

Environmental Assessment & Public Notice for Public Comment

- **Environmental Assessment &
supporting documents**
- **Public Notice for Public Comment
package**
 - **Form Checklist**
 - **PN- Certificate of service**
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 - **Notice Area Map**

**Environmental Assessment &
Public Notice for Public
Comment**

NOTICE AREA

Application No. **43D 30171861**

Regional Office # 03

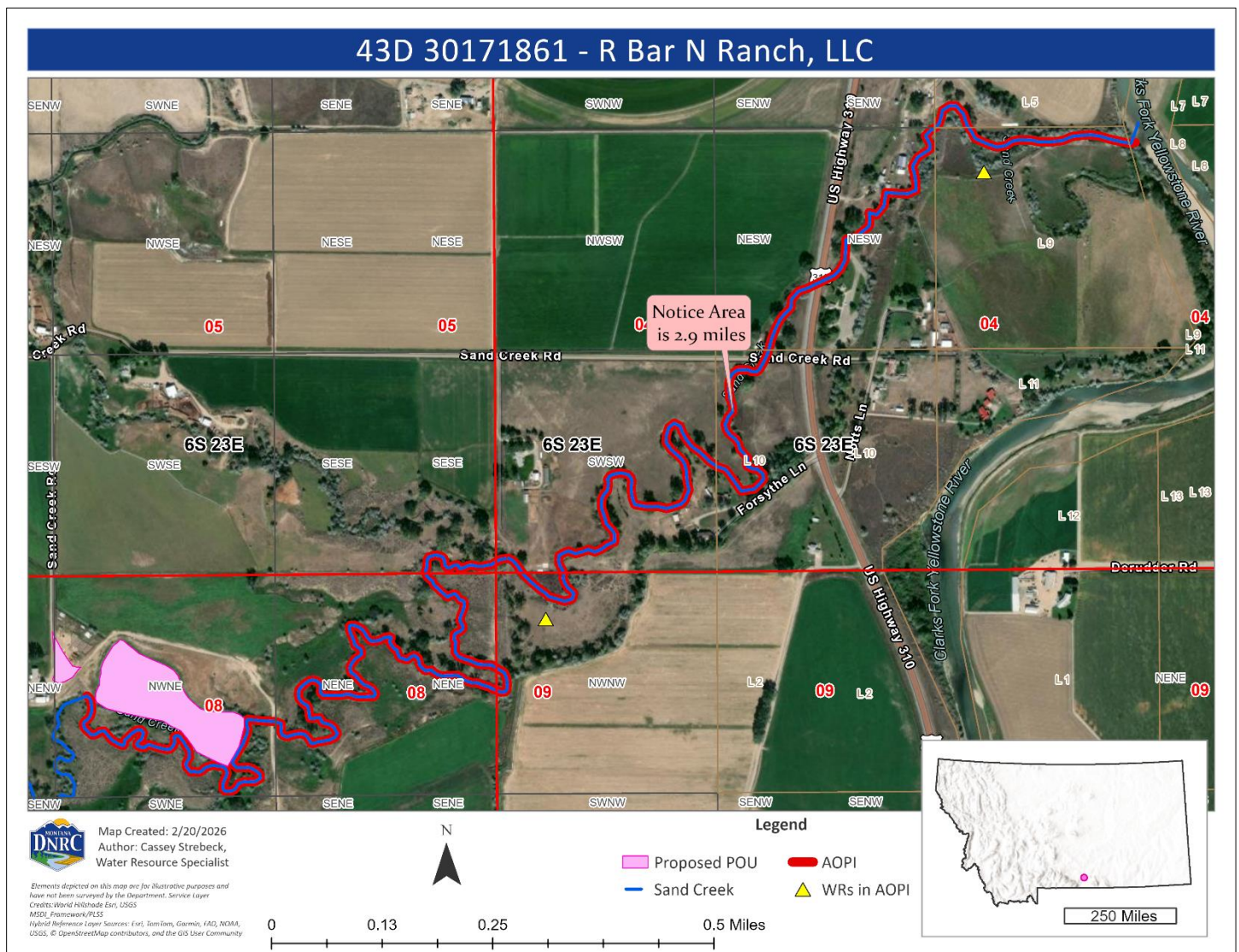
Applicant's Name **R Bar N Ranch, LLC.**

