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

May 23, 2025

BRUCE AND ILENE PAULSEN
8 BALDY VIEW LN
PLAINS MT 59859-9249

Subject: Correct and Complete Application for Beneficial Water Use Permit Application No. 76N 30163571

Dear Applicant,

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

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

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

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

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

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

Sincerely,

Travis Wilson
Water Resource Specialist
Kalispell Regional Office

APPLICATION AMENDMENT FORM

ARM 36.12.1401

Form No. 655 *(Revised 01/2024)*

RECEIVED
05/18/2025
DNRC
KALISPELL WATER RESOURCES

Application # 76N 30163571

Rec'd Date 05/18/2025

INFORMATION

Use this form to modify an element of a permit or change application.

An applicant may modify an element of a permit or change application prior to the department's issuance of a draft preliminary determination. If the draft preliminary determination is to deny or to grant with modifications, the applicant may modify their application after the draft preliminary determination has been issued, only if they have been granted an extension of time under §85-2-307, MCA, and may only modify it one time under this provision (ARM 36.12.1401).

Modification of an element will reset the statutory timelines for application processing identified in §85-2-302 and -307, MCA. If the applicant completed a preapplication meeting and the modification does not require the department to update its technical analyses, the reduced preapplication timelines shall still apply. If the applicant completed a preapplication meeting and the modification requires the department to update any of its technical analyses, the reduced preapplication timelines shall no longer apply. In addition to resetting timelines, the priority date of a permit application will be changed to the date the last modification was made if a modification changes the nature or scope of the permit application information (ARM 36.12.1401).

Application Number 76N 30163571

Applicant Name PAULSEN, BRUCE & ILENE

Name of individual completing Form, (*If other than applicant*)

Name _____

Mailing Address _____ City _____ State _____ Zip _____

Phone Number _____ Email Address _____

I am amending the following elements: *(please check all that apply)*

- ☐ Purpose
- ☐ Point of diversion
- ☐ Place of use
- ☑ Flow rate
- ☐ Period of diversion
- ☐ Period of use
- ☐ Volume
- ☐ Other: _____

Describe in detail the proposed amendment(s) checked above. Use additional sheets if necessary.

We modified our requested flow rate from 35 gallons per minute to 30 gallons per minute through our April 25, 2025 response to the DNRC's deficiency letter dated December 26, 2024. This change occurred because we changed the pump and conveyance system we plan to use. We are not modifying any other element of our request.

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

Printed Name BRUCE PAULSEN

Applicant / Representative Signature Bruce Paulsen **Date** 05/18/2025

Printed Name ILENE PAULSEN

Applicant / Representative Signature Ilene Paulsen **Date** 05/18/2025

NOTE: Form must be signed by the applicant or an individual with legal power of attorney representing applicant

Wilson, Travis

From: Ilene Paulsen via DocHub <no-reply@dochub.com>
Sent: Sunday, May 18, 2025 2:00 PM
To: Wilson, Travis
Subject: [EXTERNAL] 655.pdf
Attachments: 655.pdf

DocHub

Ilene Paulsen sent you a document 655.pdf

Ilene Paulsen
ibpaulsen93@gmail.com

> Please see the attached document.
>
> Sent from my DocHub [dochub.com]

Liquid Friction Pressure Loss

Pressure Loss (psi): 4.6 **Head Loss (ft):** 10.6

Line Number:	**Piping Length (ft):** 25
Date: 5/16/2025	
Nominal Pipe Size: 1	
Pipe Schedule: SCH 40	
Flow Rate (gpm): 30	
Viscosity (cP): 1	
Specific Gravity (water=1): 1	
Temperature (F): 70	
Pipe Roughness (ft): 0.000016	
Actual Pipe ID (in.): 1.049	
Fluid Velocity (ft/sec): 11.14	
Reynolds Number: 90446	
Flow Region: Turbulent	
Friction Factor: 0.019	
Overall K: 5.51	

'Copy and Paste' Pressure Loss or Head Loss into other applications
If any output is NaN click back button and make sure all Fluid and Piping and Valves and Fittings fields contain values, enter 0 if necessary

RECEIVED
04/25/2025
DNRC
KALISPELL WATER RESOURCES

April 25, 2025

Travis Wilson
Water Resource Specialist
Kalispell Regional Water Resource Office

Subject: Deficiency Responses for Beneficial Water Use Permit Application No. 76N 30163571

Dear Mr. Wilson,

In response to your Deficiency Letter dated December 26, 2024, I am providing additional information requested by your office for the following sections:

Adverse Effect

Q30*: If the legal availability criteria assessment finds that water is not legally available throughout the entire proposed period of diversion, do you have a contingency plan to address this?*

If water is not legally available throughout the entire proposed period of diversion, upon entering that period of diversion when water is not legally available, we (applicants) will cease pumping water out of Lynch Creek and remove the pump intake line from the creek. We (applicants) will revert back to using existing groundwater rights (76N 14802-00) and well pump for domestic use to irrigate lawn and garden.

Q32: *Explain how you can control your diversion in response to a call being made.*

In response to a valid call for water made by a senior water rights owner on the water source, we (applicants) will cease pumping water out of Lynch Creek and remove the pump intake line from the creek.

Q35: *Describe your plan to ensure existing water rights will be satisfied during times of water shortage.*

To ensure existing senior water rights will be satisfied during times of water shortage, we (applicants) will limit our water usage to the maximum volume permitted and time frames identified on the water certificate. Upon receiving a valid call for water made by a senior water rights owner on the water source, we (applicants) would cease pumping water out of Lynch Creek and remove the pump intake line from the creek.

Adequate Means of Diversion and Operation

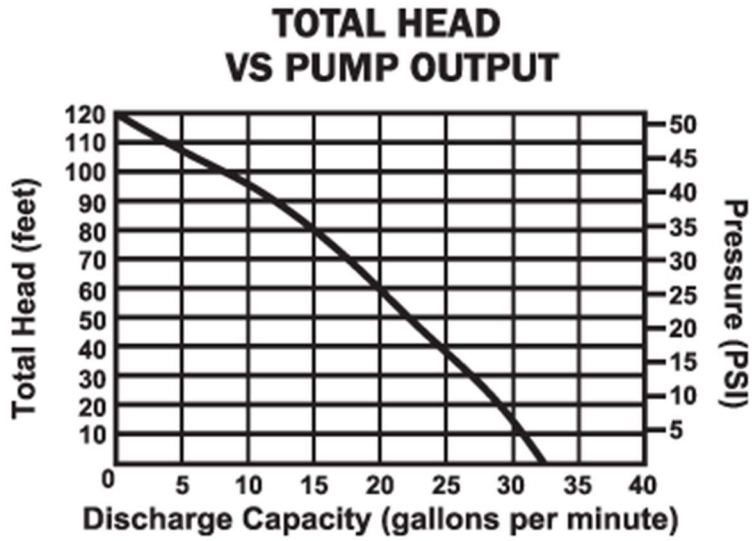
Q39: *Describe specific information about the capacity of all proposed diversionary structures. This may include, where applicable: pump curves and total dynamic head calculations, headgate design specifications, and dike or dam height and length.*

The following proposed water conveyance system is an amendment to our original proposal and was discussed and approved for submission after discussions between the applicant and Travis Wilson, Water Resource Specialist, on April 24, 2025. Changes are to the means of conveyance only and there are no changes to the volume or period of use originally requested.

The proposed centrifugal pump will be a Honda WX10T 1-inch aluminum water pump with the following specs: displacement of 25cc; a maximum discharge capacity of 32 gallons/minute; maximum pressure of 52 psi. Intake: 15-feet of 1-inch diameter rubber line and screened, submersed intake with suction head of approximately 3 feet to the pump; output: 10-feet of 1-inch diameter rubber line from the pump with approximate total discharge lift of 4-5 feet into three 400-gallon portable plastic water tanks, one mounted in a pickup bed and two mounted on a flatbed trailer. Water tanks will be transported by vehicle/trailer from point of diversion to point of use. The same Honda WX10T water pump will be used to pump water from the portable water tanks through 1-inch diameter rubber lines varying from 30'-70' in length to rotating impact sprinklers and oscillating sprinklers to irrigate garden and lawn areas. The Honda WX10T has a 3-position discharge port to adjust the flow rate if necessary.

We currently use our well system pump which produces only 5 gpm to irrigate the garden and lawn areas with sprinklers but the flow is weak and discharge decreases rapidly after only an hour or two of operation. With a maximum discharge capacity of 32 gpm, the diversion flow rate is less than the 35 gpm diversion limit associated with Avista's Noxon Reservoir water rights.

The nominal total dynamic head of approximately 8 feet and total water line length (intake plus output lines) of approximately 25 feet will provide an estimated discharge of 30 gpm of water as indicated on the performance curve for the WX10T water pump below.



40: *Is the diversion capable of providing the full amount of water requested through the period of diversion?*

At approximately 30 gpm flow rate from the source into tanks and from the tanks into the sprinklers, the diversion is capable of providing the full amount of water requested through the period of diversion.

Q41: *Describe the size and configuration of infrastructure to convey water from all proposed points of diversion to all proposed places of use. This may include, where applicable: ditch capacity and/or pipeline size and configuration.*

The proposed centrifugal pump will be a Honda WX10T 1-inch aluminum water pump with the following specs: displacement of 25cc; a discharge capacity of 32 gallons/minute; maximum pressure of 52 psi. Intake: 15-feet of 1-inch diameter rubber line and screened, submersed intake with suction head of approximately 3 feet to the pump; output: 10-feet of 1-inch diameter rubber line from the pump with approximate total discharge lift of 4-5 feet into three 400-gallon portable plastic water tanks, one mounted in a pickup bed and two mounted on a flatbed trailer. Water tanks will be transported by vehicle/trailer from point of diversion to point of use. The same Honda WX10T water pump will be used to pump water from the portable water tanks through 1-inch diameter rubber lines varying from 30'-70' in length to rotating impact sprinklers and oscillating sprinklers to irrigate garden and lawn areas. The Honda WX10T has a 3-position discharge port to adjust the flow rate if necessary.

Q43: *Is the proposed conveyance structure capable of providing the required flow and volume, plus any conveyance losses?*

Due to the nominal total dynamic head and short water line lengths, the estimated flow rate of approximately 30 gpm, the proposed conveyance structure is capable of providing the required flow and volume for garden and lawn irrigation, which is currently accomplished with 5gpm but is weak and of limited duration.

<u>Honda WX10T Water Pump Specifications</u>

Engine: GX25

Displacement: 25cc

Bore and stroke: 1.4" x 1.0"

Compression Ratio: 8.0:1

Oil Alert: N/A

Pump Type: General purpose Centrifugal Self-priming

Volute: Aluminum

Impeller: Aluminum

Mechanical Seal (Pump case / impeller): Carbon/Ceramic

Priming time: 80 sec. at 16.4 ft.

Drive system: Direct

Discharge capacity: 32 gal./min.

Suction port diameter: 1.0" NPT

Discharge port diameter: 1.0" NPT

Total head lift: 121 ft.

Suction head lift: 26 ft.

Maximum pressure: 52 psi

Solids handling: N/A

Dimensions (LxWxH): 13.4"x8.7"x11.6"

Dry weight: 13 lbs.

Fuel Capacity: 0.56 qt

Run Time @ Max Discharge: 0.9 hr

Strainer Part: #78325-YB0-711

Residential Warranty: 2 years

Sincerely,

Bruce & Ilene Paulsen

Wilson, Travis

From: Ilene Paulsen <ibpaulsen93@gmail.com>
Sent: Friday, April 25, 2025 4:25 PM
To: Wilson, Travis
Subject: Re: [EXTERNAL] Water conveyance
Attachments: DNRC Deficiency Letter Response 04252025.docx

Hello Travis,

Attached is additional information in response to your request outlined in Deficiency Letter dated December 26, 2024 for Beneficial Water Use Permit Application No. 76N 30163571.

Respectfully submitted,
Bruce & Ilene Paulsen

On Thu, Apr 24, 2025 at 12:43 PM Wilson, Travis <Travis.Wilson@mt.gov> wrote:

> Hi Bruce,
>
> Just a quick message to let you know I got your email. I am admittedly a little confused with our new process's application amendment allowances, but I will get back to you shortly once I have dug into our manual and discussed the new amendment allowances with my supervisor.
>
> Please standby,
> -Travis
>
> Travis Wilson | Water Resource Specialist
> Water Rights Bureau, New Appropriations, Kalispell Regional Office
> Montana Department of Natural Resources and Conservation
> 655 Timberwolf Pkwy, Ste. 4, Kalispell, MT 59901
> DESK: 406-752-2746 EMAIL: Travis.Wilson@mt.gov
> Website | Facebook | X (Twitter) | Instagram
> How did we do? Let us know here: Feedback Survey
> Interested in Montana stream flows? Check out our Stream and Gage Explorer:
> https://gis.dnrc.mt.gov/apps/StAGE/
>
> -----Original Message-----
> From: Ilene Paulsen <ibpaulsen93@gmail.com>
> Sent: Wednesday, April 23, 2025 8:25 PM
> To: Wilson, Travis <Travis.Wilson@mt.gov>
> Subject: [EXTERNAL] Water conveyance
>
> Hello Travis,
> I have been reading and researching water conveyance systems and calculations and reaching a road block. I believe the lengthy distance and total dynamic head will not be overcome with the system I was

envisioning. Learning some things that seem to be counterintuitive, such as high gpm rates resulting in significantly higher friction losses than lower gpm rates, and smaller diameter lines having significantly higher friction losses than larger diameter lines for the same him rate. Therein lies my dilemma.

