOORE; SARAH MOORE
76M 30153214	GROUND WATER CERTIFICATE	JENNIFER A THOMPSON; ROBERT S THOMPSON
76M 30158235	GROUND WATER CERTIFICATE	SERGEY KIRICHENKO
76M 30111437	GROUND WATER CERTIFICATE	AISLING PROPERTIES LLC
76M 30162001	GROUND WATER CERTIFICATE	AMANDA CORSON; GERALD CORSON
76M 30070393	GROUND WATER CERTIFICATE	JENNIFER HURST
76M 30063697	GROUND WATER CERTIFICATE	CHARLES M NAU; PATRICIA M NAU
76M 78947 00	GROUND WATER CERTIFICATE	DONNA BOURKE
76M 30103105	GROUND WATER CERTIFICATE	RHONDA HARRIS; STACY L HARRIS
76M 30045956	GROUND WATER CERTIFICATE	ASHLEY I FINNERTY; STEVEN R FINNERTY
76M 30158223	GROUND WATER CERTIFICATE	LINDA L SCALLY
76M 30164610	GROUND WATER CERTIFICATE	JOHN A GOTTULA; LISA A GOTTULA
76M 30159753	GROUND WATER CERTIFICATE	DEBBIE S DUBE; ROBERT J DUBE
76M 75720 00	GROUND WATER CERTIFICATE	THOMAS A FONT
76M 82138 00	GROUND WATER CERTIFICATE	IRENE TANNER
76M 30094711	GROUND WATER CERTIFICATE	DOUGLAS B WATSON
76M 78974 00	GROUND WATER CERTIFICATE	MOUNTAIN VIEW BAPTIST CHURCH
76M 30121079	GROUND WATER CERTIFICATE	CYD HOBLITT
76M 74302 00	GROUND WATER CERTIFICATE	DARRELL S BECKWITH; JOETTE C BECKWITH
76M 30118733	GROUND WATER CERTIFICATE	RANDY S ROSENQUIST; ROBIN R ROSENQUIST
76M 30070184	GROUND WATER CERTIFICATE	JACQUELINE R CASELTON; NEIL J CASELTON
76M 30126084	GROUND WATER CERTIFICATE	JOSEPHINE P HORNE; SCOTT D HORNE
76M 105225 00	GROUND WATER CERTIFICATE	JARED BARNARD; JENNIFER BARNARD
76M 30158222	GROUND WATER CERTIFICATE	LINDA L SCALLY
76M 30019838	GROUND WATER CERTIFICATE	GENE BOSCHEE; BOSCHEE FAMILY TRUST 9 24 2014
76M 30020185	GROUND WATER CERTIFICATE	JENNIFER A WHITMIRE; KURT WHITMIRE

76M 149103 00	STATEMENT OF CLAIM	OLD HELLGATE VILLAGE, INC
76M 12573 00	GROUND WATER CERTIFICATE	BLACK, PATRICK & SUE LIVING TRUST
76M 30030201	GROUND WATER CERTIFICATE	WILLIAM BIGGS
76M 30030248	GROUND WATER CERTIFICATE	DEBRA JONES; PRESTON JONES
76M 30015373	GROUND WATER CERTIFICATE	CARI MENDENHALL; RODNEY MENDENHALL
76M 30011660	GROUND WATER CERTIFICATE	JAMES STANICAR; JENNIFER STANICAR
76M 30020046	GROUND WATER CERTIFICATE	BRENT G BYRAM
76M 30021302	GROUND WATER CERTIFICATE	COREY STONEFIELD; JESSICA STONEFIELD
76M 30018417	GROUND WATER CERTIFICATE	REGINA Y OLSON; TRACY R OLSON
76M 30024303	GROUND WATER CERTIFICATE	LILLIE M SMITH; PATRICIA J SMITH CUSKER; CYNTHIA A SMITH HEITMANN; BETTY I SMITH LABELLE; ADA M SMITH OSTEEN
76M 30014142	GROUND WATER CERTIFICATE	DAVID BORGONOVO; SYLVIA BORGONOVO
76M 30016974	GROUND WATER CERTIFICATE	JUSTIN AUCH; MEAGAN AUCH
76M 30011123	GROUND WATER CERTIFICATE	JEFFREY R KUCHEL
76M 598 00	GROUND WATER CERTIFICATE	OLD HELLGATE VILLAGE, INC
76M 30042087	GROUND WATER CERTIFICATE	DAVID R OLSON; KELLY R OLSON
76M 30019747	GROUND WATER CERTIFICATE	JUSTIN MEHLHOFF; TAMMY MEHLHOFF
76M 2555 00	GROUND WATER CERTIFICATE	FLORENCE O WOOD
76M 30012031	GROUND WATER CERTIFICATE	JEFFREY L BRANDT
76M 30010691	GROUND WATER CERTIFICATE	GEORGE THOMPSON
76M 30022704	GROUND WATER CERTIFICATE	JASMINE OLSON; TADD OLSON
76M 30011656	GROUND WATER CERTIFICATE	JOHN W THUNSTROM; LORRAINE THUNSTROM
76M 30019657	GROUND WATER CERTIFICATE	ELIZABETH H CRAWFORD; TAYLOR G CRAWFORD
76M 30006695	GROUND WATER CERTIFICATE	JAMIE L SPARR; MICHAEL J SPARR
76M 30007633	GROUND WATER CERTIFICATE	CHRISTOPHER J DOVE; KATE E PAPPE
76M 30024541	GROUND WATER CERTIFICATE	MARJORIE J SOLEM; STEPHEN J SOLEM
76M 30010000	GROUND WATER CERTIFICATE	KEVIN LUU; JOYCE NGUYEN
76M 30007509	GROUND WATER CERTIFICATE	SETH BOID; MAURA MALL
76M 30024553	GROUND WATER CERTIFICATE	ANDREW MICKELSON; SHERYL MICKELSON
76M 9809 00	GROUND WATER CERTIFICATE	KASEY SCHRIVER; MEAGAN Y SCHRIVER
76M 30006817	GROUND WATER CERTIFICATE	BRENDA J THOMAS; PERRY M THOMAS
76M 30012136	GROUND WATER CERTIFICATE	JUSTIN J FLUHARTY; LIANNE M FLUHARTY
76M 30011624	GROUND WATER CERTIFICATE	LISA A BISHOP
76M 30029163	GROUND WATER CERTIFICATE	DAVID MUZZANA; KAYE MUZZANA
76M 30009996	GROUND WATER CERTIFICATE	JUSTIN AUCH; MEAGAN AUCH
76M 30022739	GROUND WATER CERTIFICATE	JOE FEATHERLY; SHERRIE FEATHERLY
76M 6947 00	GROUND WATER CERTIFICATE	BETTY KALDAHL; DALE KALDAHL
76M 30029168	GROUND WATER CERTIFICATE	AMY MCKETHEN; NICHOLAS MCKETHEN
76M 30027041	GROUND WATER CERTIFICATE	MATTHEW PLUTE; WENDY PLUTE
76M 30011557	GROUND WATER CERTIFICATE	ANNETTE J BARNHILL; EMERY M BARNHILL

76M 30024617	GROUND WATER CERTIFICATE	MATTHEW A CAVANAUGH; TRISHA J CAVANAUGH
76M 30012744	GROUND WATER CERTIFICATE	DEBRA M TIPTON; RONALD C TIPTON
76M 30006851	GROUND WATER CERTIFICATE	CHARLES THOMAS; CONNIE R THOMAS
76M 30134756	STATEMENT OF CLAIM	DEBRA M TIPTON; RONALD C TIPTON
76M 30025040	GROUND WATER CERTIFICATE	AMANA BEIERLE; TAYLOR BEIERLE; JOSEPH SAMPLE; STEFANIE SAMPLE
76M 30029545	GROUND WATER CERTIFICATE	BONNIE J MEKEAL; CHARLES E MEKEAL
76M 7949 00	GROUND WATER CERTIFICATE	EDMUND DENNY; HOPE E DENNY
76M 30005744	GROUND WATER CERTIFICATE	DONA L JOHNSON; RANDALL W JOHNSON
76M 30019698	GROUND WATER CERTIFICATE	PAMELA A BAERTSCH; SHANE R BAERTSCH

Groundwater Permit Technical Analyses Report – Part B

Department of Natural Resources and Conservation (DNRC or Department)
Water Resources Division
Benjamin Thomas, Water Conservation Specialist, Missoula Regional Office

Application No.	76M 30164554	**Proposed Point of Diversion**	SWNWSE Sec. 14, T13N, R20W
Applicant	David Miller		

Overview

This report is Part B of a two-part publication which 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 Groundwater Permit Technical Analyses Report – Part B contains the following sections:

1.0 Application Details

The Applicant proposes to divert water from April 15 to October 15 from the Missoula Valley Aquifer at a rate of 220 GPM. A volume of 55.43 AF would be used between April 15 and October 15 for sprinkler irrigation in the SWNWSE and SWSE Sec. 14, and the NWNWNE Sec. 23, all within T13N, R20W, Missoula County.

Table 1: Summary of the Proposed Use

Source	Flow Rate	Diverted Volume	Consumed Volume	Purpose	Period of Use	Place of Use	Point of Diversion	Period of Diversion
Groundwater (Missoula Valley Aquifer)	220 GPM	55.43 AF	38.8 AF	Irrigation	4/15-10/15	SENWSE, SWSE Sec. 14 & NWNWNE Sec. 23 T13N, R20W	SWNWSE Sec. 14 T13N, R20W	4/15-10/15

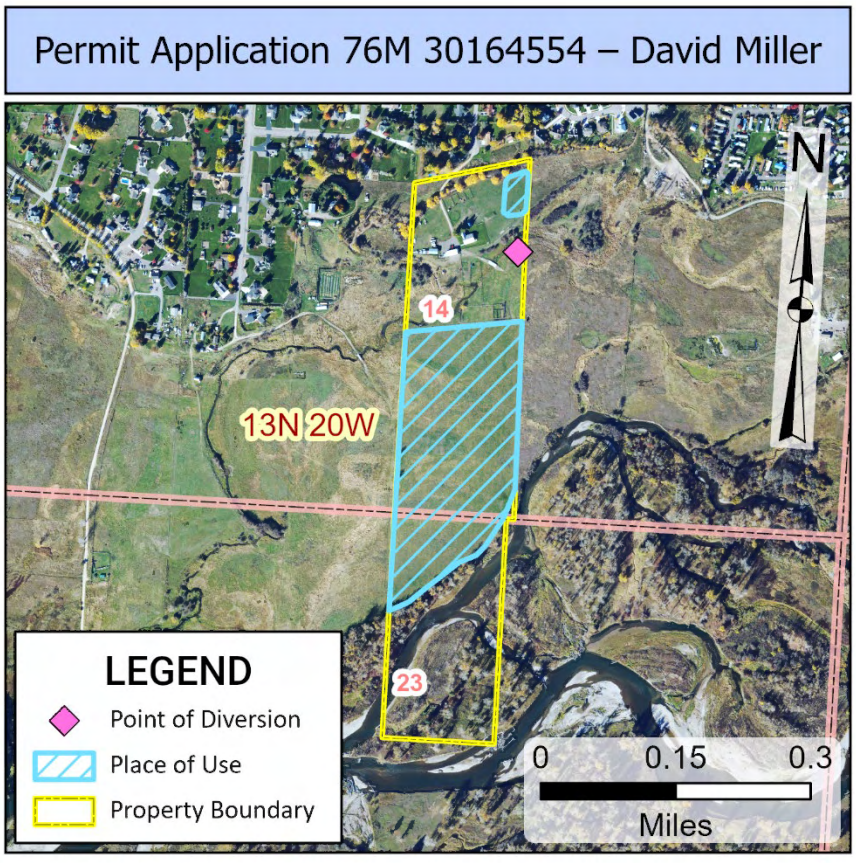


Figure 1: Map of the Applicant's proposed POD on the source and proposed place of use.