Indian Reservation ☐ Yes ☒ No If yes, Reservation _____

Irrigation District ☐ Yes ☒ No If yes, District _____

Specialist **C. Strebeck**

Date **13Jul2026**



Water Right Owner	Water Right # (Basin, ID, and Number)
Applicant: R Bar N Ranch, LLC	43D 30171861
Water Right Owners in Potentially Affected Area	
Robin A Schalla; Tammy S Schalla	43D 43402-00
Heidema Ranch LP	43D 30134926
ALL WATER RIGHTS APPLICATION	
1BIA BUREAU OF INDIAN AFFAIRS	All Apps
1DSL MONTANA BOARD OF LAND COMMISSIONER	All Apps
1FWP DEPT OF FISH, WILDLIFE, & PARKS	All Apps
1PPL PPL MONTANA LLC, Holly Franz	All Apps
1NWE NORTHWESTERN ENERGY	All Apps
2FWP DEPT OF FISH, WILDLIFE, & PARKS	All Apps
3BLG DEPT OF NATURAL RESOURCES & CONSERVATION Billings Regional Office	All Apps
3NPR NORTHERN PLAINS RESOURCE COUNCIL	All Apps
ALL SURFACE WATER	
1BOR US DEPT OF INTERIOR	All Surface
1TUL MT TROUT UNLIMITED	All Surface
1FWS US FISH & WILDLIFE SERVICE	All Surface
CONSERVATION DISTRICT	
3CDA CARBON COUNTY CONSERVATION DISTRICT	Carbon County Apps
NEWSPAPERS	
CARBON COUNTY NEWS	Newspaper

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

The public notice area is shown on the map as the source outlined in red; the reach of Sand Creek within the red outline extends from the proposed point of diversion to the confluence of Sand Creek and the Clarks Fork Yellowstone River.

Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

1. Applicant/Contact name and address: R Bar N Ranch, L.L.C.
89 Sand Creek Rd
Bridger, MT 59014
2. Type of action: Application for Beneficial Water Use Permit No. 43D 30171861
3. Water source name: Sand Creek (GNIS ID 00776175)
4. Location affected by project: Generally located in the NE of Section 8, Township 6 South, Range 23 East.
5. Narrative summary of the proposed project, purpose, action to be taken, and benefits:

The Applicant proposes to divert water from Sand Creek, from May 1 to September 30, by means of a pump, from the proposed point of diversion located in the SWNWNE Section 8, Township 6 South, Range 23 East, Carbon County. The proposed use includes diverting at a flow rate of 2.45 CFS and up to 17.09 AF in volume per year, for irrigation from May 1 to September 30. The Applicant proposes irrigating 6.85 acres in the NWNE Sec. 8, T6S, R23E, Carbon County, using a gated pipe system.

The DNRC shall issue a water use permit if an applicant proves that the criteria in 85-2-311 MCA are met.

6. Agencies consulted during preparation of the Environmental Assessment:
(include agencies with overlapping jurisdiction)

Montana Department of Natural Resources and Conservation
Montana Department of Fish, Wildlife and Parks (FWP)
Montana Department of Environmental Quality (DEQ)
Montana Sage Grouse Habitat Conservation Program (SGHCP)
Montana Natural Heritage Program (NHP)
U.S. Fish and Wildlife Service (USFWS)
U.S. Department of Agriculture, National Resource Conservation Service (USDA, NRCS)

7. Attachment: Montana State Library Natural Heritage Program – R Bar N Environmental Summary, hereafter referred to as Summary

Part II. Environmental Review

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity

This project is for 17.09 AF/YR in volume from Sand Creek to be diverted and used between May 1 to September 30. The majority of water extracted for this project will return to Sand Creek. This water is believed to come primarily from wastewater and return flows from local irrigators. If local irrigators stopped diverting water from the Clarks Fork Yellowstone River, it is believed that there would be no water available in Sand Creek for the Applicant to utilize.

StreamStats determined a contributing basin area of 44.3 square miles at the project site, with a mean annual precipitation of 13.81 inches. USGS classifies the Sand Creek as an intermittent stream, though a site visit in May 2025 by Department hydrologist Christine Schweigert determined no water was available upgradient of where the Sand Creek canal flume crosses over Sand Creek.

This Department took measurements in May; the Applicant took measurements in June, July, August, and September. Water was found to be physically available below the Sand Creek canal flume throughout the proposed months for the proposed project, based on the data analyzed at the time of the Technical Analysis. Montana FWP currently does not have a classification for Sand Creek.

Determination: No Significant Impact

Water quality

This project will consist of irrigated acreage near the creek; thus, some runoff is expected and may directly enter the creek. Minimal pollutants are expected to occur; however, this is dependent on the Applicant's behaviors and irrigation practices. The Applicant should be conscious of how their actions affect the riparian and water quality.