I wanted to use 2" diameter lines as I already have a few hundred feet of line that size I was hoping to incorporate into the system. Most 2" pumps also have high gpm flow rates resulting in insufficient discharge due to distance/head/friction losses.

I was considering the 2" Duromax XP702HP water pump at 70 gpm with a 262' lift capacity but could find no performance curves online. I called the manufacturer and they did not have any performance data. Frustrating!

I was considering an alternative and want to know if I can change the method of conveyance at this stage in the process just to meet the rapidly approaching deadline.

Using a less than 35 gpm pump (such as Honda WX10T at 32 gpm) and pump directly into pickup bed water tanks, either in a pickup or on a flatbed trailer, right at the point of diversion. Total head would be about 5'-6' and line length about 10', resulting in minimal friction losses. Would then use a relatively low flow rate (10-30 gpm) water pump to pump directly from the water tanks through sprinklers.

We currently use our well pump to run sprinklers and it only pumps at about 5 gpm and decreases considerably after an hour or two.

Please let me know if DNRC would consider this method as acceptable and I will revise our application.

Respectfully,
Bruce Paulsen

Sent from my iPhone

DEPARTMENT OF NATURAL RESOURCES
AND CONSERVATION

WATER RESOURCES DIVISION – KALISPELL REGIONAL OFFICE
655 TIMBERWOLF PKWY, SUITE 4, KALISPELL, MONTANA 59901 PHONE: (406) 752-2288 FAX: (406) 752-2873

GREG GIANFORTE, GOVERNOR

STATE OF MONTANA

DIRECTOR'S OFFICE: (406) 444-2074
FAX: (406) 444-2684
http://dnrc.mt.gov

PO BOX 201601
HELENA, MONTANA 59620-1601

December 26, 2024 Corrected response due date on pg. 3 on 01.06.2025

BRUCE AND ILENE PAULSEN
8 BALDY VIEW LN
PLAINS MT 59859-9249

Subject: Deficiency Letter for Beneficial Water Use Permit Application No. 76N 30163571

Dear Paulsens,

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 Administrative Rules of Montana (ARM) 36.12.1501(1) and §85-2-302(5)(b), Montana Code Annotated (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):

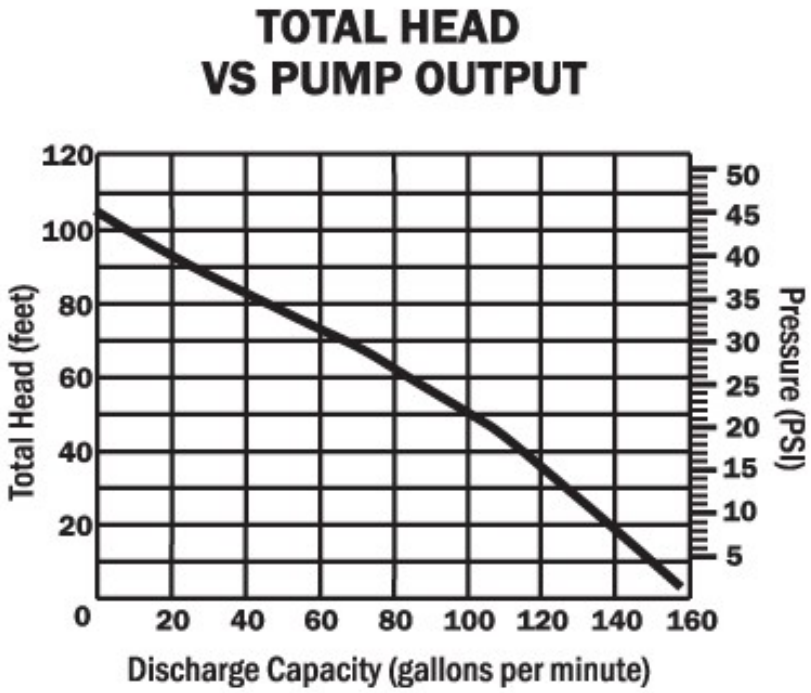
Adverse Effect

- Form 600 – Questions 30, 32, and 35.
  Q30: *If the legal availability criteria assessment finds that water is not legally available throughout the entire proposed period of diversion, do you have a contingency plan to address this?*
  Q32: *Explain how you can control your diversion in response to a call being made.*
  Q35: *Describe your plan to ensure existing water rights will be satisfied during times of water shortage.*
  - In your responses to these three questions, you discuss your potential actions after receiving "a call from MT DNRC." Under Montana's Prior Appropriation Doctrine, it is not the DNRC (in the majority of cases) who would be making call on your water right in times of water shortage, it would be water right owners on the water source with senior priority dates to yours. Please acknowledge that you would respond to a valid call for water made by a senior water right owner in your response to this letter.

Adequate Means of Diversion and Operation

- Form 600 – Question 39. *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.*
  - You did not provide enough information for the Department to determine the capacity of your diversion. Please provide a total dynamic head (TDH) for your diversion/conveyance system and compare that to your pump's pump curve (below) to determine if the pump is capable of diverting and conveying the requested flow rate and volume under your system's specific head conditions.

- The TDH of your system is the sum of the elevation head (vertical distance between the water surface elevation and the discharge elevation), friction head (friction losses caused by the conveyance piping and fittings; this is generally a function of the pipe/fitting internal diameter, length, and material), and output pressure head (the maximum output pressure the system). I have some resources I can send you to help you understand TDH and how to calculate it. If you would like me to direct you to these resources please ask.
- I found the following pump performance curve on the manufacturer's website for the Honda WB20 water pump you plan to use:



Source: https://powerequipment.honda.com/pumps/models/wb20#Performance

- Form 600 – Question 40. *Is the diversion capable of providing the full amount of water requested through the period of diversion?*
  - See Question 39. You did not provide enough information for the Department to determine the capacity of your diversion.

- Form 600 – Question 41. *Describe the size and configuration of infrastructure to convey water from all proposed points of diversion to all proposed places of use. This may include, where applicable: ditch capacity and/or pipeline size and configuration.*
  - Please go into more detail in your description of your water conveyance infrastructure (water line material, etc.). This information will be also be necessary for you to calculate your TDH (see Question 39).

- Form 600 – Question 43. *Is the proposed conveyance infrastructure capable of providing the required flow and volume, plus any conveyance losses?*
  - See Question 39. You did not provide enough information for the Department to determine the capacity of your diversion.

- Form 600 – Question 45. *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, output and configuration of sprinkler heads and pipelines within the place of use.*
    - You state that water will be pumped to storage tanks and then gravity fed to soaker hoses and drip irrigation lines in your responses to Questions 39 and 41. What are the sizes of these tanks? Are the sprinklers also gravity fed from the tanks, or will they be directly supplied by the pump? Will the tanks provide enough gravity head to operate the sprinklers and/or drip emitters? What pressure do the sprinkler heads need to operate, what is their output per head, and how many heads will be operated at once? Please expand your description of how water is delivered within the place of use in a way that provides the Department with enough information to assess the adequacy of your system at its peak design capacity.

****

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 Kalispell Regional Office by April 25, 2025. 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.

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.

Please contact me if you have any questions.

Sincerely,

Travis Wilson
Water Resource Specialist
Kalispell Regional Water Resource Office
(406) 752-2746
Travis.Wilson@mt.gov

APPLICATION FOR BENEFICIAL WATER USE PERMIT

§ 85-2-302

Form No. 600 *(02/2024)*

For Department Use Only

RECEIVED
DNRC Water Resources

DEC 0 4 2024

Kalispell Unit

Application # 30163571 Basin 76N
Priority Date 12/4/24 Time 12:30 AM/PM
Rec'd By JS
Fee Rec'd $ 700- Check # 1013
Deposit Receipt # KLU2508506
Payor PAULSEN, BRUCE P/ILENE L
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)).

Applicant Information: *Add more as necessary.*

Applicant Name Bruce Paulsen
Mailing Address 8 Baldy View Lane City Plains State MT Zip 59859
Phone Numbers: Home _____ Work 406-210-1843 Cell 406-303-1970
Email Address ibpaulsen93@gmail.com

Applicant Name Ilene Paulsen
Mailing Address 8 Baldy View Lane City Plains State MT Zip 59859
Phone Numbers: Home _____ Work _____ Cell 406-303-1972
Email Address ibpaulsen93@gmail.com

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

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

Contact/Representative is: X Applicant ___ Consultant ___ Attorney ___ Other
Contact/Representative Name Bruce Paulsen
Mailing Address 8 Baldy View Lane City Plains State MT Zip 59859
Phone Numbers: Home _____ Work 406-210-1843 Cell 406-303-1970
Email Address ibpaulsen93@gmail.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.*

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 checked 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. 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 "see attachment" must be placed on this form. For tables on this form, circle correct unit at header of column when table has unit options. For tables in attachments, label all units.

PREAPPLICATION AND TECHNICAL ANALYSIS INFORMATION

1. ■ **Y** ☐ **N** Did you have a preapplication meeting AND complete a Form 600P Permit Preapplication Meeting Form?

IF QUESTION 1 IS YES,

2. ▣ **Y** ☐ **N** Did you elect on Form 600P to have the Department conduct Technical Analysis?

3. ☐ **Y** ■ **N** Has any element of the application changed from Form 600P or the Technical Analysis conducted as part of the preapplication process? A Technical Analysis Addendum (Form 600-TAA) is required if changes have occurred.

4. Submit the following items:

4.1. ■ **S** Technical Analysis you would like the Department to use to conduct criteria assessment.

4.2. ☐ **S** ■ **NA** Scientific Credibility Review, if applicable.

4.3. ☐ **S** ■ **NA** Technical Analysis Addendum (Form 600-TAA), if applicable, per question 3.

IF QUESTION 1 IS NO,

5. ☐ **S** Submit the Technical Analysis Addendum (Form 600-TAA).

6. ☐ **Y** ☐ **N** Do you elect to have the Department conduct Technical Analysis?

6.1. ☐ **S** If no, submit all the required Technical Analyses. See the Technical Analysis Guide for more information.

APPLICATION ADDENDA AND REVIEW

7. ☐ **S** ■ **NA** If your application is for groundwater 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).

8. ☐ **S** ■ **NA** If your application is for groundwater and one or more of your points of diversion are in a Basin Closure Area, then you must comply with the requirements of §85-2-360. If you elected to conduct Technical Analysis, you must submit the Hydrogeologic Report Addendum (Form 600-HRA). If you did not have a preapplication meeting AND complete a Form 600P Permit Preapplication Meeting Form, you must submit the Hydrogeologic Report Addendum (Form 600-HRA). If you had a preapplication

meeting, completed a Form 600P Permit Preapplication Meeting Form, and elected DNRC to conduct Technical Analysis, you do not need to submit Form 600-HRA because the Department's Technical Analysis, which you must submit along with this application, meets the requirements of §85-2-360.

9. ☐ **S** ■ **NA** If one or more of your points of diversion are in a Controlled Groundwater Area, then submit the Controlled Groundwater Area Addendum (Form 600-CGWA) and all its required attachments.

10. ☐ **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).

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

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

13. ☐ **S** ■ **NA** If the proposed purposes include marketing or selling water, then submit the Water Marketing Purpose Addendum (Form 600/606-WMA).

14. ☐ **S** ■ **NA** If the project is in designated sage grouse habitat, then submit a review letter from the Montana Sage Grouse Habitat Conservation Program (https://sagegrouse.mt.gov).

15. ☐ **Y** ☐ **N** ■ **NA** You must provide a written notice of the application to each owner of an appropriation right sharing the point of diversion or means of conveyance (e.g., canal, ditch, flume, pipeline, or constructed waterway). Have you sent this notice to all applicable parties? Your application cannot be deemed correct and complete until you have sent this notice pursuant to §85-2-302(4)(c), MCA.

PURPOSE AND DIVERSION INFORMATION

16. ☐ **Y** ■ **N** Is the proposed use temporary?

16.1. If yes, when will the appropriation cease? _____

17. Is the proposed source surface water or groundwater? Surface water

18. What is the source name? Lynch Creek

19. ■ **S** Attach a map utilizing 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 facilities and or routes, all proposed places of storage, and places of use for all overlapping water rights.

20. 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 or CFS)*	**Volume** *(Acre-Feet)*
Lawn and garden	Pump	0.343	05/01-09/30	05/01-09/30	35 GPM	0.858
				Total Flow Rate and Volume Required	35 GPM	

POINT(S) OF DIVERSION

21. 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 19).

POD #	**¼**	**¼**	**¼**	**Sec.**	**Twp.**	**Rge.**	**County**	**Lot**	**Block**	**Tract**	**Subdivision**	**Gov. Lot**
1	SW	NW	SW	36	21N	26W	Sanders	8			Sammons Trucking	

PLACE OF USE

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

-35-3094-35-1-01-40-0000	-
-	-
-	-
-	-

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

Acres	Gov. Lot	Block	¼	¼	¼	Sec.	Twp.	Rge.	County
0.343			SE	NE	SE	35	21N	26W	Sanders

SUPPLEMENTAL AND OVERLAPPING WATER RIGHTS

24. ■ **Y** □ **N** Will other water rights supplement or overlap the place of use to contribute to the purpose(s)?