2.0 Surface Water Analysis of Depleted Surface Water

2.1 Source Description

Part A of the Technical Analyses Report includes the Groundwater Analysis, which describes the methodologies used to identify the depleted surface water source.

Depleted Source of Water: Clark Fork River

Depleted Source Type: Perennial Stream

Location of Depletions: Downstream of the SWNE Sec. 23, T13N, R20W, Missoula County

2.2 Method of Estimation

Gage Name: Clark Fork above Missoula MT

Gage Number: USGS Gage #12340500

Period of Record: 03-01-1929 to 02-23-2025

Why this gage is considered an appropriate data source: This gage quantifies the flow of water in the Clark Fork River approximately 9 miles upstream of the location of depletions. The period of record for this gage extends back to 1929 and thus provides a substantial record from which to calculate median flows. As this gage is managed by the USGS, it meets all other departmental requirements for use in estimating physical and legal availability.

2.3 Monthly Flow Rate and Volume

Methodology: USGS Gage #12340500 is the nearest gage to the proposed POD on the Clark Fork River before its confluence with the Bitterroot River. The point where depletions begin in the Clark Fork River is downstream of the gaging station.

Physical availability of water in the Clark Fork River at the point of depletions was quantified monthly, using data from the entire period of record for the USGS gage. Department practice for estimating monthly physical availability where a gage is upstream of the point of depletions is to subtract the flow rates for a given month of existing water rights between the gage and the point of depletions from the median of the mean flow rate for that month as recorded by 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 median of the mean monthly flow rates in cubic feet per second (CFS) for the Clark Fork River using USGS Gage #12340500 records (Table 1, column B). Those flows were converted to monthly volumes in AF (Table 1, column C) using the following equation found on DNRC Form 615: median of the mean monthly flow (CFS) × 1.98 (AF/day/1 CFS) × days per month = AF/month.

2. The Department calculated the monthly flows appropriated by existing users downstream of the gage on the source (Table 1, column D) by:
   i. Generating a list of existing water rights from USGS Gage #12340500 to the point of depletions (list is included in the application file and available upon request);
   ii. Designating irrigation and lawn and garden uses as occurring from April 1 to October 31;
   iii. Designating all other water uses as year-round uses;
   iv. Assigning a single combined flow rate of 0.08 CFS to all livestock direct from source rights without a designated flow rate; and,
   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. This leads to an overestimation of existing uses from the source. The Department finds this an appropriate measure of assessing existing rights as it protects existing water users.

3. Since the gage used is upstream of the point of depletions, the Department subtracted the flow rates of the existing rights between USGS Gage #12340500 and the point where depletions begin (Table 1, column D) from the median of the mean monthly gage values (Table 1, column B) to determine physical availability at the POD (Table 1, column E). Physically available monthly flows were then converted to monthly volumes (Table 1, column F).

Table 2: Physical Availability at the Point of Depletions on the Clark Fork River

A	B	C	D	E	F
Month	**Median of the Mean Monthly Flow at Gage 12340500 (CFS)**	**Median of the Mean Monthly Volume at Gage 12340500 (AF)**	**Existing Water Demands from Gage 12340500 to Point of Depletions (CFS)**	**Physically Available Water at Point of Depletions (CFS)**	**Physically Available Water at Point of Depletions (AF)**
January	1221	74944.98	30.24	1190.76	73088.85
February	1378.5	76424.04	30.24	1348.26	74747.53
March	1794.5	110146.41	33.58	1760.92	108085.3
April	3387	201187.80	332.47	3054.53	181439.1
May	7281.5	446938.47	332.53	6948.97	426527.8
June	7673.5	455805.90	332.55	7340.95	436052.4
July	2786.5	171035.37	332.55	2453.95	150623.5
August	1429.5	87742.71	332.55	1096.95	67330.79
September	1354.5	80457.30	332.55	1021.95	60703.83
October	1495.5	91793.79	332.44	1163.06	71388.62
November	1509.5	89664.30	135.04	1374.46	81642.92
December	1337	82065.06	30.24	1306.76	80208.93

3.0 Area of Potential Impact Analysis of Depleted Surface Water

Area of Potential Impact: The local area of potential impact of the depleted source is the Clark Fork River from the point of depletions to the confluence of the Clark Fork and Bitterroot Rivers. A total of three surface water rights exist within this reach, with legal demands totaling 105.91 CFS and 39270.63 AF. A list of these rights can be found in Appendix A.

The Department must also consider the Clark Fork River at Noxon Dam near the Idaho-Montana border as an area of potential impact due to the findings of fact in the Final Order for the Thompson River Lumber Company Application for Beneficial Use Permit No. 76N 30010429. A memo from then-acting DNRC Administrator John Tubbs dated May 1, 2009, indicates that when net depletions to surface water sources in basins 76M, 76N, and that portion of 76L west of the Flathead Reservation boundary exceed 35 GPM or 10 AF/year, senior hydropower rights at the Noxon Dam must be considered.

Since the depletions for this application are 38.8 AF/year, the Department assessed the Clark Fork River near Noxon Dam, using USGS Gage #12391400 (Clark Fork River below Noxon Rapids Dam near Noxon) to determine physical availability.

Table 3: Physical Availability at Noxon Dam

Month	Median of the Mean Monthly Flow at USGS Gage #12391400 (CFS)	Volume Available at USGS Gage #12391400 (AF)
January	13905	853489
February	12890	714622
March	14785	907503
April	21160	1256904
May	38030	2334281
June	47320	2810808
July	22280	1367546
August	10720	657994
September	10166	603860
October	11240	689911
November	12605	748737
December	13335	818502

Why this is an appropriate Area of Potential Impact: The Bitterroot River is a major river of a similar size to the Clark Fork River, and therefore the Department views the confluence of these two rivers to be a reasonable point at which to end the consideration of local adverse effects.

Methodology: The depletion analysis detailed in Part A of this document describes the methods used to determine the location of depletions from groundwater pumping. The confluence of two similarly sized waterways is a standard commonly used by the Department to determine the endpoint of Areas of Potential Impact. The Bitterroot and Clark Fork Rivers meet this standard, and thus their confluence was chosen as a suitable endpoint.

Review

This document has been reviewed by the Department on May 1, 2025.

References

Department Standard Practice for Determining Physical Availability of Surface Water
Department Standard Practice for Area of Potential Impact Analysis
DNRC Memo dated May 1, 2009 *Permitting in the open Clark Fork and Flathead basins – Follow-up to June 9, 2008 Memorandum*

Appendix A: Water Rights within the Area of Potential Impact

Water Right Number	Flow Rate (CFS)	Volume (AF)
76M 110490-00	0.08	57.82
76M 110493-00	105.75	39155
76M 30122648	0.08	57.82

Missoula Water Resources Regional Office
PO Box 5004
2705 Spurgin Road, Bldg. C
Missoula, MT 59806-5004
(406) 721-4284

March 19, 2025

David & Susan Miller
6610 Mullan Rd
Missoula, MT 59808-5654

Subject: Complete Preapplication Form for Beneficial Water Use Permit Application No. 76M 30164554

Dear Applicant,

The Missoula Regional Office of the Department of Natural Resources and Conservation (DNRC or Department) received your Preapplication Meeting Form and preapplication meeting fee on March 12, and the Department deemed the submitted Preapplication Meeting Form to be successfully completed per ARM 36.12.1302 on March 19.

As designated on the submitted Preapplication Meeting Form per § 85-2-302(3)(b), MCA, the Department will produce the technical analyses based on the parameters included in the Preapplication Meeting Form (ARM 36.12.1302(4)) within 45 days of March 19.

Please let me know if you have any questions.

Best,

Benjamin Thomas

Benjamin Thomas
Water Conservation Specialist
Missoula Regional Office
benjamin.thomas@mt.gov | (406) 542-5883

CC:
Julie Merritt
WGM Group
1111 E Broadway
Missoula, MT 59802

WGMGROUP
Community Values. Inspired Futures.

1111 East Broadway
Missoula, MT 59802
406.728.4611
www.wgmgroup.com

MEMORANDUM

DATE: March 10, 2025

TO: Jim Nave, Benjamin Thomas, Melissa Brikl,
Montana Department of Natural Resources and Conservation

FROM: Patrick Doyle, Water Right Technician, WGM Group, Inc.

CC: David Miller and Susan Miller, Applicants
Julie Merritt, Water Rights Specialist III, WGM Group, Inc.

RE: Flynn Lowney Ditch Preapplication Meeting Follow Up Responses

---

Follow Up Responses for the preapplication meeting form for 76M 30164554 from 10/02/2024.

1. PLACE OF USE AND VOLUME (QUESTIONS 5, 7, 8, & 42)

The initial Place of Use listed on the preapplication form was not the complete intended place of use. A parcel owned by the applicants and an additional 5 acres of irrigation should be added to the proposed place of use. The additional 5 acres of irrigation will increase the proposed volume.

5. Describe the proposed purpose information, including period of diversion, period of use, flow rate and volume.

Purpose	Period of Diversion	Period of Use	Flow Rate	Volume
Irrigation	04/15 to 10/15	04/15 to 10/15	220 GPM	55.43 AF
		Total	220 GPM	55.43 AF

7. What are the geocodes of the place of use?

04219914402010000
04219923101020000

8. Describe the legal land description for the proposed place of sue and, if an irrigation or lawn and garden purpose, list the number of irrigated acres.

ACRES	¼	¼	¼	SECTION	TOWNSHIP	RANGE	COUNTY
0.5	SW	NW	SE	14	13N	20W	MISSOULA
17.5		SW	SE	14	13N	20W	MISSOULA
5	NW	NW	NE	23	13N	20W	MISSOULA
23.0	Total						

42. What is the flow rate, volume, and period of diversion required at each groundwater point of diversion? If the POD is a well, provide the well depth, if available, or estimated well depth. Please use the same POD# as the project map to match this information with the location information.

POD#	Flow Rate	Volume	Period of Diversion	Well Depth	Measured or Estimated
1	220 GPM	55.43 AF	04/15 to 10/15	100 FT	Measured

2. AQUIFER TEST (QUESTIONS 30 & 31)

30. Provide the Aquifer Testing Addendum. This form will be required before the Preapplication Meeting Form is deemed complete.

The Aquifer Testing Addendum (Form 600-ATA) was submitted on November 22, 2024, and included a variance Request (Form 653). The variance was granted on January 8, 2025.

31. Have you submitted a completed Form 633 to DNRC for review?

Yes, Form 633 was submitted on November 22, 2024.

3. UPDATED MAPS (QUESTIONS 2, 32, & 78)

Updated maps showing the additional parcel and place of use have been attached to this memo.

2. Provide a 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 places of use for all overlapping water rights.

See attached for an updated map.