As of the time of this assessment, Montana DEQ classifies the water quality of Sand Creek below Bridger Creek as Use Class B-1: "Waters classified as suitable for drinking, culinary, and food processing purposes after conventional treatment; bathing, swimming, and recreation; growth and propagation of salmonid fishes and associated aquatic life, waterfowl, and furbearers; and agricultural and industrial water supply." Also, Montana FWP does not have any restrictions or closures on Sand Creek.

Determination: No Significant Impact

Groundwater

This project is for surface water and is adjacent to the creek. The project should not affect the quality or quantity of groundwater.

Determination: No Impact

DIVERSION WORKS

Pump

The project will consist of a pump (Cornell model 3RB with a 20-HP engine) and a suction apparatus to divert water from the creek. With a stationary pump, riparian damage may occur during installation. After installation, time should be given for the riparian zone to heal and revegetate. The Applicant should be aware of the damage that can be inflicted on the riparian and maintain vegetation for bank stability and habitat health. An access point for future access is recommended.

Determination: No Significant Impact

Conveyance

The Applicant proposes to convey water from the pump via a main pipeline to five auxiliary pipelines throughout the proposed place of use. Soil disturbance is expected to be minimal, but is dependent on the Applicant's practices.

Determination: No Significant Impact

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Sage Grouse

This project is located within the bounds of the Sage Grouse EO-General Habitat. The Applicant has submitted a letter from the Montana Sage Grouse Habitat Conservation Program for Project No. 7184, dated October 15, 2025 (Governor's Executive Orders 12-2015 and 21-2025). There is minimal disturbance expected with the new point of diversion for this place of use. The appropriator has been utilizing local ditch shares to irrigate, and aerial imagery from the Water Resource Survey shows the lands near the project site have been irrigated.

Determination: No Significant Impact

Endangered and threatened species

This project may have minimal impact on threatened or endangered fish, wildlife, plants, or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. See Summary, pages 3-10, for species in the area of the project, and their status.

Determination: No Significant Impact

Wetlands

No wetlands were claimed or proposed in this project. See Summary page 11. Page 13 of the Summary contains an incomplete list; the issue is unknown. This project is located along Sand Creek. Wetlands and riparian areas are expected at the project site, upstream, and

downstream. An EA completed in February 2026, for Application for Beneficial Water Use Permit No. 43D 30171860, located downstream of this project also had an incomplete list. Both only identify Riverine-Lower Perennial and Riverine-Intermittent rivers.

Determination: Potential Impact

Ponds

No ponds were claimed or proposed in this project. Aerial imagery does not show a body of water suggestive of a pond or pit.

Determination: No Impact

GEOLOGY - SOIL QUALITY, STABILITY AND MOISTURE

Soil Quality

The NRCS Web Soil Survey expects that the area around the point of diversion on Sand Creek, where the pump will be placed, consists primarily of Heldt Silty clay loam (Ht) with a 2 to 4 percent slope. See attached NRCS Web Soil Survey.

Stability

The Applicant should consider the effects on bank stabilization by limiting the removal of riparian vegetation.

Determination: Potential Impact

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS –

Land Cover

Vegetation cover can be viewed on pages 11-12 of the summary. The summary includes a range of vegetation that does not necessarily apply to the project site. The area around the project site, seen in the orange trapezoid near the lower left point of the hexagonal frame, consists primarily of great plains floodplain. As mentioned, loss of riparian is expected due to the pump being moved along the bank of the creek. The Applicant should take precautions to prevent loss of vegetation.

Determination: Potential Impact

Noxious Weeds

This project may result in the establishment or spread of noxious weeds. See Summary pages 16-18 for species found in the area. It will be the responsibility of the landowner to prevent the establishment and spread of noxious weeds and non-native species.

Determination: Potential Impact

AIR QUALITY

This project proposes to use a water pump. This product may produce air pollutants. It is the Applicant's responsibility to maintain equipment and limit environmental impact.

Determination: No Significant Impact

HISTORICAL AND ARCHEOLOGICAL SITES

Montana's National Register of Historic Places does not identify any registered historic landmarks, properties, or districts near the project site, at the time of this assessment. If the Applicant were to locate something of historical significance, it is the Applicant's responsibility to notify the appropriate authorities.

Determination: No Known Impact

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY

No additional impact on other environmental resources is expected due to this project.

Determination: No Known Impacts

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS

There are no known locally adopted environmental plans or goals.

Determination: No Known Impacts

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES

This project will have no significant impact on recreational and wilderness activities.

Determination: No Significant Impact

HUMAN HEALTH

This project will have no significant impact on human health.