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

Groundwater Certificate 76N 14802-00 is well water for domestic use and can be used for lawn and garden but is only 5 GPM and will run dry in short period of continuous use. If granted water rights from Lynch Creek, this surface water would irrigate lawn and garden, leaving the well water for household use.

25. 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 to the shared place of use.

Water Right #	Average Period of Diversion	Average Period of Use	Flow Rate	Volume Contributed
76N 14802-00	05/01-09/30	05/01-09/30	5 GPM	0.09

26. □ **Y** ■ **N** Will this application supplement contract water from a Federal Project, ditch company, or other source?

26.1. If yes, explain.

OWNERSHIP AND POSSESSORY INTEREST

27. ■ **Y** □ **N** Does the Applicant have ownership of all proposed points of diversion and places of use?

27.1. If no, explain.

28. ☐ 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.

28.1. If yes, explain.

ADVERSE EFFECT

29. ■ Y ☐ N Do you have evidence that water is physically and/or legally available in the amount required for the proposed flow rate and volume of your project?

29.1. If yes, explain.

Using the MT DNRC Completed Technical Analyses Report for Permit Preapplication No. 76N 30163571, dated June 7, 2024, and after subtracting existing downstream water rights from the physically available water at the POD (Table 6 (E)), calculations indicate sufficient water flow is physically and legally available during the months of May and June, but not during the months of July, August and September.

30. ■ Y ☐ N If the legal availability criteria assessment finds that water is not legally available throughout the entire proposed period of diversion, do you have a contingency plan to address this?

30.1. If yes, explain.

If water is not legally available throughout the entire proposed period of diversion, upon receiving a call from MT DNRC, we (applicants) would cease pumping water out of Lynch Creek and remove the pump intake line from the creek. We (applicants) would revert back to using existing water rights for ground water to irrigate lawn and garden.

31. ☐ Y ■ N Are there any factors that would limit your ability to turn off your appropriation in response to a call?

31.1. If yes, explain.

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

In response to a call from MT DNRC, we (applicants) will cease pumping water out of Lynch Creek and remove the pump intake line from the creek.

33. ☐ Y ■ N Are you aware of any calls that have been made on the source of supply or depleted surface water source?

33.1. If yes, explain.

34. ☐ Y ■ N Does a water commissioner distribute water or oversee water distribution on your proposed source or any identified depleted surface water sources?

34.1. If yes, list the source(s).

35. Describe your plan to ensure existing water rights will be satisfied during times of water shortage.

To ensure existing water rights will be satisfied during times of water shortage, upon receiving a call from MT DNRC notifying us (applicants), we (applicants) would cease pumping water out of Lynch Creek and remove the pump intake line from the creek.

36. ☐ Y ■ N Do other water rights share any of the proposed points of diversion?

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

37. ☐ **Y** ■ **N** Do other water rights share any conveyance ditch associated with the proposed project? See the list of water rights that share the conveyance ditches in either the Preapplication Meeting Form (Form 600P) or the Technical Analysis Addendum (Form 600-TAA).

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

ADEQUATE MEANS OF DIVERSION AND OPERATION

38. ■ **S** Provide a diagram of how you will operate your system from all proposed points of diversion to all proposed places of use.

39. 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 proposed centrifugal pump will be a Honda WB20 2-inch general purpose water pump with the following specs: displacement of 118cc; a discharge capacity of 164 gallons/minute; maximum pressure of 45 psi. Intake: 10-foot line with suction head of 3 feet; output: 1,290-foot line with total discharge lift of 130 feet. Storage tanks at line terminals will hold water which will be gravity fed for garden irrigation. Sprinklers will be used for lawn irrigation. Flow limiter valves will be used to control flow rate at 35 GPM.

40. ■ **Y** ☐ **N** Is the diversion capable of providing the full amount of water requested through the period of diversion?

40.1. If no, explain.

41. Describe the size and configuration of infrastructure to convey water from all proposed points of diversion to all proposed places of use. This may include, where applicable: ditch capacity and/or pipeline size and configuration.

10-foot by 2-inch diameter intake line to centrifugal water pump. Primary line 2-inch diameter by 800 feet to Tank 1. Secondary line 2-inch diameter by 315 feet to Tank 2. Tertiary line 2-inch diameter by 175 feet to lawn sprinklers. Storage tanks will gravity feed garden areas via soaker hoses and drip irrigation lines.

42. Describe any losses related to the proposed conveyance.

Losses in the proposed water conveyance system will be internal losses in pressure and flow rate due to static suction/discharge head; frictional losses due to pipe size, length, material and valves; and restriction losses from sprinklers/nozzles.

43. ■ **Y** □ **N** □ **NA** Is the proposed conveyance infrastructure capable of providing the required flow and volume, plus any conveyance losses?

43.1. If no, explain.

44. □ **Y** ■ **N** Does the proposed conveyance require easements?

44.1. If yes, explain.

45. 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, output and configuration of sprinkler heads and pipelines within the place of use.

Garden areas will have soaker hoses and irrigation lines delivering water from the storage tanks. Lawn area will have sprinkler system.

46. ☐ Y ■ N Will your system be designed to discharge water from the project?

46.1. If yes, explain the way water will be discharged and the disposal method.

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

47. ☐ Y ■ N Is the means of diversion for any proposed point of diversion a well?

IF YES,

47.1. ☐ Y ☐ N Have all wells already been drilled?

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

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

47.4. ☐ S ☐ NA Submit any additional well logs for wells drilled after submittal of Form 600P.

BENEFICIAL USE

48. Why is the requested flow rate and volume the amount needed for the purpose(s)?

Current ground water from the well only flows at 5 GPM. If used continuously for only a short period of time (1-2 hours), water flow decreases rapidly and increases risk of well running dry and burning out the well pump. Recorded measurements from a flow meter on the well water indicate a need of approximately 350-400 gallons per day for lawn and garden irrigation.

49. ■ **Y** ☐ **N** Does the Department have a 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.

49.1. ■ **Y** ☐ **N** If yes, does the proposed beneficial use fall within Department standards?

49.2. If no Department standard exists, or if proposed beneficial use falls outside of Department standards, explain how the use is reasonable for the purpose.

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

50.1. ☐ **Y** ☐ **N** If yes, have you researched or consulted with DEQ regarding those requirements?

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

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

51.1.1. ☐ **S** ☐ **NA** If yes, please submit the COSA.

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

PROPOSED COMPLETION PERIOD

52. How many years will be needed to complete this project and to submit to the DNRC a Project Completion Notice (Form 617)? Approximately 2 years.

53. Why is this amount of time needed?

Limited discretionary funds to purchase and install the water pump, several hundred feet of water line and associated valves/connectors, storage tanks, soaker hoses and drip irrigation lines, sprinklers, etc.

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. 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 Bruce Paulsen

Applicant Signature Bruce Paulsen Date: 12/03/2024

Printed Name Ilene Paulsen

Applicant Signature Ilene Paulsen Date: 12.3.24

Printed Name _____

Applicant Signature _____ Date: _____

DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

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655 TIMBERWOLF PKWY, SUITE 4, KALISPELL, MONTANA 59901 PHONE: (406) 752-2288 FAX: (406) 752-2873

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PO BOX 201601
HELENA, MONTANA 59620-1601

June 7, 2024

BRUCE AND ILENE PAULSEN
8 BALDY VIEW LN
PLAINS MT 59859-9249

Subject: Completed Technical Analyses Report for Permit Preapplication No. 76N 30163571

Dear Paulsens,

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. 76N 30163571 based on the information provided in your Preapplication Meeting Form submitted to the Department on April 23, 2024. The technical analyses can be found in the attached report completed by Kalispell Regional Office Water Resource Specialist Travis Wilson.

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 a Form 600 for the project described in the completed Preapplication Meeting Form.

This Technical Analyses Report **IS NOT:** An analysis or discussion of whether the Preapplication Meeting Form as filed meets the criteria in §85-2-311, 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 Kalispell Regional Office by December 4, 2024, a new preapplication meeting will be required to process the Application with expedited timelines (ARM 36.12.1302(6)(b)). If any elements 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)).

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

Sincerely,

Travis Wilson
Water Resource Specialist
Kalispell Regional Water Resource Office

Surface Water Permit Technical Analyses Report

Department of Natural Resources and Conservation (DNRC or Department)
Water Resources Division
Travis Wilson, Water Resource Specialist, Kalispell Regional Office

Application No.	76N 30163571	**Proposed Point of Diversion**	SWNWSW S36 T21N R26W SANDERS
Applicant	PAULSEN, BRUCE & ILENE		

Overview

This report analyzes data submitted by the Applicant in support of Application No. 76N 30163571. 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 Surface Water Permit Technical Analyses Report contains the following sections:

Variances

No variances were requested.

1.0 Application Details

The Applicant proposes to divert water from Lynch Creek at a point in the SWNWSW of Section 36, Township 21N, Range 26W, Sanders County, Montana. Diversion and use will occur from

May 1 to September 30 at a rate of 35.0 gallons per minute (GPM) up to 0.86 acre-feet (AF) of volume for lawn and garden irrigation on 0.34 acres in the SENESE of Section 35, Township 21N, Range 26W, Sanders County, Montana.

2.0 Surface Water Analysis

2.1 Source Description

Proposed Source of Water: Lynch Creek

Proposed Source Type: Perennial

Proposed Point of Diversion (POD): SWNWSW of Section 36, Township 21N, Range 26W, Sanders County

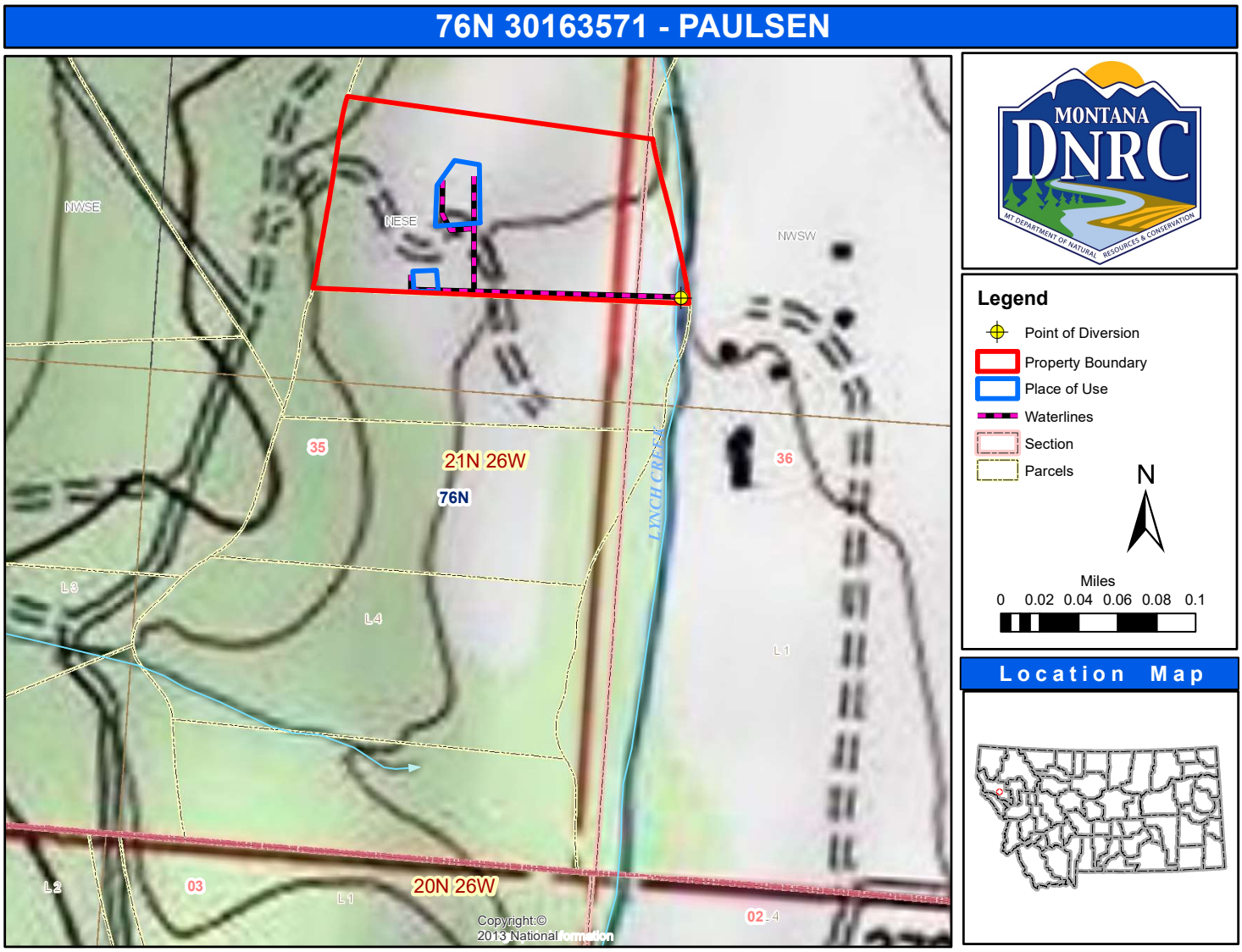


Figure 1: Map of the Applicant's proposed POD on the source and proposed place of use.