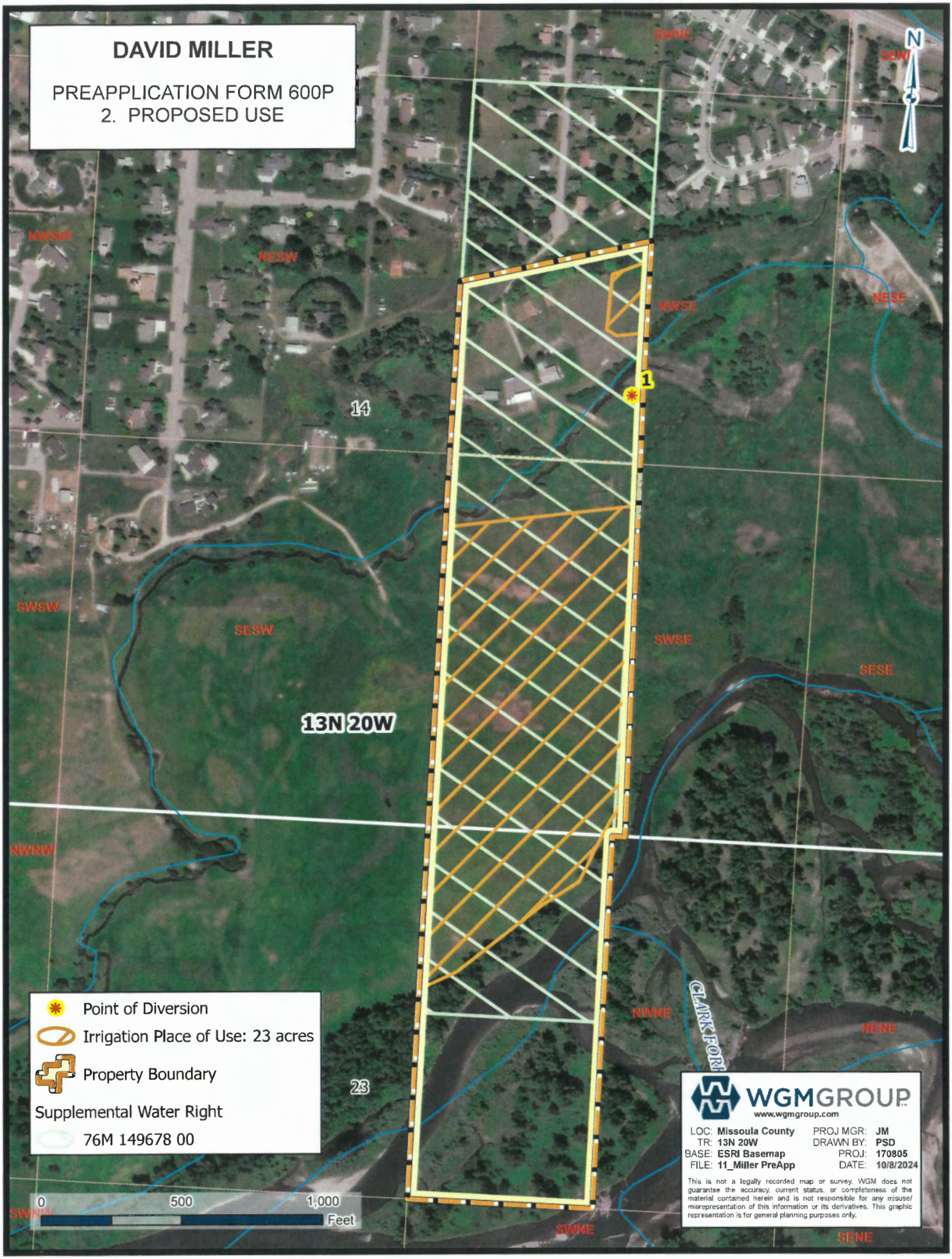
32. Do you have a map with the location of each well/pit labeled and, if available, with the GWIC ID?

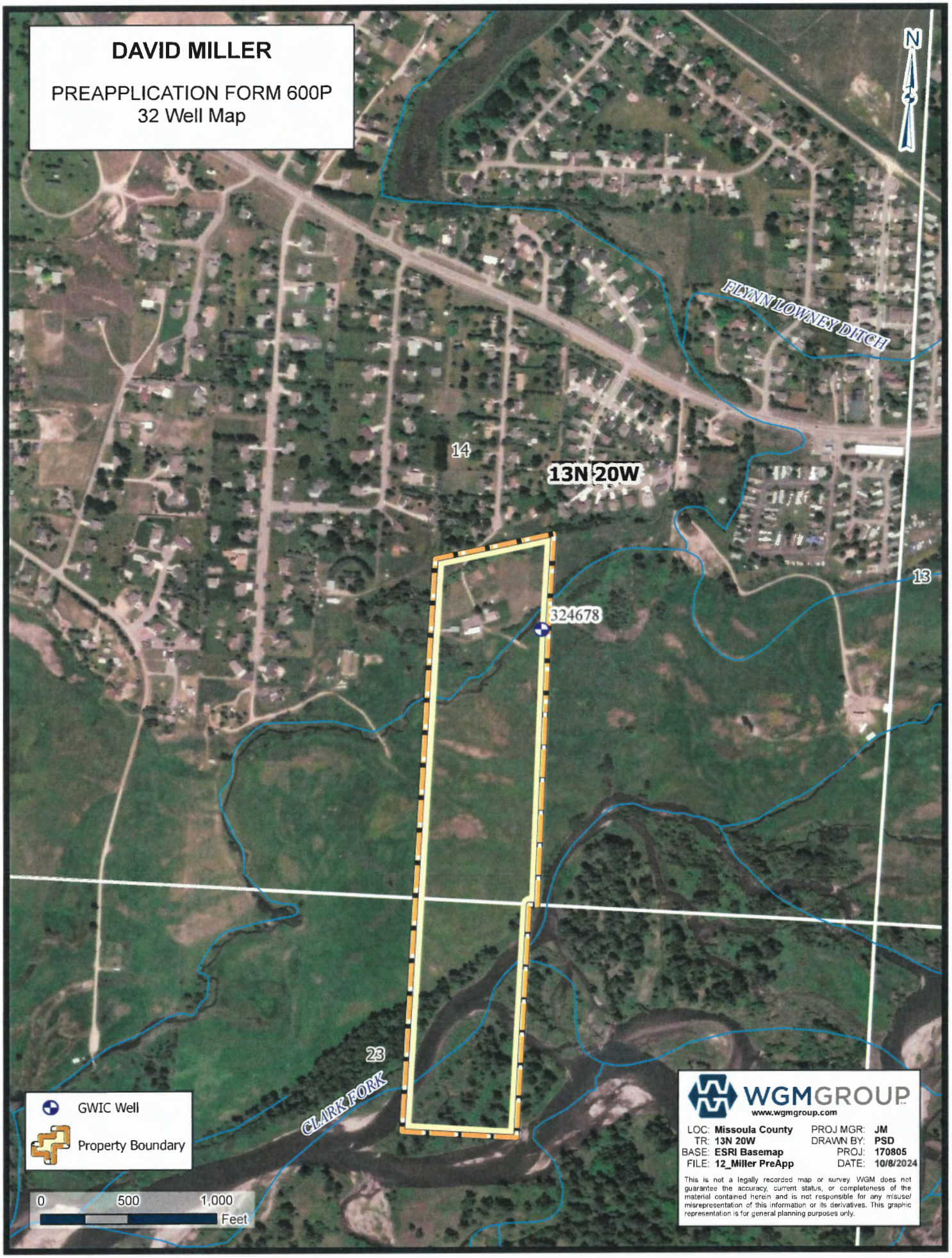
Yes, See attached for an updated map.

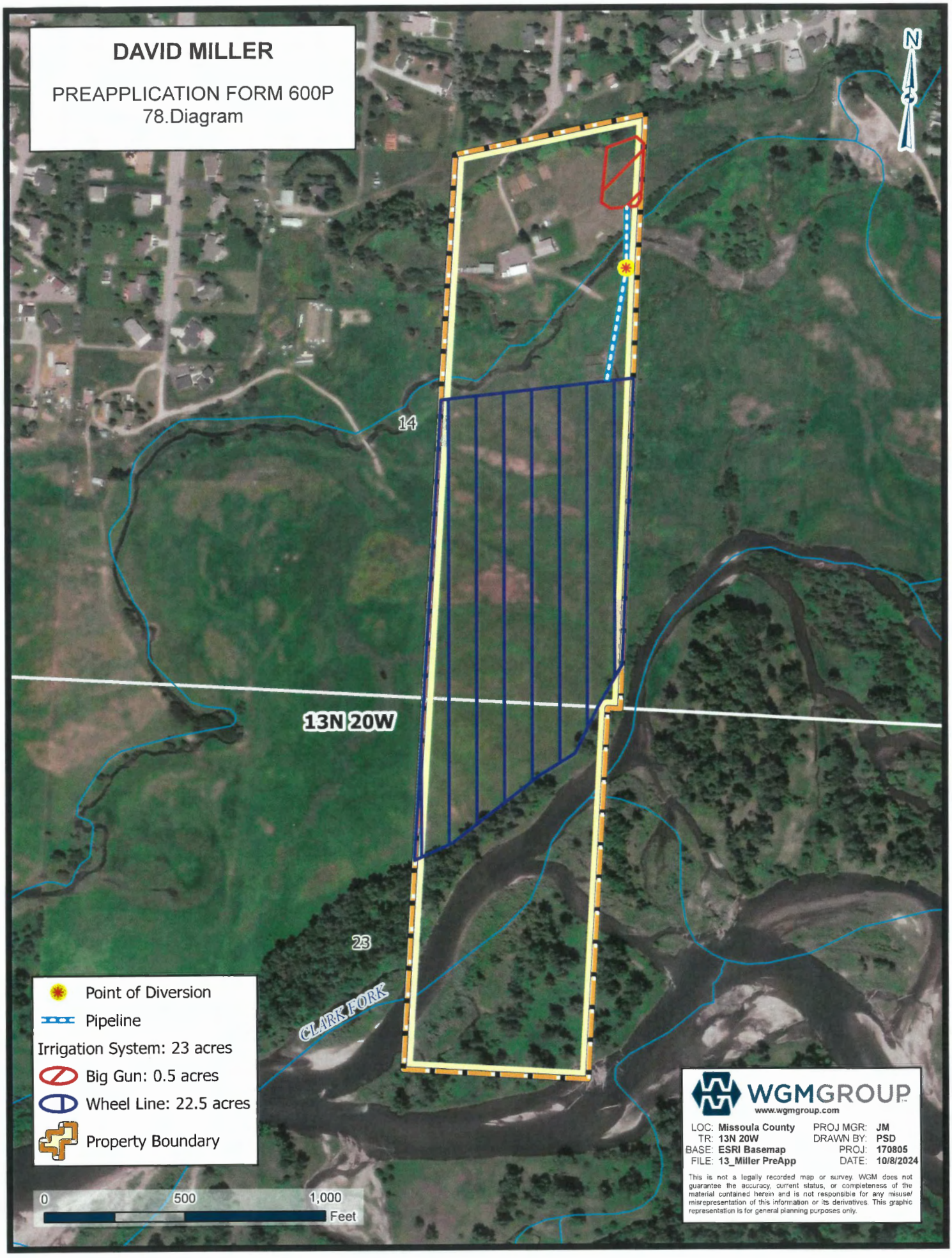
78. Provide a diagram of how you will operate your system from the point of diversion to the place of use.

See attached for an updated map.

Attachments:
Map of Proposed Use including overlapping water right
Map of well location with GWIC ID
Map of Diagram showing irrigation system


DAVID MILLER
PREAPPLICATION FORM 600P
2. PROPOSED USE
N
SWNE
SENE
NWSW
NESW
NWSE
NESE
1
14
SWSW
SESW
SWSE
SESE
13N 20W
NWNW
NWNE
NENE
CLARK FORK
23
SWNW
SWNE
SENE
Point of Diversion
Irrigation Place of Use: 23 acres
Property Boundary
Supplemental Water Right
76M 149678 00
0
500
1,000
Feet
WGMGROUP
www.wgmgroup.com
LOC: Missoula County
TR: 13N 20W
BASE: ESRI Basemap
FILE: 11_Miller PreApp
PROJ MGR: JM
DRAWN BY: PSD
PROJ: 170805
DATE: 10/8/2024
This is not a legally recorded map or survey. WGM does not guarantee the accuracy, current status, or completeness of the material contained herein and is not responsible for any misuse/misrepresentation of this information or its derivatives. This graphic representation is for general planning purposes only.


DAVID MILLER
PREAPPLICATION FORM 600P
32 Well Map
N
FLYNN LOWNEY DITCH
14
13N 20W
13
324678
23
CLARK FORK
GWIC Well
Property Boundary
0
500
1,000
Feet
WGMGROUP
www.wgmgroup.com
LOC: Missoula County
TR: 13N 20W
BASE: ESRI Basemap
FILE: 12_Miller PreApp
PROJ MGR: JM
DRAWN BY: PSD
PROJ: 170805
DATE: 10/8/2024
This is not a legally recorded map or survey. WGM does not guarantee the accuracy, current status, or completeness of the material contained herein and is not responsible for any misuse/misrepresentation of this information or its derivatives. This graphic representation is for general planning purposes only.


DAVID MILLER
PREAPPLICATION FORM 600P
78.Diagram
N
14
13N 20W
23
CLARK FORK
Point of Diversion
Pipeline
Irrigation System: 23 acres
Big Gun: 0.5 acres
Wheel Line: 22.5 acres
Property Boundary
0
500
1,000
Feet
WGMGROUP
www.wgmgroup.com
LOC: Missoula County
TR: 13N 20W
BASE: ESRI Basemap
FILE: 13_Miller PreApp
PROJ MGR: JM
DRAWN BY: PSD
PROJ: 170805
DATE: 10/8/2024
This is not a legally recorded map or survey. WGM does not guarantee the accuracy, current status, or completeness of the material contained herein and is not responsible for any misuse/misrepresentation of this information or its derivatives. This graphic representation is for general planning purposes only.

MONTANA WELL LOG REPORT

This well log reports the activities of a licensed Montana well driller, serves as the official record of work done within the borehole and casing, and describes the amount of water encountered. This report is compiled electronically from the contents of the Ground Water Information Center (GWIC) database for this site. Acquiring water rights is the well owner's responsibility and is NOT accomplished by the filing of this report.

Other Options

Return to menu
Plot this site in State Library Digital Atlas
Plot this site in Google Maps

Site Name: MILLER, SUSAN & DAVID
GWIC Id: 324678

Section 1: Well Owner(s)

1) MILLER, SUSAN & DAVID (MAIL)
6610 MULLAN RD
MISSOULA MT 59808 [10/25/2022]
2) MILLER, SUSAN & DAVID (WELL)
6610 MULLEN RD
MISSOULA MT 59808 [10/25/2022]

Section 2: Location

Township	Range	Section	Quarter Sections
13N	20W	14	SW¼ SE¼

County: MISSOULA
Geocode:

Latitude	Longitude	Geomethod	Datum
46.879546	-114.089772	TRS-SEC	NAD83

Ground Surface Altitude:
Ground Surface Method:
Datum:
Date:

Addition:
Block:
Lot:

Section 3: Proposed Use of Water

IRRIGATION (1)

Section 4: Type of Work

Drilling Method: ROTARY
Status: NEW WELL

Section 5: Well Completion Date

Date well completed: Sunday, November 20, 2022

Section 6: Well Construction Details

Borehole dimensions

From	To	Diameter
0	100	8

Casing

From	To	Diameter	Wall Thickness	Pressure Rating	Joint	Type
-2	100	8.6	0.25		WELDED	A53B STEEL

Completion (Perf/Screen)

From	To	Diameter	# of Openings	Size of Openings	Description
90	100	8.6		1/4	HOLTE PERFORATOR SLOTS

Annular Space (Seal/Grout/Packer)

From	To	Description	Cont. Fed?
0	40	BENTONITE	Y

Section 7: Well Test Data

Total Depth: 100
Static Water Level: 5
Water Temperature:

Air Test *

250 gpm with drill stem set at 80 feet for 1 hours.
Time of recovery 1 hours.
Recovery water level 5 feet.
Pumping water level _ feet.

** During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.*

Section 8: Remarks

Section 9: Well Log

Geologic Source
Unassigned

From	To	Description
0	1	TOP SOUL
1	60	LARGE GRAVELS, SAND
60	70	GREY CLAY, SAND, SEAMS OF GRAVEL
70	100	LARGE GRAVELS, SOME SILT, WATER

Driller Certification

All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Name: COLE BICK
Company: ACE DRILLING
License No: WWD-774
Date Completed: 11/20/2022

PREAPPLICATION MEETING FORM
PERMIT

§ 85-2-302

Form No. 600P *(Revised 4/2024)*

For Department Use Only

Application # 30164554 Basin 76M

Meeting Date 10/2/2024 Time 9:00 AM/PM

Completed Form Deadline 3/31/2025

RECEIVED

MAR 12 2025

MONTANA D.N.R.C
MISSOULA REGIONAL OFFICE

Completed Form Received 3/12/2025

Fee Rec'd $ 500 Check # _____

Deposit Receipt # MSS2519084

Payor _____

Refund $ _____ Date _____

PREAPPLICATION MEETING FEE

$ 500

FILING FEE REDUCTION & EXPEDITED TIMELINE

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

The Department will fill out Form No. 600P 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 DAVID & SUSAN MILLER

Mailing Address 6610 MULLAN RD City MT State MT Zip 59808

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 JULIE MERRITT

Mailing Address 1111 E BROADWAY City MISSOULA State MT Zip 59802

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

Email Address jmerritt@wgmgroup.com

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

Meeting Attendees: *Add more as necessary.*

Name	Organization	Position
Jim Nave	DNRC	Regional Manager
Melissa Brickl	DNRC- WSB	Groundwater Hydrologist
Benjamin Thomas	DNRC	Water Conservation Specialist
Patrick Doyle	WGM Group	Water Rights Technician

Table of Contents

Application Details

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

Questions, Narrative Responses, and Tables	Check-boxes	Follow-Up
1. Do you elect to have DNRC conduct Technical Analyses?	■ Y ☐ N	☐ F
2. Provide a 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 places of use for all overlapping water rights.	■ S	☐ F
3. Is the project located in a Controlled Groundwater Area or Basin Closure Area? If yes, immediately go to Project-Specific Questions 47 to 52 because Form 600 may be the incorrect form, or this project may not meet the requirements for the Department to accept a Form 600.	■ Y ☐ N	☐ F
4. Is the proposed use temporary?	☐ Y ■ N	☐ F
a. If yes, when will the appropriation cease? _____	☐ A	☐ F
5. Describe the proposed purpose information, including period of diversion (MM/DD-MM/DD), period of use (MM/DD-MM/DD), flow rate (GPM or CFS) and volume (AF).	☐ A	■ F

Purpose	Period of Diversion *(MM/DD-MM/DD)*	Period of Use *(MM/DD-MM/DD)*	Flow Rate *Flow Rate*	*GPM*	*CFS*	Volume *(AF)*
IRRIGATION	04/15 TO 10/15	04/15 TO 10/15	220	✔	☐	43.38
				☐	☐	
				☐	☐	
				☐	☐	
		Total	220	✔	☐	43.38

6. Describe the proposed location of the point(s) 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 each POD with the POD ID number used for the project map (question 2).

■ A ☐ F

POD #	¼	¼	¼	Sec	Twp	Rge	County	Lot	Block	Tract	Subdivision	Gov Lot	SW or GW	Source Name	Means
1	SW	NW	SE	14	13N	20W	MISSOULA						GW	GROUNDWATER	WELL

7. What are the geocodes of the place of use?

☐ A ■ F

04219914402010000	
04219923101020000 (follow up)	

8. Describe the legal land description for the proposed place of use and, if an irrigation or lawn and garden purpose, list the number of irrigated acres.

☐ A ■ F

Acres	Gov't Lot	Block	¼	¼	¼	Sec	Twp	Rge	County
0.5			SW	NW	SE	14	13N	20W	MISSOULA
17.5			W2	SW	SE	14	13N	20W	MISSOULA
18.0	*Total*								

9. Will other water right(s) supplement or overlap the place of use to contribute to the purpose(s)?

■ Y ■ N ☐ F

a. If yes, summarize how the water rights will be operated as a whole to serve the purpose(s).

There is generally no water available to use for irrigation from the source after May and so will likely not be used together with the proposed use.

■ A ☐ F

10. For each supplemental or overlapping water right, please list the water right number, purpose, typical period of diversion and use (MM/DD-MM/DD), flow rate (GPM or CFS), and the volume of water (AF) contributed.	■ A	☐ F

Water Right No.	Avg. Period of Diversion (MM/DD-MM/DD)	Avg. Period of Use (MM/DD-MM/DD)	Flow Rate (GPM or CFS)	Volume Contributed (AF)
76M 149678 00	4/15 TO 10/19	4/15 TO 10/19	160GPM	85

11. Will this application supplement contract water from a Federal Project, ditch company, or other source?	☐ Y ■ N	☐ F
a. If yes, explain. _____ _____	☐ A	☐ F
12. Does the project involve one or more place(s) of storage with a capacity of greater than 0.1 acre-feet? This does not include storage tanks and cisterns. If yes, answer questions 53 to 61 for place of storage.	☐ Y ■ N	☐ F
13. Does the project involve one or more conveyance ditches? If yes, answer questions 62 to 64 for ditch-specific questions.	☐ Y ■ N	☐ F
14. Does the project involve an appropriation that is greater than 5.5 CFS and 4,000 AF? If yes, you must submit a Criteria Addendum Application for Beneficial Water Use Permit for Appropriations Greater than 5.5 CFS and 4,000 AC-FT (Form 600-B) with application submittal. The criteria are found in §85-2-311(3), MCA.	☐ Y ■ N	☐ F
15. Will you be transporting water for use outside of Montana? If yes, you will need submit an Out-of-State Use Addendum (Form 600/606-OSA) with the application. The out-of-state use criteria are outlined in §85-2-402(6), MCA.	☐ Y ■ N	☐ F
16. Does the project include the water marketing purpose? If yes, answer questions 65 to 71 for water marketing. A Water Marketing Purpose Addendum (Form 600/606-WMA) will be required with application submittal.	☐ Y ■ N	☐ F
17. Is the project located in designated sage grouse habitat? If yes, you must have a consultation with and review of your project by the Montana Sage Grouse Habitat Conservation Program. The review letter will be required at application submittal.	☐ Y ■ N	☐ F

Surface Water

☐ **Applicable**, move on to question 18. ☒ **Not Applicable**, skip to question 29.