Figure 2: Aerial photo of project area.

2.2 Method of Estimation

Method of Measurement Used:

No USGS or equivalent stream gage exists on Lynch Creek. The Applicant submitted five streamflow measurements collected during 2023 at their proposed POD using the Float-area Method (Table 1). One measurement was collected during each month of their proposed period of diversion and use. The Department deemed the measurements credible after applying the correct velocity conversion coefficient to the Applicant's raw data. The average depth of Lynch Creek at the Applicant's measurement location was less than one foot for each of their five measurements. Following the Montana State University Extension – The Float-are Method (MT 9125) standard procedure, the appropriate coefficient to apply when the average depth is less than one foot is 0.66 (Figure 3). The Applicants calculated their measurements using a coefficient of 0.85 (Table 1, column B). The Department recalculated the Applicant's measurements using their raw data and the appropriate coefficient of 0.66 (Table 1, column C).

Table 1: Applicant-provided streamflow measurements for Lynch Creek at the POD using the Float-area Method		
A	**B**	**C**
Date	**Streamflow measurements calculated by Applicant using a velocity conversion coefficient of 0.85 (CFS)**	**Streamflow measurements calculated by DNRC from Applicant data using a velocity conversion coefficient of 0.66 (CFS)**
May 29, 2023	44.51	34.55
June 29, 2023	17.75	13.75
July 29, 2023	4.38	3.40
August 26, 2023	5.01	3.91
September 30, 2023	9.94	7.70

Coefficients for Converting Float Velocity to Water Velocity	
Average Depth in ft.	Coefficient
Less than 1	0.66
1	0.66
2	0.68
3	0.70
4	0.72
5	0.74
6	0.76
9	0.77
12	0.78
15	0.79
20	0.80
Greater than 20	0.80

Figure 3: Montana State University Extension – The Float-area Method Coefficients

Method of Estimation Used:

To obtain estimated mean monthly streamflow rates and volumes for Lynch Creek at the POD, the Department used U.S. Geological Survey (USGS) Montana StreamStats[1] (hereafter StreamStats) to generate basin characteristics associated with the Lynch Creek drainage above the Applicant's POD/measurement site (Table 2). The USGS used a process known as regionalization to develop equations that can be used to estimate streamflow statistics for ungaged sites. Regionalization involves the use of regression analysis to relate streamflow statistics computed for a group of selected stream gages to basin characteristics associated with the stream gages. Basin characteristics measured for ungaged sites can be entered into the resulting equations to obtain estimates of streamflow statistics such as mean monthly flow. The Department used StreamStats

[1] U.S. Geological Survey (USGS), 2019, The StreamStats program, online at https://streamstats.usgs.gov/ss/, accessed April 24, 2024

basin characteristics and USGS equations to estimate mean monthly flows at the POD/measurement site (Table 3).

Table 2: Basin characteristics generated at the POD/measurement site	
Basin Characteristic	**Value**
Contributing drainage area (mi^2)	38.60
Mean annual precipitation (in)	21.36
Percent of area with slopes greater than 50%	5.90

Table 3: StreamStats monthly streamflow estimates for Lynch Creek at the POD	
Month	**StreamStats mean monthly streamflow (CFS)**
May	46.13
June	39.25
July	16.22
August	8.61
September	6.72

The Department tested the accuracy of the basin characteristic method by comparing estimated mean monthly flows and their prediction intervals (PIs) for the 90% confidence level obtained from the USGS regression equations mentioned above to the Applicant's streamflow measurements. If the estimates were reasonable, meaning a low percentage of error between approximate and exact values, then the estimates were assumed to represent mean monthly flows. The Applicant's streamflow measurements (Table 4, column B) are closer to the lower PIs for the 90% confidence level (Table 4, column C) for each month measured, and the June and July measurements are less than the lower PI. The Department queried 2023 monthly historical data and conditions for Sanders County maintained by the National Integrated Drought Information System[2] and found that the project area experienced "Abnormally Dry" conditions in May and June, and "Severe Drought" conditions from July through September. The StreamStats monthly streamflow estimates were deemed reasonable after comparing the Applicant's measurements to the PIs for the 90-percent confidence level computed by StreamStats and after considering the monthly drought conditions for Sanders County in 2023.

[2] National Integrated Drought Information System (NIDIS), 2024, U.S. Drought Monitor Historical Data and Conditions, online at https://www.drought.gov/historical-information?state=Montana&dataset=O&selectedDateUSDM=20230926&countyFips=30089, accessed May 31, 2024

Table 4: Comparison of Applicant streamflow measurements to StreamStats Prediction Intervals for the 90% Confidence Level for Lynch Creek			
A	**B**	**C**	**D**
Month	**Applicant monthly streamflow measurements (CFS)**	**StreamStats prediction intervals for the 90% confidence level**	
		Lower PI (CFS)	*Upper PI (CFS)*
May	34.55	16.03	132.72
June	13.75	15.96	96.52
July	3.40	6.54	40.24
August	3.91	3.27	22.68
September	7.70	2.73	16.52

Why this method is considered appropriate:
The Department considered this method appropriate because using Applicant-collected monthly streamflow measurements to validate the StreamStats estimations is an approved methodology in the 2019 DNRC Technical Memorandum: Physical Availability of Surface Water without Gage Data.

2.3 Monthly Flow Rate and Volume

Methodology:
The Department calculated the monthly flows appropriated by existing users upstream of the Applicant's POD/measurement site on Lynch Creek (Table 6, column D) by:

i. Generating a list of existing Lynch Creek water rights/legal demands upstream of the POD/measurement site (Table 5);

ii. Designating uses as occurring during their claimed periods of diversion;

iii. Assigning a single combined flow rate of 0.08 CFS to all livestock direct from source water rights that did not have a designated flow rate (per DNRC adjudication standard practice); and,

iv. Assuming that the flow rate of each existing right is continuously diverted throughout each month of its 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.

The Department subtracted out the flow rate of the existing upstream water rights (Table 6, column D) from the mean monthly StreamStats streamflow estimates (Table 6, column B) to determine the amount of water physically available at the POD/measurement site (Table 6, column E). Physically available monthly flows were then converted to monthly volumes (Table 6, column F) using the following equation: mean monthly flow (CFS) × 1.98 (AF/day/1-CFS) × days per month = AF/month.

Table 5: Existing Lynch Creek Legal Demands Upstream of the POD/measurement site		
Water Right Number	Purpose	Flow Rate (CFS)
76N 30112583	STOCK	0.08*
76N 116296 00	IRRIGATION	2.50

**In order to account for livestock direct from source rights, Department practice is to assign one combined total flow rate of 0.08 CFS (35.0 GPM) for all stock rights without a designated flow rate.*

Table 6: Physical Availability of Lynch Creek at the Point of Diversion					
A	**B**	**C**	**D**	**E**	**F**
Month	**StreamStats Mean Monthly Streamflow at the POD (CFS)**	**StreamStats Mean Monthly Streamflow at the POD (AF)**	**Existing legal demands upstream of the POD (CFS)**	**Physically Available Water at POD (CFS)**	**Physically Available Water at POD (AF)**
May	46.13	2,831.24	2.58	43.55	2,672.87
June	39.25	2,331.70	2.58	36.67	2,178.45
July	16.22	995.51	2.58	13.64	837.15
August	8.61	528.32	2.58	6.03	369.96
September	6.72	399.20	2.58	4.14	245.95

3.0 Area of Potential Impact (AOPI) Analysis

The Area of Potential Impact for this application is:
Lynch Creek from the Applicant's POD downstream to the confluence of Lynch Creek with the Clark Fork River. There are 12 water rights within the AOPI (Table 7).

Why this is an appropriate Area of Potential Impact:
Diversion of water at the proposed POD on Lynch Creek would reduce the flow and volume of water in Lynch Creek downstream of the POD. The Department did not extend the AOPI into the Clark Fork River. A comparison of monthly StreamStats streamflow estimations generated at the mouth of Lynch Creek to the mean monthly flows of the Clark Fork River shows that Lynch Creek contributes less than a tenth of a percent of the total mean monthly flow of the Clark Fork River at the confluence of Lynch Creek.

Methodology:
To make the determination of the appropriate downstream terminus of the AOPI, the Department estimated mean monthly streamflow at the mouth of Lynch Creek using StreamStats and obtained mean monthly streamflow data for the Clark Fork River as measured at USGS Gaging Station No. 12389000 Clark Fork near Plains, MT, which is located approximately 7.5 miles upstream of the confluence of Lynch Creek with the Clark Fork River.

Review

This document was reviewed by the Department on June 6, 2024.

References

Department Standard Practice for Determining Physical Availability of Surface Water.

- DNRC Technical Memorandum: Physical Availability of Surface Water without Gage Data (2019).

Department Standard Practice for Determining Area of Potential Impact.

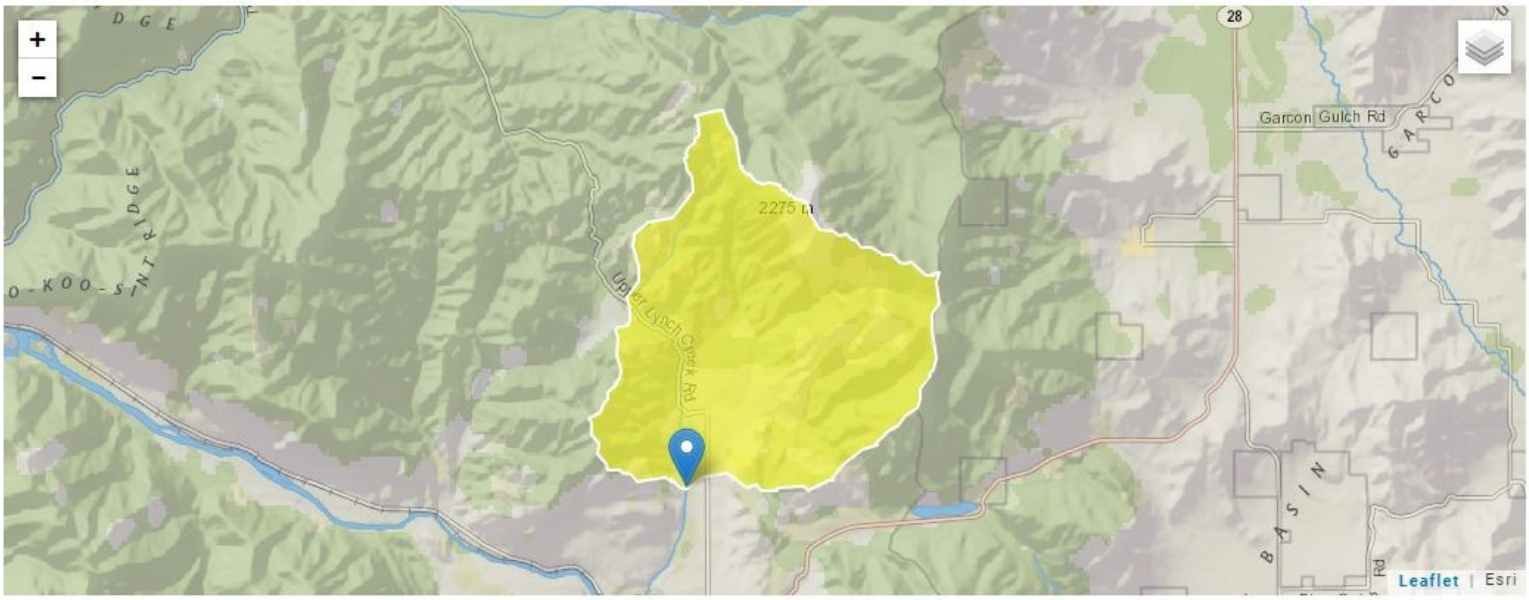
Appendix A: Water Rights within the Area of Potential Impact

Appendix A: Water rights downstream of the POD on Lynch Creek (within the AOPI)		
Water Right Number	Purpose	Flow Rate (CFS)
76N 116297 00	IRRIGATION	6.25
76N 118297 00	IRRIGATION	0.56
76N 211777 00	IRRIGATION	0.25
76N 214612 00	STOCK	2.5
76N 31197 00	IRRIGATION	0.89
76N 46281 00	IRRIGATION	1.06
76N 138034 00	STOCK	0.08*
76N 40631 00	IRRIGATION	0.33
76N 110835 00	IRRIGATION	0.55
76N 17946 00	IRRIGATION	0.34
76N 105440 00	IRRIGATION	3.75
76N 53633 00	IRRIGATION	0.62

**In order to account for livestock direct from source rights, Department practice is to assign one combined total flow rate of 0.08 CFS (35.0 GPM) for all stock rights without a designated flow rate.*

76N 30163571 (PAULSEN) - StreamStats Report

Region ID:	MT
Workspace ID:	MT20240424234206882000
Clicked Point (Latitude, Longitude):	47.53224, -114.88202
Time:	2024-04-24 17:42:34 -0600



Report generated by Travis Wilson, DNRC Water Resource Specialist, on 04/24/2024. The "clicked point" represents the location on Lynch Creek of the point of diversion and the location of the Applicant's Float Area Method measurements for Water Right Permit Application No. 76N 30163571.

Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
CONTDA	Area that contributes flow to a point on a stream	38.6	square miles
PRECIP	Mean Annual Precipitation	21.36	inches
SLOP50_30M	Percent area with slopes greater than 50 percent from 30-meter DEM.	5.9	percent

General Disclaimers

Upstream regulation was checked for this watershed.

Monthly Flow Statistics

Monthly Flow Statistics Parameters [W Region Season3 MeanDur 2015 5019G]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
CONTDA	Contributing Drainage Area	38.6	square miles	6.4	2520
SLOP50_30M	Slopes_gt_50pct_from_30m_DEM	5.9	percent	1.87	67.5

Monthly Flow Statistics Parameters [W Region Season1 MeanDur 2015 5019G]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
CONTDA	Contributing Drainage Area	38.6	square miles	6.4	2520
SLOP50_30M	Slopes_gt_50pct_from_30m_DEM	5.9	percent	1.87	67.5

Monthly Flow Statistics Parameters [W Region Season2 MeanDur 2015 5019G]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
CONTDA	Contributing Drainage Area	38.6	square miles	6.4	2520
SLOP50_30M	Slopes_gt_50pct_from_30m_DEM	5.9	percent	1.87	67.5

Monthly Flow Statistics Flow Report [W Region Season3 MeanDur 2015 5019G]

Statistic	Value	Unit
November Mean Flow	7.12	ft^3/s
December Mean Flow	6.53	ft^3/s
January Mean Flow	6.37	ft^3/s
February Mean Flow	6.72	ft^3/s

Monthly Flow Statistics Flow Report [W Region Season1 MeanDur 2015 5019G]

Statistic	Value	Unit
March Mean Flow	10.2	ft^3/s
April Mean Flow	23.6	ft^3/s
May Mean Flow	46.1	ft^3/s
June Mean Flow	39.3	ft^3/s

Monthly Flow Statistics Flow Report [W Region Season2 MeanDur 2015 5019G]

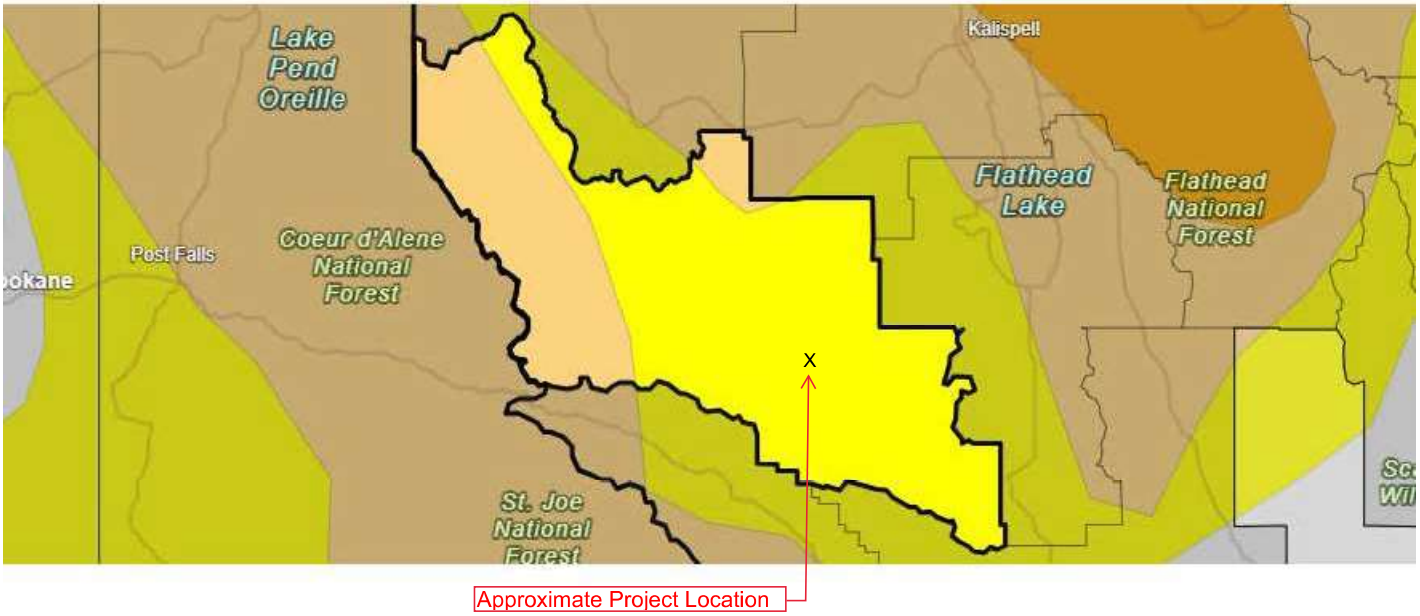
Statistic	Value	Unit
July Mean Flow	16.2	ft^3/s
August Mean Flow	8.61	ft^3/s
September Mean Flow	6.72	ft^3/s
October Mean Flow	6.7	ft^3/s

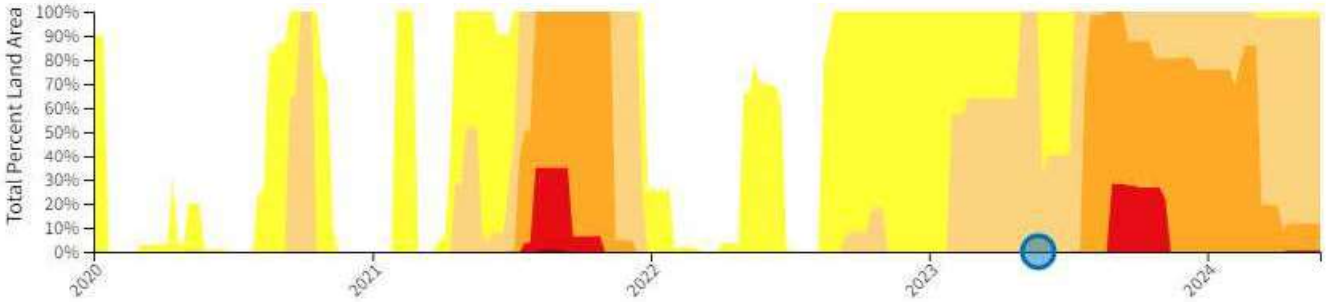
Monthly Flow Statistics Flow Report [Area-Averaged]

Statistic	Value	Unit
November Mean Flow	7.12	ft^3/s
December Mean Flow	6.53	ft^3/s
January Mean Flow	6.37	ft^3/s
February Mean Flow	6.72	ft^3/s
March Mean Flow	10.2	ft^3/s
April Mean Flow	23.6	ft^3/s
May Mean Flow	46.1	ft^3/s
June Mean Flow	39.3	ft^3/s
July Mean Flow	16.2	ft^3/s
August Mean Flow	8.61	ft^3/s
September Mean Flow	6.72	ft^3/s
October Mean Flow	6.7	ft^3/s

Monthly Flow Statistics Citations

U.S. Drought Monitor for Sanders





Map Valid: May 30, 2023

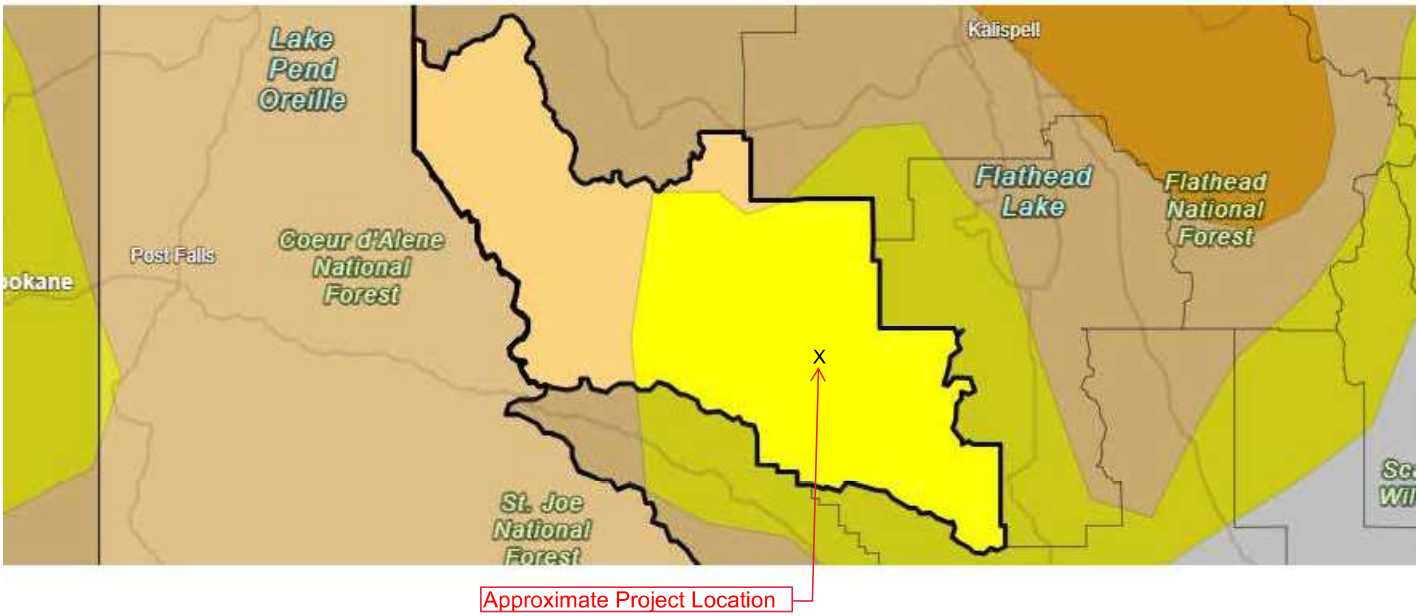
U.S. Drought Monitor Category

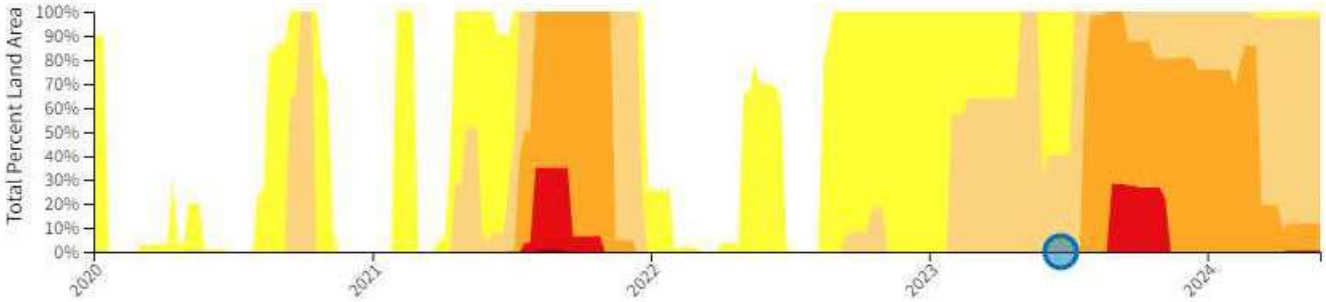
D0	D1	D2	D3	D4
Abnormally Dry	Moderate Drought	Severe Drought	Extreme Drought	Exceptional Drought
69.1%	30.9%	0.0%	0.0%	0.00%

Total Area in Drought (D1–D4)
30.90%

URL: https://www.drought.gov/historical-information?state=Montana&dataset=0&selectedDateUSDM=20230926&countyFips=30089
Accessed: May 31, 2024