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

Surface Water: Physical Availability

Questions, Narrative Responses, and Tables	**Check-boxes**	**Follow-Up**
18. What is the flow rate (GPM or CFS), volume (AF), period of diversion start date and end date (MM/DD-MM/DD), and source type (e.g., perennial, ephemeral) at each point of diversion? Use the same POD # as the project map (question 2) to label each point of diversion.	☐ A	☐ F

POD #	**Flow Rate (GPM or CFS)**	**Volume (AF)**	**Period Start (MM/DD)**	**Period End (MM/DD)**	**Source Type**

19. What is the source type of the surface water diversion? _____						☐ A	☐ F
Perennial or intermittent	Answer question 20	**Ephemeral**	Answer questions 22 to 24	**Lakes**	Answer question 25	**Other**	Answer question 26

Surface Water: Physical Availability: Perennial or Intermittent

☐ Applicable ☐ Not Applicable

20. Is stream gage data available?	☐ Y ☐ N	☐ F
a. If yes, answer the following questions related to the number of stream gages that are available.		
i. One stream gage is available		
1. What is the gage name? _____		☐ F

2. Who operates and maintains the gage? _____		☐ F
3. Is the stream gage upstream or downstream of point(s) of diversion? _____		☐ F
4. Is there a limiting or controlling factor that would make the Drainage Area Method not practical? This includes dams that control the flow and streams with large gaining and/or losing reaches. If you have questions about this, please contact the Regional Hydro-Specialist or the Water Sciences Bureau.	☐ Y ☐ N	☐ F
5. Is the period of record greater than or equal to 10 years?	☐ Y ☐ N	☐ F
6. How frequently is stage data recorded? _____		☐ F
7. If data gaps were to occur, are they identified and left unfilled or estimated using interpolation, ice correction, or indirect discharge measurements methods?	☐ Y ☐ N	☐ F
8. Was the rating curve established and maintained throughout the duration of the period of record using measurements taken near the reference gage and stage recorder according to USGS protocols?	☐ Y ☐ N	☐ F
9. Were there requirements for maintaining a permanent gage datum and meeting specified accuracy limits?	☐ Y ☐ N	☐ F
10. Does the gage data meet the Department's standard to be sufficient to calculate the median of the mean monthly flow rate and volume during the proposed months of diversion?	☐ Y ☐ N	☐ F
a. If yes, this section is complete. Skip to question 27.		
b. If no, answer question 20.b.		
ii. More than one stream gage is available		
1. List the gage names. _____		☐ F
2. Who operates and maintains the gages? _____		☐ F
3. Is one stream gage upstream and one downstream of point(s) of diversion?	☐ Y ☐ N	☐ F
4. Do the stream gages have similar periods of record?	☐ Y ☐ N	☐ F
5. Are the periods of record each greater than or equal to 10 years?	☐ Y ☐ N	☐ F

6. How frequently is stage data recorded at each gage? _____		☐ F
7. For each gage, if data gaps were to occur, are they identified and left unfilled or estimated using interpolation, ice correction, or indirect discharge measurements methods?	☐ Y ☐ N	☐ F
8. Were the rating curves established and maintained throughout the duration of the period of record using measurements taken near the reference gages and stage recorders according to USGS protocols?	☐ Y ☐ N	☐ F
9. For each gage, were there requirements for maintaining a permanent gage datum and meeting specified accuracy limits?	☐ Y ☐ N	☐ F
10. Does the gage data meet the Department's standard to be sufficient to calculate the median of the mean monthly flow rate and volume during the proposed months of diversion?	☐ Y ☐ N	☐ F
a. If yes, this section is complete. Skip to question 27.		
b. If no, answer question 20.b.		
b. If no gage data is available or if available gage data does not meet the Department's standard to be sufficient to calculate the median of the mean monthly flow rate and volume during the proposed months of diversion, is the source otherwise measured?	☐ Y ☐ N	☐ F
i. If yes,		
1. Submit available measurements to the Department.	☐ S	☐ F
2. Who collected the measurements? _____	☐ A	☐ F
3. With what method was the data collected? _____ _____	☐ A	☐ F
4. What is the period of record? _____		☐ F
5. What is the frequency of measurement? _____		☐ F
6. Are there gaps in the data?	☐ Y ☐ N	☐ F

a. If yes, what is the nature of the gaps and how are gaps handled to ensure data quality?	☐ A	☐ F
7. Is there a process for maintaining the data and meeting specified accuracy limits?	☐ Y ☐ N	☐ F
a. If yes, explain.	☐ A	☐ F
8. Does available measurement data meet the Department's standard to be sufficient to calculate the median of the mean monthly flow rate and volume during the proposed months of diversion?	☐ Y ☐ N	☐ F
a. If yes, this section is complete. Skip to question 27.		
b. If no, answer question 21.		
21. 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 calibration of a department-accepted estimation technique?	☐ Y ☐ N	☐ F
a. If yes, describe the estimation technique.	☐ A	☐ F
b. If no,		
i. Will measurements be collected prior to submission of a completed Form No. 600P that meet the Department's standard of including a minimum of high, moderate, and low flows to be sufficient to use for calibration of a department-accepted estimation technique?	☐ Y ☐ N	☐ F
1. If yes,		
a. With what method will the data be collected?	☐ A	☐ F

b. What will be the interval of measurement?		☐ F
c. Describe the proposed estimation technique.	☐ A	☐ F
2. If no,		
a. Describe your plan to comply with the requirements of ARM 36.12.1702(1).	☐ A	☐ F
b. Do you plan on requesting a variance from measurement requirements pursuant to ARM 36.12.1702(1)(b)?	☐ Y ☐ N	☐ F

Surface Water: Physical Availability: Ephemeral

☐ Applicable ■ Not Applicable

22. If you will conduct Technical Analyses, what is your plan to calculate mean annual runoff? If DNRC will conduct Technical Analyses, write N/A.	☐ A	☐ F
23. Where do you plan to obtain climate and drainage area data?	☐ A	☐ F
24. Where is the downstream point of diversion, which will be used to delineate the drainage basin?	☐ A	☐ F

Surface Water: Physical Availability: Lakes

☐ Applicable ■ Not Applicable

25. Do you have a design plan?	☐ Y ☐ N	☐ F
a. If yes, provide the design plans to DNRC	☐ S	☐ F
b. If no, has the lake volume been quantified by a qualified entity based on bathymetric data?	☐ Y ☐ N	☐ F
i. If yes, provide this information to DNRC.	☐ S	☐ F
ii. If no, answer the following questions,		
1. When do you plan to collect this information? _____		☐ F
2. With what method will it be collected? _____ _____	☐ A	☐ F

Surface Water: Physical Availability: Other

☐ Applicable ☐ Not Applicable

26. Have you measured the source?	☐ Y ☐ N	☐ F
a. If yes, answer the following questions,		
i. With what method was the data collected? _____ _____	☐ A	☐ F
ii. What is the measurement interval? _____		☐ F
1. Does the interval meet the requirements of 36.12.1702(4)?	☐ Y ☐ N	☐ F
b. If no or if the measurement interval does not meet the requirements of 36.12.1702(4)		
i. When do you plan to measure? _____		☐ F
ii. With what method will the measurements be collected? _____ _____ _____	☐ A	☐ F

Surface Water: Identification of Legal Demands in Area of Potential Impact

27. If you are conducting Technical Analysis, how will the Area of Potential Impact be defined? If Department is conducting Technical Analyses, write N/A. _____ _____ _____ _____	☐ A	☐ F

Surface Water: Basin Closure Area

28. Is the project located in a Basin Closure Area? If yes, explain how the project meets a closure exception. More information about basin closures online at: https://dnrc.mt.gov/Water-Resources/Water-Rights/Basin-Closures-Stream-Depletion-Controlled-Ground-Water-Areas. Answer the follow-up questions for specific Basin Closure Areas in the "Project-Specific Questions: Controlled Groundwater Areas and Basin Closures" section (questions 51 to 52). _____ _____ _____ _____ _____ _____	☐ Y ☐ N	☐ F

Groundwater

■ **Applicable**, move on to question 29. ☐ **Not Applicable**, skip to question 47.

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

Questions, Narrative Responses, and Tables	**Check-boxes**	**Follow-Up**

Groundwater: Physical Availability

29. What is the type of groundwater diversion? WELL	■ A	☐ F

Well/Pit	Answer questions 30 to 32	**Developed Spring**	Answer question 33	**Pond**	Answer questions 34 to 38

Groundwater: Physical Availability: Well/Pit

■ Applicable ☐ Not Applicable

30. Provide the Aquifer Testing Addendum (Form 600-ATA). This form will be required before the Preapplication Meeting Form is deemed complete.	☐ S	■ F
31. Have you submitted a completed Form 633 to DNRC for review?	■ Y ☐ N	☐ F
a. If no, submit Form 633 to DNRC for review. Form 633 is required by the time the Preapplication Meeting Form is deemed complete.	☐ S	☐ F
b. If yes, did the Department identify deficiencies?	■ Y ☐ N	■ F
i. If yes, are variances from ARM 36.12.121 needed?	■ Y ☐ N	■ F
1. If yes,		
a. Do you have data for aquifer characteristics?	☐ Y ☐ N	■ F
i. If yes, provide the data to the Department.	☐ S	■ F
b. Have you submitted Form 653 to the Department?	☐ Y ☐ N	■ F
i. If yes, was the variance granted?	☐ Y ☐ N	■ F
32. Do you have a map with the location of each well/pit labeled and, if available, with the GWIC ID?	■ Y ☐ N	■ F
a. If no, have all the wells/pits been constructed?	☐ Y ☐ N	☐ F

i. If yes, provide a map with the wells/pits labeled and, if available, with the GWIC ID. Create map on an aerial photograph or topographic map that also includes the following: section corners, township and range, and a north arrow.	☐ S	☐ F
ii. If no, answer the following questions,		
1. When will the wells/pits be constructed? _____		☐ F
2. Do you have an initial map with the proposed location of wells/pits?	☐ Y ☐ N	☐ F
a. If yes, provide an initial map to the Department. Create map on an aerial photograph or topographic map that also includes the following: section corners, township and range, and a north arrow.	☐ S	☐ F
3. Is the requested volume for each new well/pit known?	☐ Y ☐ N	☐ F
a. If no, what is the total requested volume (AF) and the number of new PODs? _____		☐ F

Groundwater: Physical Availability: Developed Spring

☐ Applicable ■ Not Applicable

33. Have you measured the source?	☐ Y ☐ N	☐ F
a. If yes, answer the following questions,		
i. Do you have flow rate (GPM or CFS) and volume measurements?	☐ Y ☐ N	☐ F
ii. With what method were measurements collected? _____ _____	☐ A	☐ F
iii. What is the interval of measurements? _____		☐ F
iv. Is the interval of measurements sufficient to comply with ARM 36.12.1703(1)?	☐ Y ☐ N	☐ F
b. If no, or if measurements do not comply with ARM 36.12.1703(1),		
i. When do you plan to measure? _____		☐ F

ii. With what method and at what interval will measurements be collected? _____ _____	☐ A	☐ F

Groundwater: Physical Availability: Ponds

☐ Applicable ■ Not Applicable

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

Groundwater: Identification of Groundwater Legal Demands

All information to calculated Zone of Influence was collected in previous questions.

Groundwater: Adverse Effect to Existing Groundwater Rights

All information to calculate One-Foot Drawdown Contour was collected in previous questions.

Groundwater: Physical Availability of Depleted Surface Water Source(s)

39. What are the hydraulically connected surface water source(s)? **CLARK FORK RIVER**		☐ F
40. For each hydraulically connected surface water source, is gage data available?	■ Y ☐ N	☐ F
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? _____		☐ F
2. Who operates and maintains the gage? _____		☐ F
3. Is the stream gage upstream or downstream of point(s) of diversion? _____		☐ F
4. Is there a limiting or controlling factor that would make the Drainage Area Method not practical? This includes dams that control the flow and streams with large gaining and/or losing reaches. If you have questions about this, please contact the Regional Hydro-Specialist or the Water Sciences Bureau.	☐ Y ☐ N	☐ F
5. Is the period of record greater than or equal to 10 years?	☐ Y ☐ N	☐ F
6. How frequently is stage data recorded? _____		☐ F
7. If data gaps were to occur, are they identified and left unfilled or estimated using interpolation, ice correction, or indirect discharge measurements methods?	☐ Y ☐ N	☐ F
8. Was the rating curve established and maintained throughout the duration of the period of record using measurements taken near the reference gage and stage recorder according to USGS protocols?	☐ Y ☐ N	☐ F
9. Were there requirements for maintaining a permanent gage datum and meeting specified accuracy limits?	☐ Y ☐ N	☐ F
10. Does the gage data meet the Department's standard to be sufficient to calculate the median of the mean monthly flow rate and volume during the proposed months of diversion?	☐ Y ☐ N	☐ F
a. If yes, this section is complete. Skip to question 42.		
b. If no, answer question 40.b.		
ii. More than one stream gage is available		
1. List the gage names. **USGS Gage #12340500, USGS Gage #12353000**		☐ F
2. Who operates and maintains the gages? **USGS**		☐ F
3. Is one stream gage upstream and one downstream of point(s) of diversion?	■ Y ☐ N	☐ F

4. Do the stream gages have similar periods of record?	■ Y ☐ N	☐ F
5. Are the periods of record each greater than or equal to 10 years?	■ Y ☐ N	☐ F
6. How frequently is stage data recorded at each gage? EVERY 15 MINUTES		☐ F
7. For each gage, if data gaps were to occur, are they identified and left unfilled or estimated using interpolation, ice correction, or indirect discharge measurements methods?	■ Y ☐ N	☐ F
8. Were the rating curves established and maintained throughout the duration of the period of record using measurements taken near the reference gages and stage recorders according to USGS protocols?	■ Y ☐ N	☐ F
9. For each gage, were there requirements for maintaining a permanent gage datum and meeting specified accuracy limits?	■ Y ☐ N	☐ F
10. Does the gage data meet the Department's standard to be sufficient to calculate the median of the mean monthly flow rate and volume during the proposed months of diversion?	■ Y ☐ N	☐ F
a. If yes, this section is complete. Skip to question 42.		
b. If no, answer question 40.b.		
b. If no gage data is available or if available gage data does not meet the Department's standard to be sufficient to calculate the median of the mean monthly flow rate and volume during the proposed months of diversion, is the source otherwise measured?	☐ Y ☐ N	☐ F
i. If yes,		
1. Submit measurements to the Department.	☐ S	☐ F
2. Who collected the measurements?	☐ A	☐ F
3. With what method was the data collected?	☐ A	☐ F
4. What is the period of record?		☐ F
5. What is the frequency of measurement?		☐ F
6. Are there gaps in the data?	☐ Y ☐ N	☐ F

a. If yes, what is the nature of the gaps and how are gaps handled to ensure data quality _____ _____ _____ _____	☐ A	☐ F
7. Is there a process for maintaining the data and meeting specified accuracy limits?	☐ Y ☐ N	☐ F
a. If yes, explain. _____ _____ _____ _____	☐ A	☐ F
8. Does available measurement data meet the Department's standard to be sufficient to calculate the median of the mean monthly flow rate and volume during the proposed months of diversion?	☐ Y ☐ N	☐ F
a. If yes, this section is complete. Skip to question 42.		
b. If no, answer question 41.		
41. 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 calibration of a department-accepted estimation technique?	☐ Y ☐ N	☐ F
a. If yes, describe the estimation technique. _____ _____ _____	☐ A	☐ F
b. If no,		
i. Will measurements be collected prior to submission of a completed Form No. 600P that meet the Department's standard of including a minimum of high, moderate, and low flows to be sufficient to use for calibration of a department-accepted estimation technique?	☐ Y ☐ N	☐ F
1. If yes,		
a. With what method will the data be collected? _____ _____ _____	☐ A	☐ F

b. What will be the interval of measurement? _____		☐ F
c. Describe the proposed estimation technique. _____ _____ _____ _____	☐ A	☐ F
2. If no, describe your plan to comply with the measurement requirements for hydraulically connected surface water sources. _____ _____ _____	☐ A	☐ F

Groundwater: Legal Availability of Depleted Surface Water Source(s)

All information to determine legal demands for depleted surface water source(s) was collected in previous questions.

Groundwater: Adequacy of Diversion

Questions, Narrative Responses, and Tables	Check-boxes	Follow-Up
42. What is the flow rate (GPM or CFS), volume (AF), and period of diversion required (MM/DD-MM/DD) at each groundwater point of diversion? If the POD is a well, provide the well depth (FT), if available, or estimated well depth (FT). Please use the same POD # as the project map (question 2) to match this information with the location information.	■ A	■ F

POD #	Flow Rate (GPM or CFS)	Volume (AF)	Period of Diversion (MM/DD-MM/DD)	Well Depth (FT)	Measured or Estimated
1	220gpm	43.38	04/15 TO 10/15	100	MEASURED

43. Will the monthly pumping schedule differ from an allocation of diverted volume by the number of days in the month for year-round uses or the IWR 80% net irrigation requirements for irrigation/lawn & garden uses (IWR, NRCS 2003)?	☐ Y ■ N	☐ F

a. If yes, provide the alternative pumping schedule in the table below. Use the same POD # as the project map (question 2).	☐ A	☐ F

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

Groundwater: Basin Closure Area

44. Are the point(s) of diversion located in a basin closure area? If yes, fill out questions 45 to 46.	■ Y ☐ N	☐ F
45. Did you elect in question 1 for the Department to conduct Technical Analysis?	■ Y ☐ N	☐ F
a. If yes, the Basin Closure Area Addendum (Form 600-BCA), Hydrogeologic Report Addendum (Form 600-HRA), and Hydrogeologic Report are not required at this time. The Department's Technical Analyses will meet requirements of §85-2-360 for Form 600-HRA. Form 600-BCA will be required with application submittal.		
b. If no, submit the Basin Closure Area Addendum (Form 600-BCA), Hydrogeologic Report Addendum (600-HRA), and Hydrogeologic Report with your Technical Analysis.	☐ S	☐ F
46. If the Hydrogeologic Report indicates that the proposed groundwater use will impact a surface water source, which of the following three options best describe your plan to mitigate depletions of hydraulically connected surface water? A separate Preapplication Meeting will be required for each application to change a water right to a mitigation or aquifer recharge purpose to maintain expedited timelines and reduced filing fees for the project.		
a. Application to Change a Water Right to mitigate the adverse effects created.	■ Y ☐ N	☐ F
b. Alternative mitigation plan.	☐ Y ■ N	☐ F
c. Documentation to show a mitigation plan is not required.	■ Y ☐ N	☐ F

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.

Questions, Narrative Responses, and Tables	**Check-boxes**	**Follow-Up**

Project-Specific Questions: Controlled Groundwater Areas and Basin Closures

47. Is the project located in the East Valley Controlled Groundwater Area?	☐ Y ■ N	☐ F
a. If yes,		
i. Do you have written approval from (1) Lewis and Clark County Board of Health, (2) Lewis and Clark County Water Quality Protection Bureau, (3) the U.S. Environmental Protection Agency, (4) the Montana State Dept. of Environmental Quality and (5) the Montana State Dept. of Natural Resources and Conservation? If the agencies have established a Technical Advisory Group, prior approval by the Technical Advisory Group satisfies this requirement.	☐ Y ☐ N	☐ F
ii. Is the project in Zone 2?	☐ Y ☐ N	☐ F
i. If yes, provide in the written approval the following recommendations which will also be included as conditions on the appropriation. a. Well design and construction requirements necessary to measure the water level and water quality for any well; b. Water level measurement and water quality sample reporting requirements for any new well; c. Any other requirements necessary to ensure new wells can be operated in a manner consistent with purpose of the EVCGWA.	☐ S	☐ F
iii. Is the project in Zone 1? If yes, a Form 600 cannot be accepted by the Department.	☐ Y ☐ N	☐ F
48. Is the project located in the South Pine Controlled Groundwater Area?	☐ Y ☐ N	☐ F
a. If yes, have you completed an Application for Beneficial Water Use Permit South Pine Controlled Groundwater Area Addendum? The addendum needs to be completed by application submittal.	☐ Y ☐ N	☐ F
49. Is the project located in the Yellowstone Controlled Groundwater Area?	☐ Y ■ N	☐ F
a. If yes, is the use over 35 GPM or 10 AF per year?	☐ Y ☐ N	☐ F
i. If no, this is the incorrect form. Use instead the Yellowstone Controlled Groundwater Area Permit Application (600-YCGA).		
ii. If yes, answer the remaining parts of question 49. A Yellowstone Controlled Groundwater Area Addendum (600 Y over35) will be required with application submittal.		
1. Does the proposed use require a point of diversion with water temperature of 60 degrees Fahrenheit or more?	☐ Y ☐ N	☐ F
2. What is the ground elevation at the point of diversion? _____		☐ F

3. What is the specific conductance at the point of diversion? _____		☐ F
4. If an application is in a basin tributary to a category 3 or 4 stream (generally in or upstream of YNP), provide a report prepared by a professional qualified in the science of groundwater hydrology, verifying that the appropriation is not hydrologically connected to surface flow that is tributary to the reserved portion of category 3 or 4 streams.	☐ S	☐ F
50. Is the project located in one of the Controlled Groundwater Areas listed on the Department's website (https://dnrc.mt.gov/Water-Resources/Water-Rights/Basin-Closures-Stream-Depletion-Controlled-Ground-Water-Areas)?	☐ Y ☐ N	☐ F
a. If yes, list which one and describe how the proposed project meets the requirements of the Controlled Groundwater Area. An application must meet the specific requirements of the Controlled Groundwater Area to be accepted by the Department.	☐ A	☐ F
51. Is the project located in one of the administrative, Department ordered, or legislative closures listed on the Department's website (https://dnrc.mt.gov/Water-Resources/Water-Rights/Basin-Closures-Stream-Depletion-Controlled-Ground-Water-Areas)?	■ Y ☐ N	☐ F
a. If yes, list which one and describe how the proposed project meet the requirements of the closure. An application must meet the specific requirements of the closure to be accepted by the Department. **The project is located in the Grant Creek Basin Closure, a surface water administrative closure. This closure does not preclude applying for groundwater wells. Grant Creek is not connected to the source aquifer, and thus will not be depleted.**	☐ A	☐ F
52. Is the project located in one of the compact closures listed on the Department's website (https://dnrc.mt.gov/Water-Resources/Water-Rights/Basin-Closures-Stream-Depletion-Controlled-Ground-Water-Areas)?	☐ Y ☐ N	☐ F
a. If yes, list which one and describe how the proposed project meet the requirements of the compact closure. An application must meet the specific requirements of the compact closure to be accepted by the Department.	☐ A	☐ F