U.S. Drought Monitor for Sanders





Map Valid: Jun 27, 2023

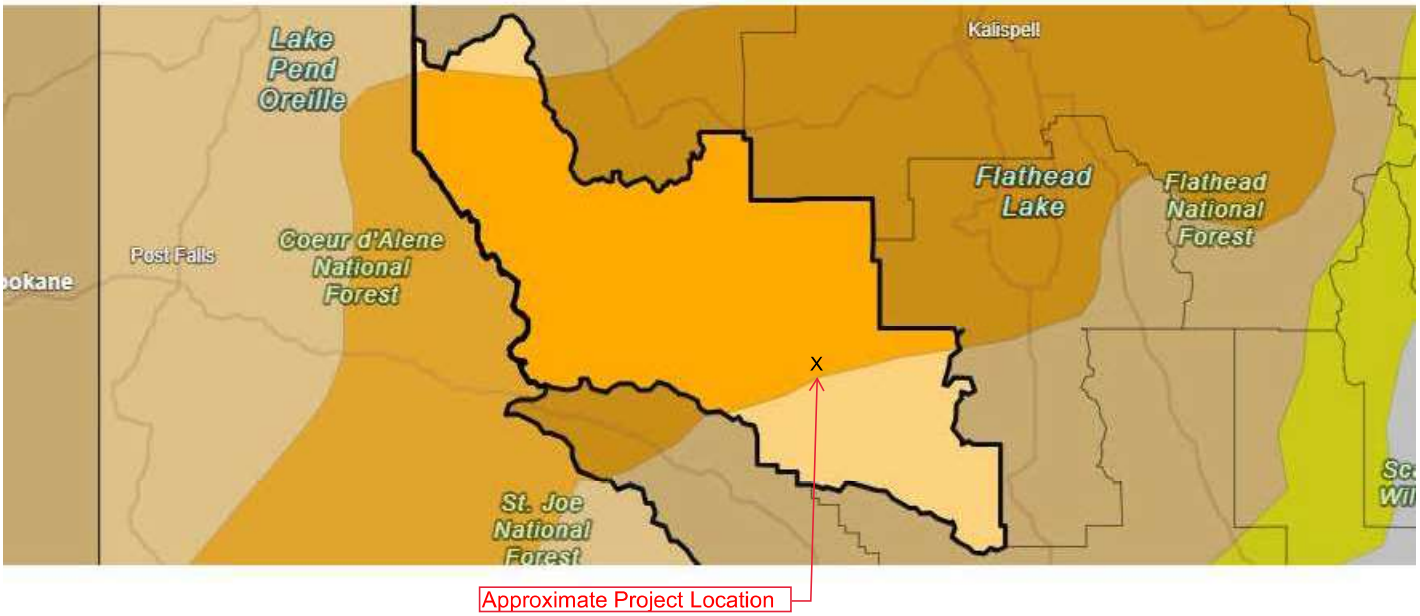
U.S. Drought Monitor Category

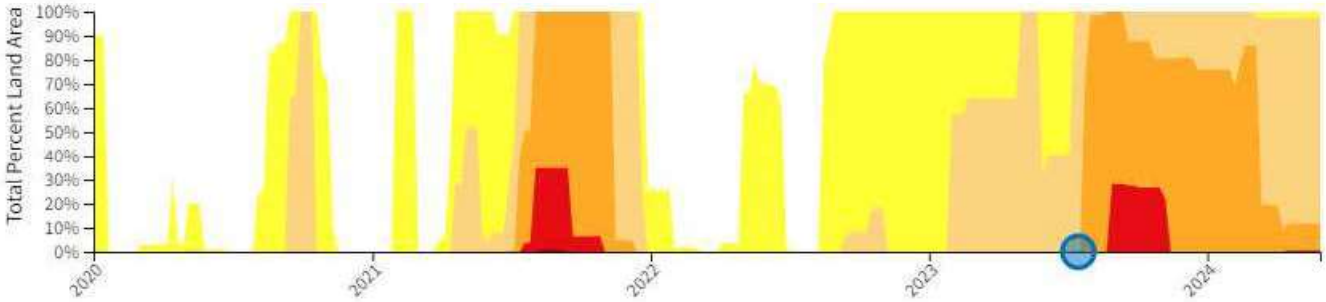
D0	D1	D2	D3	D4
Abnormally Dry	Moderate Drought	Severe Drought	Extreme Drought	Exceptional Drought
59.7%	40.3%	0.0%	0.0%	0.00%

Total Area in Drought (D1–D4)
40.30%

URL: https://www.drought.gov/historical-information?state=Montana&dataset=0&selectedDateUSDM=20230926&countyFips=30089
Accessed: May 31, 2024

U.S. Drought Monitor for Sanders





Map Valid: Jul 25, 2023

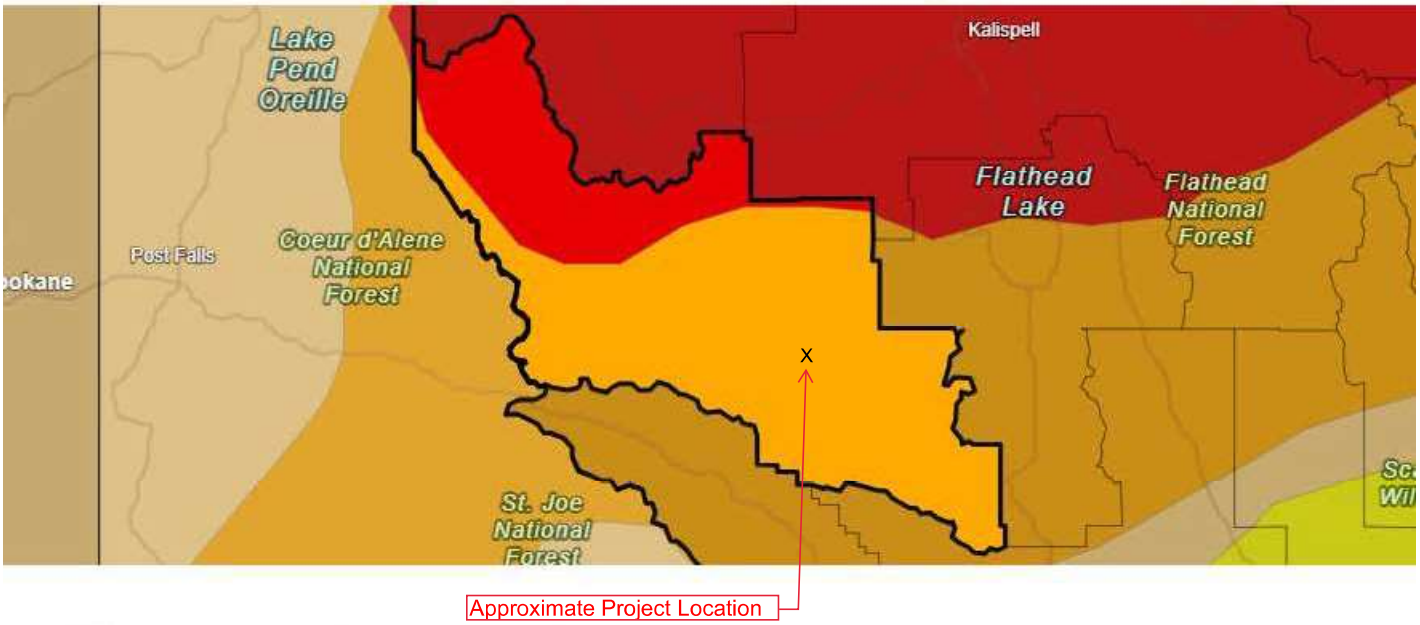
U.S. Drought Monitor Category

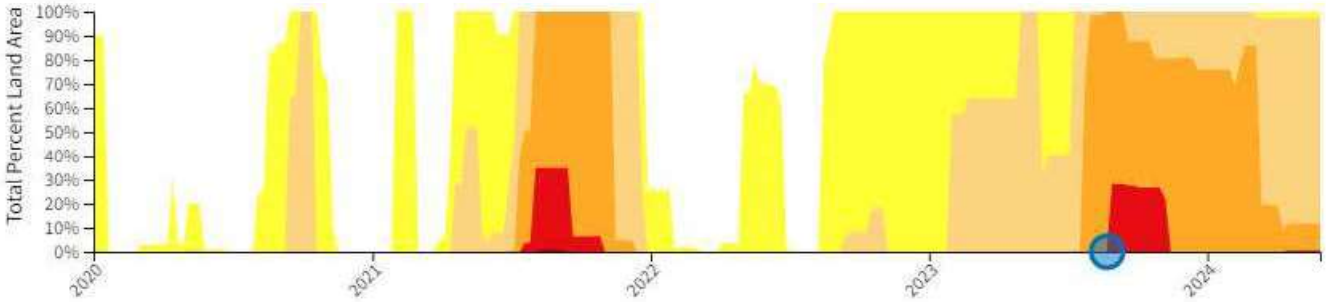
D0	D1	D2	D3	D4
Abnormally Dry	Moderate Drought	Severe Drought	Extreme Drought	Exceptional Drought
0.0%	25.6%	74.4%	0.0%	0.00%

Total Area in Drought (D1–D4)
100.00%

URL: https://www.drought.gov/historical-information?state=Montana&dataset=0&selectedDateUSDM=20230926&countyFips=30089
Accessed: May 31, 2024

U.S. Drought Monitor for Sanders





Map Valid: Aug 29, 2023

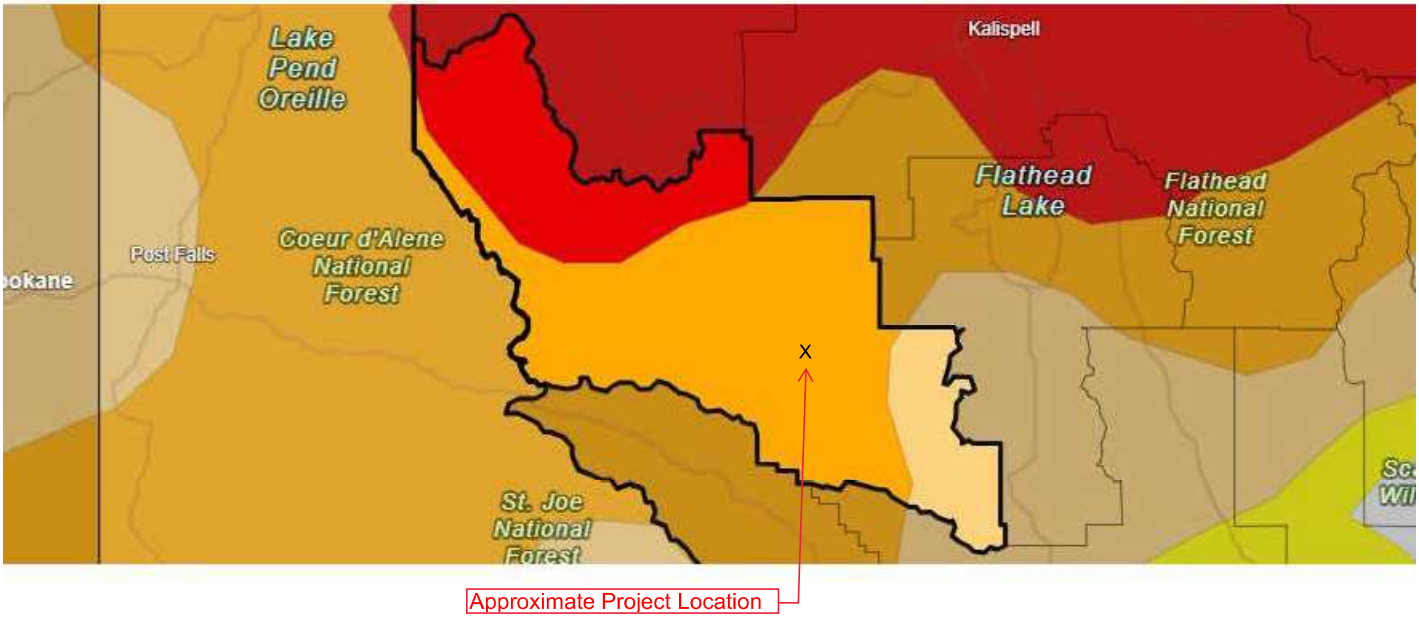
U.S. Drought Monitor Category

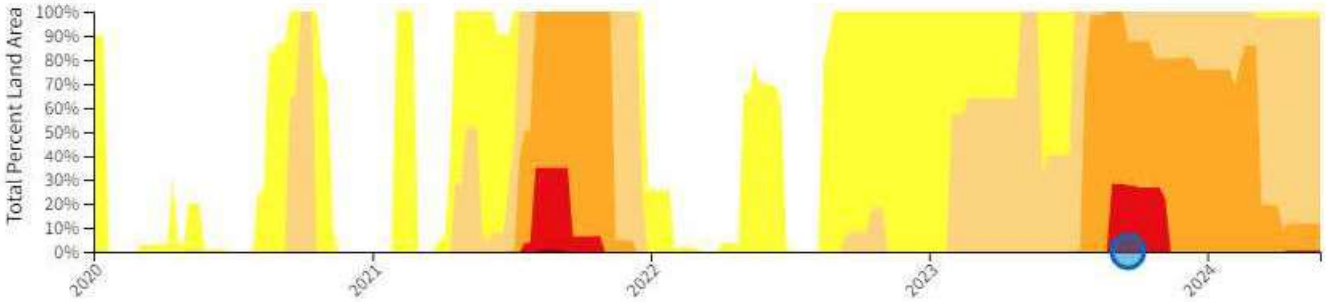
D0	D1	D2	D3	D4
Abnormally Dry	Moderate Drought	Severe Drought	Extreme Drought	Exceptional Drought
0.0%	0.0%	71.8%	28.2%	0.00%

Total Area in Drought (D1–D4)
100.00%

URL: https://www.drought.gov/historical-information?state=Montana&dataset=0&selectedDateUSDM=20230926&countyFips=30089
Accessed: May 31, 2024

U.S. Drought Monitor for Sanders





Map Valid: Sep 26, 2023

U.S. Drought Monitor Category

D0	D1	D2	D3	D4
Abnormally Dry	Moderate Drought	Severe Drought	Extreme Drought	Exceptional Drought
0.0%	12.3%	60.2%	27.4%	0.00%

Total Area in Drought (D1–D4)
99.90%

URL: https://www.drought.gov/historical-information?state=Montana&dataset=0&selectedDateUSDM=20230926&countyFips=30089
Accessed: May 31, 2024

DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

WATER RESOURCES DIVISION – KALISPELL REGIONAL OFFICE
655 TIMBERWOLF PKWY, SUITE 4, KALISPELL, MONTANA 59901 PHONE: (406) 752-2288 FAX: (406) 752-2873

GREG GIANFORTE, GOVERNOR

STATE OF MONTANA

DIRECTOR'S OFFICE: (406) 444-2074
FAX: (406) 444-2684
http://dnrc.mt.gov

PO BOX 201601
HELENA, MONTANA 59620-1601

April 27, 2024

BRUCE AND ILENE PAULSEN
8 BALDY VIEW LN
PLAINS MT 59859-9249

Subject: Complete Preapplication Form for Permit Application No. 76N 30163571

Dear Paulsens,

The Kalispell Regional Office of the Department of Natural Resources and Conservation (DNRC or Department) received your Preapplication Meeting Form and preapplication meeting fee on April 23, 2024 and the Department deems the submitted Preapplication Meeting Form to be successfully completed per ARM 36.12.1302.