Project-Specific Questions: Place of Storage

53. Does the proposal include at least one place of storage? If yes, answer questions 54 to 61 for each individual place of storage (use Additional Place of Storage Sheet for additional places of storage). If no, this section is complete, and you can skip to question 62.	☐ Y ■ N	☐ F
54. Provide a map showing the location of the place of storage. Create map on an aerial photograph or topographic map that also includes the following: section corners, township and range, and a north arrow.	☐ S	☐ F
55. Is this application to enlarge an existing reservoir?	☐ Y ☐ N	☐ F
a. If yes, what is the water right number for the existing reservoir? _____		☐ F
56. Is the place of storage located on-stream?	☐ Y ☐ N	☐ F
a. If no, explain the conveyance means to and from the off-stream place of storage and any losses that may occur with that conveyance. _____ _____ _____	☐ A	☐ F
57. What is the capacity of the proposed place of storage or the existing place of storage after it is enlarged? Use bathymetry data, survey, or engineering plans for capacity. Submit the data source used with this form. In lieu of these data sources, use the following equation: *Surface Acres x Maximum Depth (FT) x 0.5 (0.4-0.6 depending on side slope) = Capacity (AF)* _____	☐ A	☐ F
58. Will the place of storage include primary and/or emergency spillways? Preliminary design specifications for primary and emergency spillways must be included with application submittal (ARM 36.12.113).	☐ Y ☐ N	☐ F
59. Will the place of storage be lined?	☐ Y ☐ N	☐ F
60. What is the annual net evaporation of water from the place of storage using the standards in ARM 36.12.116(1)? Gridded net evaporation layer is available from DNRC upon request. _____		☐ F
61. Is the place of storage capacity calculated to be greater than 50 acre-feet?	☐ Y ☐ N	☐ F
a. If yes, have you made an application to the DNRC Water Operations Bureau for a determination of whether the dam or reservoir is a high-hazard dam?	☐ Y ☐ N	☐ F

Project-Specific Questions: Ditch-Specific Questions

62. Does the proposal include at least one conveyance ditch? If yes, answer question 63 and, for each ditch, answer question 64. If no, this section is complete, and you can skip to question 65.	☐ Y ■ N	☐ F

63. Submit a Ditch Map that shows every ditch conveying water for the proposed project. Label the ditch name(s), POD(s), the POU(s), and the ditch measurement locations (requested in question 64.c). The map should be created on an aerial photograph or topographic map with the following: section corners, township and range, and a north arrow.	☐ S	☐ F
64. For each conveyance ditch, answer the following. If there is more than one conveyance ditch, use an Additional Ditch Sheet for each additional conveyance ditch.		
a. What is the ditch name? _____		☐ F
b. What is the distance water will be carried by the conveyance ditch? Only include segments between the POD and start of the POU; do not include segments within the POU. _____ _____	☐ A	☐ F
c. 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 63.	☐ S	☐ F

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

d. What is a reasonable Manning's n value? List the factors used for estimation. If you do not know this value, please work through estimation with the Department. _____ _____	☐ A	☐ F
e. What type of soils compose the proposed conveyance ditch? For lined ditches, write "lined" instead. _____ _____	☐ A	☐ F
f. Are other water rights conveyed by the conveyance ditch?	☐ Y ☐ N	☐ F
i. If yes,		
1. What are the water right numbers? _____ _____	☐ A	☐ F

2. What is the sum of the flow rates (GPM or CFS) for water rights conveyed? _____ _____ _____	☐ A	☐ F
3. Provide a map with your best estimate of where the existing POUs begin for the other water rights conveyed by the conveyance ditch for all POUs between the proposed POD and your proposed POU. Create map on an aerial photograph or topographic map that also includes the following: section corners, township and range, and a north arrow.	☐ S	☐ F

Project-Specific Questions: Water Marketing

65. Does the proposal include water marketing? If yes, please answer the questions in this section (questions 66 to 71). If no, this section is complete, and you can skip to question 72.	☐ Y ■ N	☐ F
66. Identify the flow rate (GPM or CFS) and volume (AF) of water that will be marketed. _____		☐ F
67. Will the marketed water return to the source?	☐ Y ☐ N	☐ F
a. Explain how this determination was made. _____ _____ _____	☐ A	☐ F
68. For what purpose(s) will the marketed water be used? _____ _____	☐ A	☐ F
69. How will you control or limit access to the water? _____ _____	☐ A	☐ F
70. Do you have contracts for the entire volume and flow rate sought?	☐ Y ☐ N	☐ F
71. Provide a service area map. Create map on an aerial photograph or topographic map and shows the following: general service area boundary, section corners, township and range, and a north arrow.	☐ S	☐ F

Non-Mandatory Questions for Criteria Analysis

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

Adverse Effect

Questions, Narrative Responses, and Tables	Check-boxes
72. Do you have evidence that water is legally available in the proper flow rate, volume, and timing?	☐ Y ■ N
73. If water is not found to be legally available for part or all the proposed period of diversion, what is the plan to address this with the permitting process? Mitigation on a change application to meet depletions to Clark Fork River - Flynn Lowney.	☐ A
74. Describe your plan to ensure that existing water rights will be satisfied during times of water shortage. Shut off pump - provide plan in application	☐ A
75. Explain how you can control your diversion in response to call being made. See above	☐ A
76. Are you aware of any calls that have been made on the source of supply or depleted surface water source?	☐ Y ■ N
a. If yes, explain.	☐ A
77. Does a water commissioner distribute water or oversee water distribution on your proposed source or depleted surface water source?	☐ Y ■ N

Adequate Diversion Means and Operation

78. Provide a diagram of how you will operate your system from the point of diversion to the place of use.	☐ S
79. Describe specific information about the capacity of the diversionary structure(s). This may include, where applicable: pump curves and total dynamic head calculations, headgate design specifications, and dike or dam height and length.	☐ A

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

89. Provide a plan of operations. _____ _____ _____	☐ A
90. Can the plan of operations deliver the flow rate and volume for the beneficial use being requested?	☐ Y ☐ N
91. Do you have any plans to measure your diversion and use?	☐ Y ☐ N
a. If yes, describe the plan and the type of measurements you will take. _____ _____	☐ A

Beneficial Use

92. Why is the requested flow rate and volume the amount needed for the purpose? _____ _____	☐ A
93. Does the Department have a standard for the purposes for which water is used? Department standards can be found in ARM 36.12.112.	☐ Y ☐ N
a. If yes, does the proposed beneficial use fall within Department standards?	☐ Y ☐ N
94. If no standard, or if proposed beneficial use falls outside of Department standards, explain how the use is reasonable for the purpose. _____ _____ _____ _____	☐ A
95. Will your proposed project be subject to DEQ requirements for a public water supply (PWS) system or Certificate of Subdivision Approval (COSA)?	☐ Y ☐ N
a. If yes,	
i. Have you researched or consulted with DEQ regarding those requirements?	☐ Y ☐ N
96. Are you proposing to use surface water for in-house domestic use?	☐ Y ☐ N
a. If yes, does a COSA exist for the proposed place of use?	☐ Y ☐ N
i. If yes, please submit the COSA.	☐ S
ii. If no, have you researched or consulted with DEQ regarding their requirements?	☐ Y ☐ N

Possessory Interest

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

PREAPPLICATION MEETING AFFIDAVIT & CERTIFICATION

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

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

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

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

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

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

David Miller — 10/3/24
Applicant Signature — Date

Susan Edwards-Miller — 10/3/24
Applicant Signature — Date

10/5/24
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

Follow up on place of use acres, irrigation volume	
Follow up with new/updated map	
Submit variance request for aquifer testing	
Follow-up on questions 5, 7, 8, 30, 31, 32, 42	
DNRC will send deficiencies from 633 to Patrick Doyle	

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 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. Or, 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

Department Signature Date

MONTANA WELL LOG REPORT

This well log reports the activities of a licensed Montana well driller, serves as the official record of work done within the borehole and casing, and describes the amount of water encountered. This report is compiled electronically from the contents of the Ground Water Information Center (GWIC) database for this site. Acquiring water rights is the well owner's responsibility and is NOT accomplished by the filing of this report.

Other Options

Return to menu
Plot this site in State Library Digital Atlas
Plot this site in Google Maps

Site Name: MILLER, SUSAN & DAVID
GWIC Id: 324678

Section 1: Well Owner(s)

1) MILLER, SUSAN & DAVID (MAIL)
6610 MULLAN RD
MISSOULA MT 59808 [10/25/2022]
2) MILLER, SUSAN & DAVID (WELL)
6610 MULLEN RD
MISSOULA MT 59808 [10/25/2022]

Section 2: Location

Township	Range	Section	Quarter Sections
13N	20W	14	SW¼ SE¼

County
MISSOULA

Geocode

Latitude	Longitude	Geomethod	Datum
46.879546	-114.089772	TRS-SEC	NAD83

Ground Surface Altitude **Ground Surface Method** **Datum** **Date**

Addition **Block** **Lot**

Section 3: Proposed Use of Water

IRRIGATION (1)

Section 4: Type of Work

Drilling Method: ROTARY
Status: NEW WELL

Section 5: Well Completion Date

Date well completed: Sunday, November 20, 2022

Section 6: Well Construction Details

Borehole dimensions

From	To	Diameter
0	100	8

Casing

From	To	Diameter	Wall Thickness	Pressure Rating	Joint	Type
-2	100	8.6	0.25		WELDED	A53B STEEL

Completion (Perf/Screen)

From	To	Diameter	# of Openings	Size of Openings	Description
90	100	8.6		1/4	HOLTE PERFORATOR SLOTS

Annular Space (Seal/Grout/Packer)

From	To	Description	Cont. Fed?
0	40	BENTONITE	Y

Section 7: Well Test Data

Total Depth: 100
Static Water Level: 5
Water Temperature:

Air Test *

250 gpm with drill stem set at 80 feet for 1 hours.
Time of recovery 1 hours.
Recovery water level 5 feet.
Pumping water level _ feet.

** During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.*

Section 8: Remarks

Section 9: Well Log

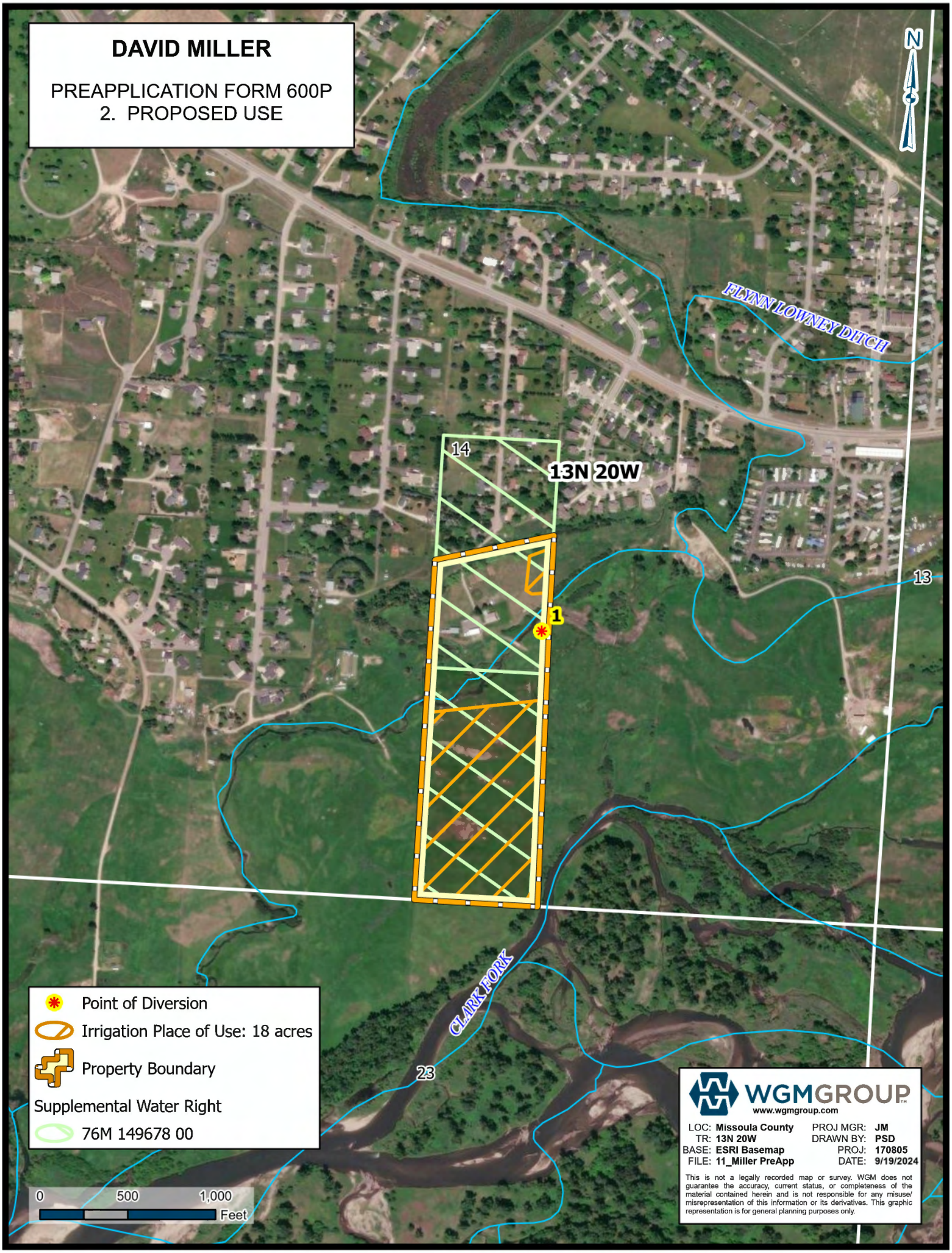
Geologic Source
Unassigned

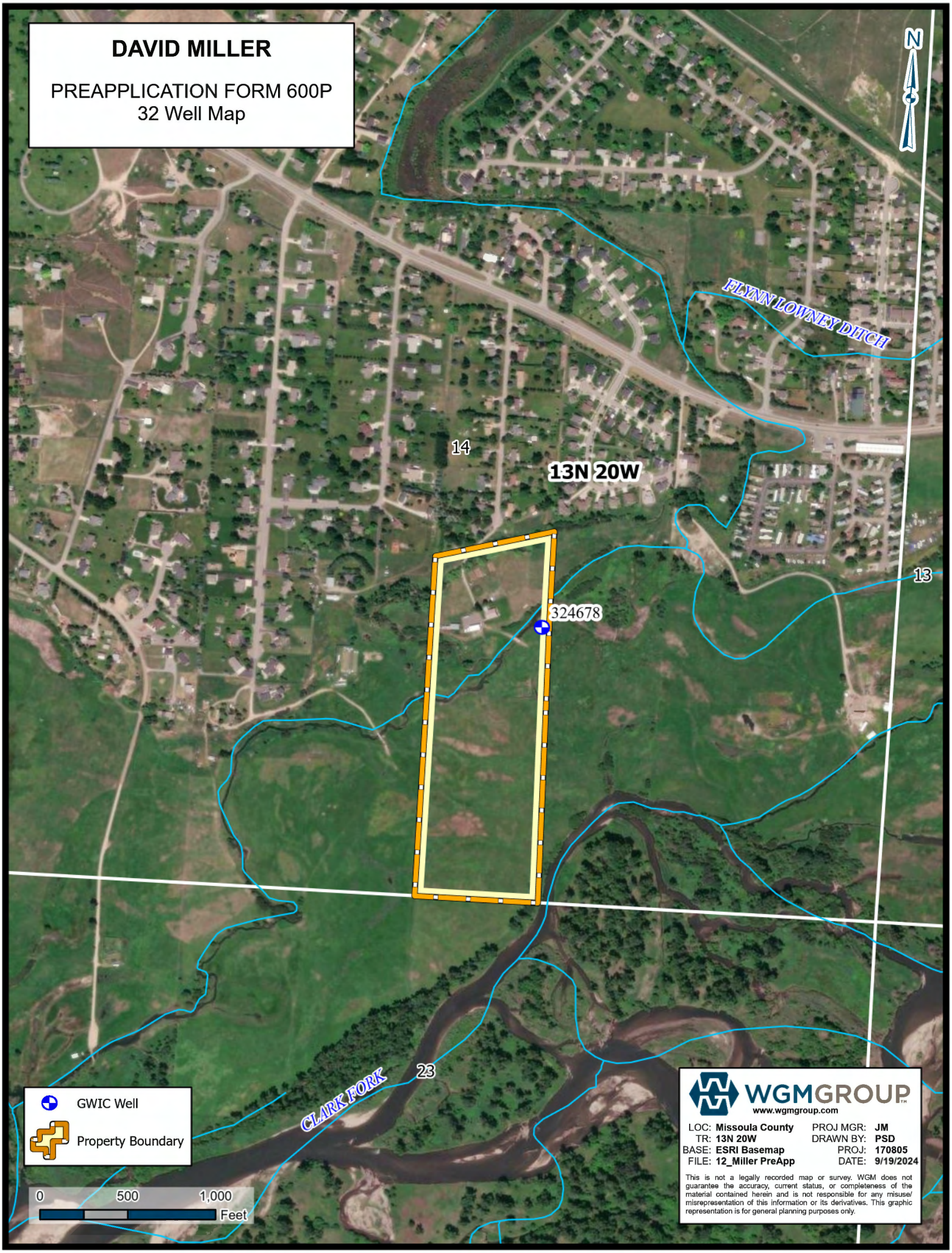
From	To	Description
0	1	TOP SOUL
1	60	LARGE GRAVELS, SAND
60	70	GREY CLAY, SAND, SEAMS OF GRAVEL
70	100	LARGE GRAVELS, SOME SILT, WATER

Driller Certification

All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Name: COLE BICK
Company: ACE DRILLING
License No: WWD-774
Date Completed: 11/20/2022


DAVID MILLER
PREAPPLICATION FORM 600P
2. PROPOSED USE
N
FLYNN LOWNEY DITCH
14
13N 20W
13
1
CLARK FORK
23
Point of Diversion
Irrigation Place of Use: 18 acres
Property Boundary
Supplemental Water Right
76M 149678 00
0
500
1,000
Feet
WGMGROUP
www.wgmgroup.com
LOC: Missoula County
TR: 13N 20W
BASE: ESRI Basemap
FILE: 11_Miller PreApp
PROJ MGR: JM
DRAWN BY: PSD
PROJ: 170805
DATE: 9/19/2024
This is not a legally recorded map or survey. WGM does not guarantee the accuracy, current status, or completeness of the material contained herein and is not responsible for any misuse/ misrepresentation of this information or its derivatives. This graphic representation is for general planning purposes only.


DAVID MILLER
PREAPPLICATION FORM 600P
32 Well Map
N
FLYNN LOWNEY DITCH
14
13N 20W
13
324678
23
CLARK FORK
GWIC Well
Property Boundary
0
500
1,000
Feet
WGMGROUP
www.wgmgroup.com
LOC: Missoula County
TR: 13N 20W
BASE: ESRI Basemap
FILE: 12_Miller PreApp
PROJ MGR: JM
DRAWN BY: PSD
PROJ: 170805
DATE: 9/19/2024
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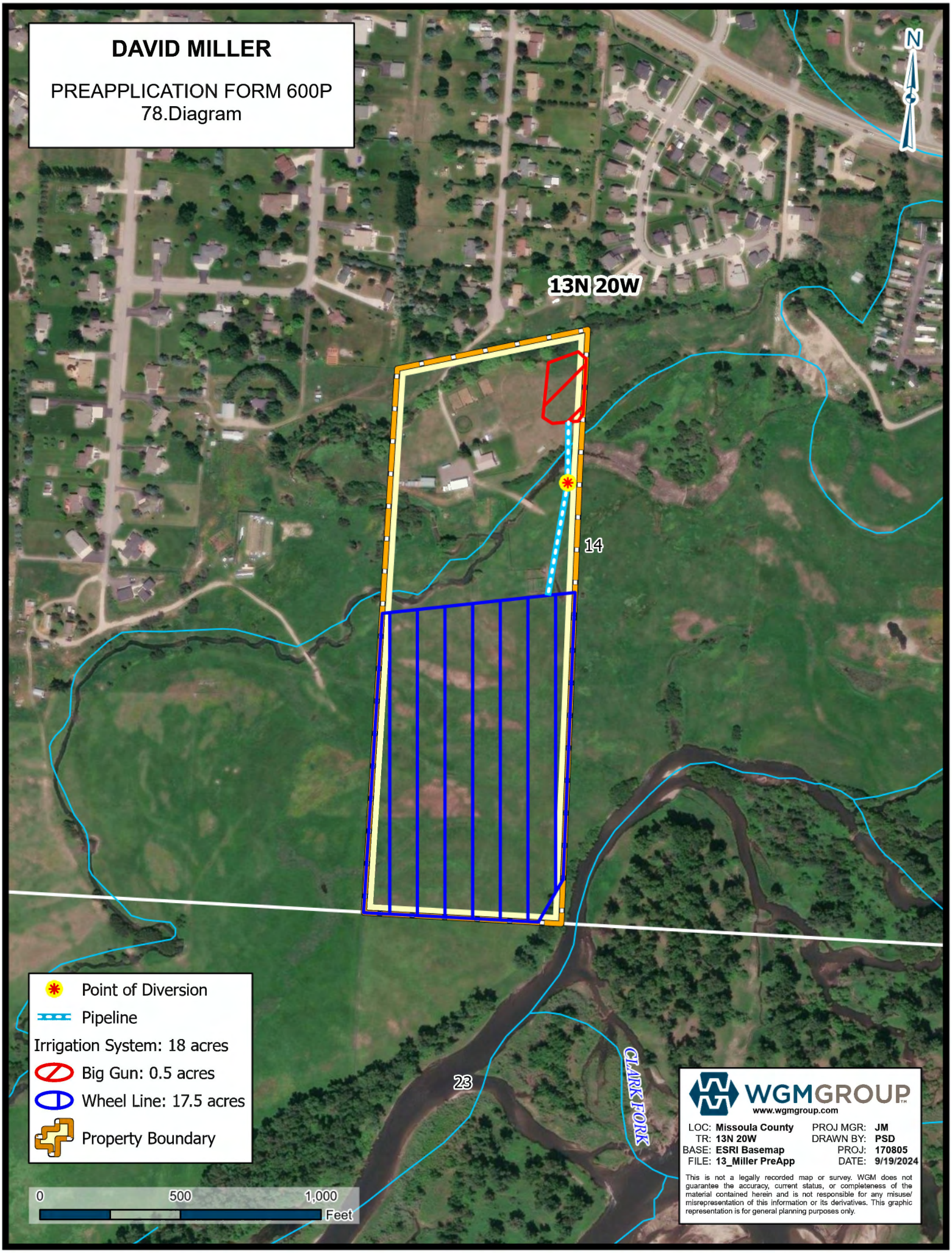
DAVID MILLER
PREAPPLICATION FORM 600P
78.Diagram
N
13N 20W
14
23
CLARK FORK
Point of Diversion
Pipeline
Irrigation System: 18 acres
Big Gun: 0.5 acres
Wheel Line: 17.5 acres
Property Boundary
0
500
1,000
Feet
WGMGROUP
www.wgmgroup.com
LOC: Missoula County
TR: 13N 20W
BASE: ESRI Basemap
FILE: 13_Miller PreApp
PROJ MGR: JM
DRAWN BY: PSD
PROJ: 170805
DATE: 9/19/2024
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