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 April 23, 2024.

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

Sincerely,

Travis Wilson
Water Resource Specialist
Kalispell Regional Water Resource Office

PREAPPLICATION MEETING FORM
PERMIT

§ 85-2-302

Form No. 600P *(Revised 2/2024)*

For Department Use Only

Application # 30163571 Basin 76N

Meeting Date 4/22/2024 Time 1000 AM/PM

Completed Form Deadline 10/19/2024

RECEIVED
DNRC Water Resources
APR 23 2024
Kalispell Unit

Completed Form Received 04/23/2024

Fee Rec'd $ 500.00 Check # 3820

Deposit Receipt # KLU2424283

Payor Same

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 BRUCE & ILENE PAULSEN 449340 / 449341

Mailing Address 8 BALDY VIEW LANE City PLAINS State MT Zip 59859

Phone Numbers: Home 406-303-1970 Work _____ Cell 406-303-1972

Email Address _____

Applicant Name _____

Mailing Address _____ City _____ State _____ Zip _____

Phone Numbers: Home _____ Work _____ Cell _____

Email Address _____

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

Contact/Representative is: ☐ Applicant ☐ Consultant ☐ Attorney ☐ Other (describe) _____

Contact/Representative Name _____

Mailing Address _____ City _____ State _____ Zip _____

Phone Numbers: Home _____ Work _____ Cell _____

Email Address _____

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

Meeting Attendees: *Add more as necessary.*

Name	Organization	Position
JIM FERCH	DNRC	KRO MANAGER
ALEXIS NEVINS; KRISTAL KIEL	DNRC	WATER RESOURCES SPECIALIST
TRAVIS WILSON	DNRC	HYDROSPECIALIST
Bruce Paulsen	Applicant	Applicant
Ilene Paulsen	Applicant	Applicant

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	Period of Use	Flow Rate			Volume
	(MM/DD-MM/DD)	*(MM/DD-MM/DD)*	*Flow Rate*	*GPM*	*CFS*	*(AF)*
Lawn and Garden	05/01 - 09/30	05/01 - 09/30	35	☑	☐	0.858
				☐	☐	
				☐	☐	
				☐	☐	
		Total	35	☐	☐	0.858

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	SW	36	21N	26W	Sanders	8			Sammons Trucking		sw	Lynch Creek	Pump

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

■ A ☐ F

~~35-3094-35-1-01-40-0000~~	

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
0.343			SE	NE	SE	35	21N	26W	Sanders
0.343	*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).

Groundwater Certificate 76N 14802-00 has Lawn and Garden, but will not be used if permit is approved.

■ 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)
76N 14802-00	05/01-09/30	05/01-09/30	5 GPM	0.5

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
1	35 GPM	0.858	05/01	09/30	Perennial Stream

19. What is the source type of the surface water diversion? Perennial Stream						■ 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? Applicant and USFS	▬ A	☐ F
3. With what method was the data collected? Applicant - Float area; USFS - other gage (unknown)	▬ A	☐ F
4. What is the period of record? May - Sept. 2023 (Applicant); May - July 2019 & June - Aug. 2023 (USFS)		☐ F
5. What is the frequency of measurement? Monthly (applicant); High, falling, low flow (USFS)		☐ 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. USGS StreamStats	■ 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. NA	☐ 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). NA	☐ 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? _____					☐ 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)? _____		☐ 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. _____		☐ 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 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

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. _____ _____ _____ _____ _____	☐ 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? Pull pump/not divert during unavailable period	▬ A
74. Describe your plan to ensure that existing water rights will be satisfied during times of water shortage. Pull pump/not divert during unavailable period	▬ A
75. Explain how you can control your diversion in response to call being made. Pull pump/not divert during unavailable period	▬ 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. Will provide	☐ 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. Will provide	☐ A
82. Describe any losses related to conveyance. NA	☐ 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. NA	☐ 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. Will provide	☐ 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. Will provide	☐ 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. Will keep track for personal knowledge	☐ A

Beneficial Use

92. Why is the requested flow rate and volume the amount needed for the purpose? Volume - used DNRC standard. Flow - to fill tanks and comply to TRLC decision (35 GPM or less).	■ 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.

Bruce Paulsen — 04/22/2024
Applicant Signature — Date

Renee Paulsen — 4.22.24
Applicant Signature — Date

[signature] — 4/22/24
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

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))."

Bruce Paulsen — 04/22/2024

Applicant Signature — Date

Alene Paulsen — 4.22.24

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))."

[signature] — 4/23/24

Department Signature — Date

Department Signature — Date

Bruce & Ilene Paulsen

8 Baldy View Lane

Plains, MT 59859

ibpaulsen93@gmail.com

Lynch Creek Water Rights Proposal

Measurements taken on May 29, 2023

Velocity

Float Distance = 38 feet. Pine cones used as float objects.

Float times in seconds: 8.01, 9.06, 8.12, 8.79, 9.66 for total of 43.64/5 = 8.73 seconds.

Velocity = 38 feet/8.73 seconds = 4.35 feet/second. Adjusted velocity = 4.35 feet/second x 0.85 adjustment factor = 3.7 adjusted feet/second.

Area

Creek width = 18.5 feet.

Depth readings in feet at one-foot intervals:

Depth 1	Depth 2	Depth 3	Depth 4	Depth 5	Depth 6	Depth 7	Depth 8	Depth 9
0.65	0.78	0.75	0.88	0.83	0.87	0.83	0.83	0.83

Depth 10	Depth 11	Depth 12	Depth 13	Depth 14	Depth 15	Depth 16	Depth 17	Depth 18
0.75	0.80	0.55	0.60	0.50	0.35	0.25	0.30	0.30

Added depth values = 11.65/18 measurements = 0.65 feet average depth.

Area: 18.5 feet creek width x 0.65 average depth = 12.03 square feet.

Cubic feet per second (CFS): 12.03 square feet x 3.7 feet/second = 44.51 CFS (19978.76 GPM).

Bruce & Ilene Paulsen

8 Baldy View Lane

Plains, MT 59859

ibpaulsen93@gmail.com

Lynch Creek Water Rights Proposal

Measurements taken on June 29, 2023

Velocity

Float Distance = 38 feet. Pine cones used as float objects.

Float times in seconds: 15.82, 14.27, 14.59, 13.59, 14.26 for total of 72.53/5 = 14.51 seconds.

Velocity = 38 feet/14.51 seconds = 2.62 feet/second. Adjusted velocity = 2.62 feet/second x 0.85 adjustment factor = 2.23 adjusted feet/second.

Area

Creek width = 18.5 feet.

Depth readings in feet at one-foot intervals:

Depth 1	Depth 2	Depth 3	Depth 4	Depth 5	Depth 6	Depth 7	Depth 8	Depth 9
0.44	0.48	0.55	0.68	0.59	0.64	0.57	0.62	0.60

Depth 10	Depth 11	Depth 12	Depth 13	Depth 14	Depth 15	Depth 16	Depth 17	Depth 18
0.57	0.50	0.38	0.21	0.29	0.20	0.14	0.14	0.10

Added depth values = 7.70/18 measurements = 0.43 feet average depth.

Area: 18.5 feet creek width x 0.43 average depth = 7.96 square feet.

Cubic feet per second (CFS): 7.96 square feet x 2.23 feet/second = 17.75 CFS (7967.27 GPM).

Bruce & Ilene Paulsen

8 Baldy View Lane

Plains, MT 59859

ibpaulsen93@gmail.com

Lynch Creek Water Rights Proposal

Measurements taken on July 29, 2023

Velocity

Float Distance = 38 feet. Pine cones used as float objects.

Float times in seconds: 24.96, 28.40, 23.57, 21.95, 29.41 for total of 128.29/5 = 25.66 seconds.

Velocity = 38 feet/25.66 seconds = 1.48 feet/second. Adjusted velocity = 1.48 feet/second x 0.85 adjustment factor = 1.26 adjusted feet/second.

Area

Creek width = 14.5 feet.

Depth readings in feet at one-foot intervals:

Depth 1	Depth 2	Depth 3	Depth 4	Depth 5	Depth 6	Depth 7	Depth 8	Depth 9
0.23	0.30	0.30	0.25	0.23	0.27	0.35	0.30	0.30

Depth 10	Depth 11	Depth 12	Depth 13	Depth 14	Depth 15	Depth 16	Depth 17	Depth 18
0.18	0.29	0.21	0.09	0.06	NA	NA	NA	NA

Added depth values = 3.36/14 measurements = 0.24 feet average depth.

Area: 14.5 feet creek width x 0.24 average depth = 3.48 square feet.

Cubic feet per second (CFS): 3.48 square feet x 1.26 feet/second = 4.38 CFS (1966.01 GPM).

Bruce & Ilene Paulsen

8 Baldy View Lane

Plains, MT 59859

ibpaulsen93@gmail.com

Lynch Creek Water Rights Proposal

Measurements taken on August 26, 2023

Velocity

Float Distance = 38 feet. Pine cones used as float objects.

Float times in seconds: 24.51, 24.13, 23.77, 23.73, 24.82 for total of 120.96/5 = 24.19 seconds.

Velocity = 38 feet/24.19 seconds = 1.57 feet/second. Adjusted velocity = 1.57 feet/second x 0.85 adjustment factor = 1.33 adjusted feet/second.

Area

Creek width = 14.5 feet.

Depth readings in feet at one-foot intervals:

Depth 1	Depth 2	Depth 3	Depth 4	Depth 5	Depth 6	Depth 7	Depth 8	Depth 9
0.15	0.23	0.25	0.29	0.29	0.29	0.36	0.39	0.36

Depth 10	Depth 11	Depth 12	Depth 13	Depth 14	Depth 15	Depth 16	Depth 17	Depth 18
0.32	0.28	0.26	0.05	0.15	NA	NA	NA	NA

Added depth values = 3.7/14 measurements = 0.26 feet average depth.

Area: 14.5 feet creek width x 0.26 average depth = 3.77 square feet.

Cubic feet per second (CFS): 3.77 square feet x 1.33 feet/second = 5.01 CFS (2248.79 GPM).

Bruce & Ilene Paulsen

8 Baldy View Lane

Plains, MT 59859

ibpaulsen93@gmail.com

Lynch Creek Water Rights Proposal

Measurements taken on September 30, 2023

Velocity

Float Distance = 38 feet. Pine cones used as float objects.

Float times in seconds: 18.85, 18.64, 21.77, 19.57, 18.06 for total of 96.89/5 = 19.38 seconds.

Velocity = 38 feet/19.38 seconds = 1.96 feet/second. Adjusted velocity = 1.96 feet/second x 0.85 adjustment factor = 1.67 adjusted feet/second.

Area

Creek width = 17.5 feet.

Depth readings in feet at one-foot intervals:

Depth 1	Depth 2	Depth 3	Depth 4	Depth 5	Depth 6	Depth 7	Depth 8	Depth 9
0.27	0.30	0.39	0.49	0.47	0.45	0.52	0.43	0.49

Depth 10	Depth 11	Depth 12	Depth 13	Depth 14	Depth 15	Depth 16	Depth 17	Depth 18
0.45	0.40	0.38	0.22	0.18	0.16	0.14	0.03	NA

Added depth values = 5.77/17 measurements = 0.34 feet average depth.

Area: 17.5 feet creek width x 0.34 average depth = 5.95 square feet.

Cubic feet per second (CFS): 5.95 square feet x 1.67 feet/second = 9.94 CFS (4,461.67 GPM).

Bruce & Ilene Paulsen

8 Baldy View Lane

Plains, MT 59859

ibpaulsen93@gmail.com

Lynch Creek Water Rights Proposal

Volume Calculations

Area

Vegetable garden: 60' x 100' = 6,000 sq.ft.

Flower garden: 50' x 30' = 1,500 sq.ft.

Lawn: 60' x 100' = 6,000 sq.ft.

Corn patch: 25' x 30' = 750 sq.ft.

Dogwoods: 10' x 70' = 700 sq.ft.

Total = 14,950 sq.ft.

14,950 sq.ft./43,560sq.ft per acre = 0.343 acres

0.343 acres x 2.5 AF/ac/season = 0.858 AF/season

Paulsen, Bruce - FS, MT

From: Richardson, Kristin - FS, MT
Sent: Thursday, October 26, 2023 8:49 AM
To: Paulsen, Bruce - FS, MT
Subject: Lynch Creek flow

Hi Bruce.

Here are the Lynch Creek flows our program measured in 2019 and 2023, taken above the confluence with C.F.

There may be other measurements done > 15 years ago. They would be in archives.

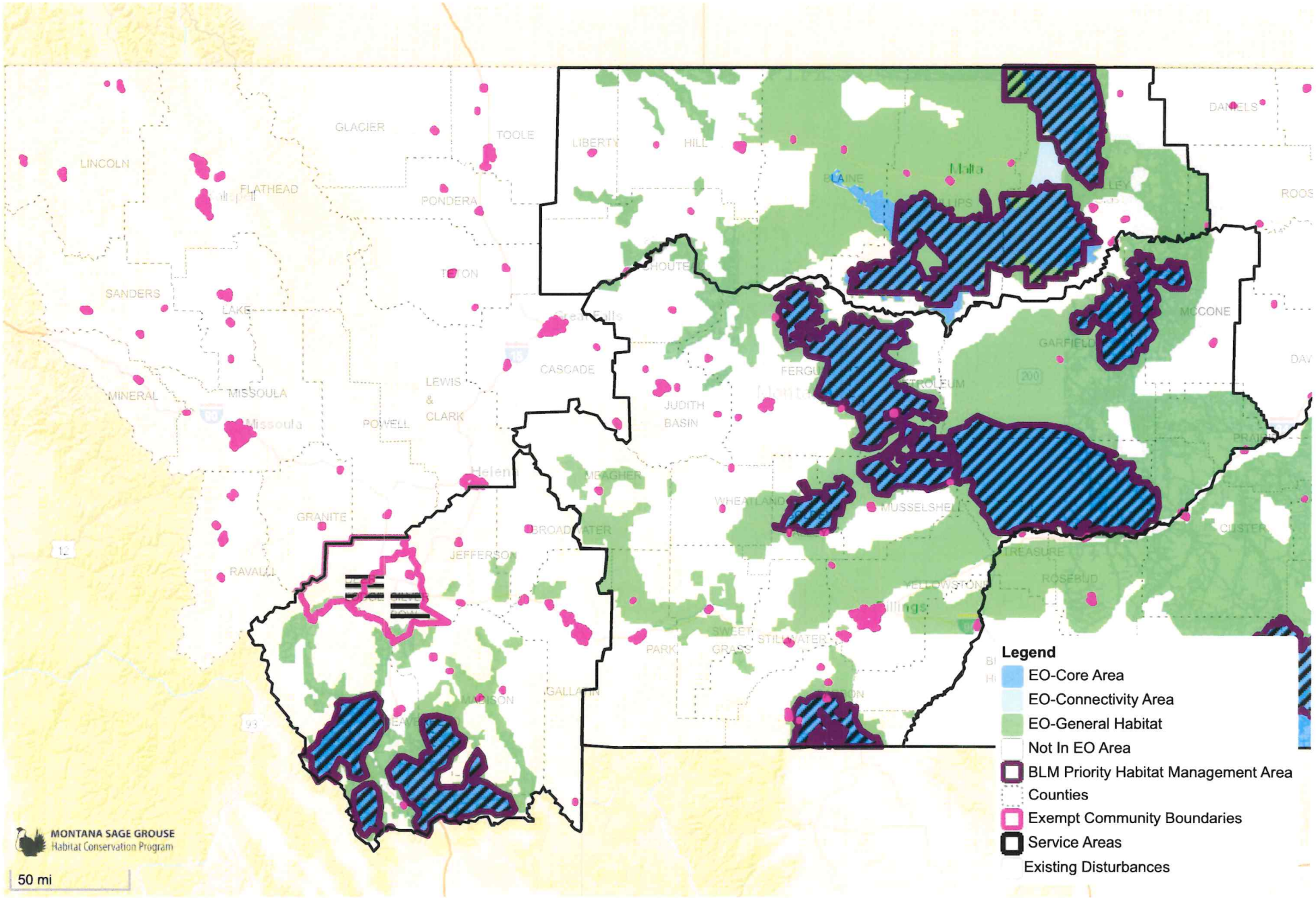
Date	Discharge (cfs)	Date	Discharge (cfs)
May 29, 2019	16.8	June 7, 2023	7.38
June 20, 2019	11.1	July 5, 2023	2.74
July 29, 2019	1.0	August 31, 2023	0.20

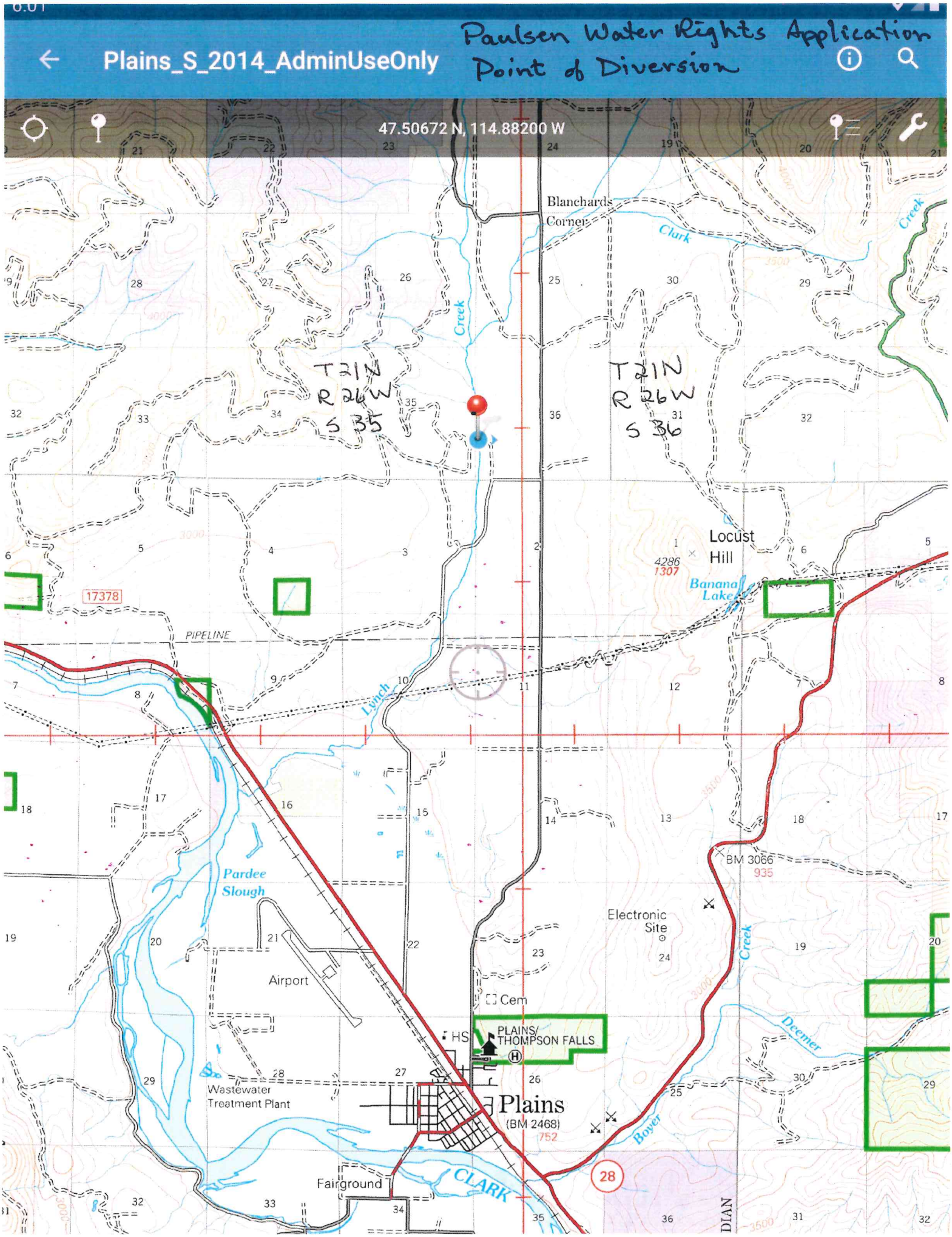
Kris

Kris Richardson
Hydrologist
Forest Service
Lolo NF
p: 406-826-4312
f: 406-826-4358
kristin.richardson@usda.gov
408 Clayton St
Plains, MT 59859
www.fs.fed.us
Caring for the land and serving people

Looking upstream


Looking Downstream


GLACIER
TOOLE
LIBERTY
HILL
BLAINE
Malta
PHILLIPS
VALLEY
DANIELS
ROOSEVELT
LINCOLN
FLATHEAD
PONDERA
TETON
SANDERS
LAKE
CASCADE
FERGUS
PETROLEUM
GARFIELD
MCCONE
MINERAL
MISSOULA
Missoula
POWELL
LEWIS & CLARK
JUDITH BASIN
WHEATLAND
MUSSELSHELL
GRANITE
BROADWATER
JEFFERSON
RAVALLI
TREASURE
ROSEBUD
CUSTER
SWEET GRASS
PARK
STILLWATER
GALLATIN
MADISON
Legend
EO-Core Area
EO-Connectivity Area
EO-General Habitat
Not In EO Area
BLM Priority Habitat Management Area
Counties
Exempt Community Boundaries
Service Areas
Existing Disturbances
MONTANA SAGE GROUSE
Habitat Conservation Program
50 mi


Plains_S_2014_AdminUseOnly
Paulsen Water Rights Application
Point of Diversion
47.50672 N, 114.88200 W
T21N
R26W
S35
T21N
R26W
S36
Blanchards Corner
Clark Creek
Locust Hill
4286
1307
Banana Lake
17378
PIPELINE
Lynch Creek
Pardee Slough
Airport
Cem
HS
PLAINS/ THOMPSON FALLS
Wastewater Treatment Plant
Plains
(BM 2468)
752
Fairground
CLARK
Electronic Site
BM 3066
935
Deemer
Boyer
28


Paulsen Water Rights Proposal
Yellow - property boundary
Black - proposed waterline
POD - proposed point of diversion
POU - proposed point of use
Legend
POU
POU
Waterline
POD
N
400 ft
Google Earth

REQUEST FOR PREAPPLICATION MEETING

ARM 36.12.1302(2)

(Revised 01/2024)

For Department Use Only

Date Received _____

Received By _____

Scheduled Meeting Date _____

Instructions

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

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

---

1. Applicant Name Bruce & Ilene Paulsen

Mailing Address 8 Baldy View Lane

City Plains State MT Zip 59859

Home Phone 406-303-1970 Other Phone 406-303-1972

Email: ibpaulsen93@gmail.com

2. Representative Name (if other than Applicant) _____

☐ Representative is Consultant ☐ Representative is Attorney ☐ Representative is Other

Mailing Address _____

City _____ State _____ Zip _____

Home Phone _____ Other Phone _____

Email: _____

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

☒ Permit ☐ Change

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

a) The flow rate and volume of water required:

Flow Rate 164 ☒ GPM ☐ CFS Volume 0.858 Acre-Feet

b) The point of diversion:

Point of Diversion #1 SW 1/4 NW 1/4 SW 1/4 Section 36, Township 21 ☒ N ☐ S, Range 26 ☐ E ☒ W

County Sanders County

Lot/Tract 8 Block _____ Subdivision Name Sammons Trucking

Point of Diversion #2 ____1/4 ____1/4 ____1/4 Section ____, Township _____ ☐ N ☐ S, Range _____ ☐ E ☐ W

County _____

Lot/Tract _____ Block _____ Subdivision Name _____

c) The place of use:

0.343 Acres 8 Lot ____ Block SE 1/4 NE 1/4 SE 1/4 Sec 35, Twp 21 ☒ N ☐ S, Rge 26 ☐ E ☒ W

_____Acres ____ Lot ____ Block_____1/4 _____1/4 _____1/4 Sec ____, Twp ____ ☐ N ☐ S, Rge ____ ☐ E ☐ W

_____Acres ____ Lot ____ Block_____1/4 _____1/4 _____1/4 Sec ____, Twp ____ ☐ N ☐ S, Rge ____ ☐ E ☐ W

_____Acres ____ Lot ____ Block_____1/4 _____1/4 _____1/4 Sec ____, Twp ____ ☐ N ☐ S, Rge ____ ☐ E ☐ W

_____Acres ____ Lot ____ Block_____1/4 _____1/4 _____1/4 Sec ____, Twp ____ ☐ N ☐ S, Rge ____ ☐ E ☐ W

d) The source of water: Lynch Creek

e) The proposed purpose: Lawn and garden

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

Type of water right _____ Basin _____ Water Right # _____

Type of water right _____ Basin _____ Water Right # _____

Type of water right _____ Basin _____ Water Right # _____

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

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

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

Location: ____1/4 ____1/4 ____1/4 Section ___, Township 21 ☐ N ☐ S, Range ___ ☐ E ☐ W

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

Location: ____1/4 ____1/4 ____1/4 Section ___, Township ___ ☐ N ☐ S, Range ___ ☐ E ☐ W

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

Location: ____1/4 ____1/4 ____1/4 Section ___, Township ___ ☐ N ☐ S, Range ___ ☐ E ☐ W

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

New Well #1 ____1/4 ____1/4 ____1/4 Section ____, Township _____ ☐ N ☐ S, Range _____ ☐ E ☐ W

County _____

Lot/Tract _____ Block_____ Subdivision Name_____

Estimated Well Depth _____ Feet

New Well #2 ____1/4 ____1/4 ____1/4 Section ____, Township _____ ☐ N ☐ S, Range _____ ☐ E ☐ W

County _____

Lot/Tract _____ Block_____ Subdivision Name_____

Estimated Well Depth _____ Feet