Determination: No Significant Impact

PRIVATE PROPERTY

Assess whether there are any government regulatory impacts on private property rights.

Yes___ No_X_ If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.

Determination: No Known Impact

OTHER HUMAN ENVIRONMENTAL ISSUES

For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.

Impacts on:

(a) Cultural uniqueness and diversity? No Significant Impact

(b) Local and state tax base and tax revenues? No Significant Impact

- (c) Existing land uses? No Significant Impact
- (d) Quantity and distribution of employment? No Significant Impact
- (e) Distribution and density of population and housing? No Significant Impact
- (f) Demands for government services? No Significant Impact
- (g) Industrial and commercial activity? No Significant Impact
- (h) Utilities? No Significant Impact
- (i) Transportation? No Significant Impact
- (j) Safety? No Significant Impact
- (k) Other appropriate social and economic circumstances? No Significant Impact

2. ***Secondary and cumulative impacts on the physical environment and human population:***

Secondary Impacts: No secondary impacts are identified

Cumulative Impacts: No cumulative impacts are identified

3. ***Describe any mitigation/stipulation measures:*** None at this time

4. ***Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:***

The alternative to the proposed project is the no-action alternative. The no-action alternative prevents the property owner from improving the operation of their irrigation system. The no-action alternative does not prevent or mitigate any significant environmental impacts.

PART III. Conclusion

- 1. ***Preferred Alternative:*** The DNRC shall issue a water use permit if an Applicant proves the criteria in 85-2-311 MCA are met.
- 2. ***Comments and Responses:*** It is recommended that the Applicant consider erosion control and increasing the health of the riparian zone.
- 3. ***Finding:***
 Yes___ No_**X**_ Based on the significance criteria evaluated in this EA, is an EIS required?

If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action:

No significant environmental impacts were identified; therefore, an EIS is not required

Name of person responsible for the preparation of this EA:

Name: Cassey Strebeck

Title: Water Resource Specialist

Date: April 20, 2026



MONTANA STATE LIBRARY

NATURAL HERITAGE PROGRAM mtnhp.mt.gov

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Latitude	Longitude
45.32772	-108.91403
45.34537	-108.93788

Summarized by:

R Bar N - Environmental Summary

(Custom Area of Interest)



Suggested Citation

Montana Natural Heritage Program. Environmental Summary Report.

for Latitude 45.32772 to 45.34537 and Longitude -108.91403 to -108.93788. Retrieved on 4/16/2026.

The Montana Natural Heritage Program is part of the Montana State Library's Natural Resource Information System. Since 1985, it has served as a neutral and non-regulatory provider of easily accessible information on Montana's species and biological communities to inform all stakeholders in environmental review, permitting, and planning processes. The program is part of the NatureServe network that is composed of over 60 member programs across North America that work to provide current and comprehensive distribution and status information on species and biological communities.



Environmental Summary

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Introduction to Environmental Summary Report

Environmental Summary Reports from the Montana Natural Heritage Program (MTNHP) provide information on species and biological communities to inform all stakeholders in environmental review, permitting, and planning processes. For information on environmental permits in Montana, please see permitting overviews by the [Montana Department of Environmental Quality](#), the [Montana Department of Natural Resources and Conservation](#), the [Index of Environmental Permits for Montana](#) and our [Suggested Contacts for Natural Resource Management Agencies](#). The report for your area of interest consists of introductory and related materials in this PDF and an Excel workbook with worksheets summarizing information managed in the MTNHP databases for: (1) species occurrences; (2) other observed species without species occurrences; (3) other species potentially present based on their range, presence of associated habitats, or predictive distribution model output if available; (4) structured surveys that follow a protocol capable of detecting one or more species; (5) land cover mapped as ecological systems; (6) wetland and riparian mapping; (7) land management categories; and (8) biological reports associated with plant and animal observations. If your area of interest corresponds to a statewide polygon layer (e.g., watersheds, counties, or public land survey sections) information summaries in your report will exactly match those boundaries. However, if your report is for a custom area, users should be aware that summaries do not correspond to the exact boundaries of the polygon they have specified, but instead are a summary across a layer of hexagons intersected by the polygon they specified as shown on the report cover. Summarizing by these hexagons which are one square mile in area and approximately one kilometer in length on each side allows for consistent and rapid delivery of summaries based on a uniform grid that has been used for planning efforts across North America.

In presenting this information, MTNHP is working towards assisting the user with rapidly assessing the known or potential species and biological communities, land management categories, and biological reports associated with the report area. Users are reminded that this information is likely incomplete and may be inaccurate as surveys to document species are lacking in many areas of the state, species' range polygons often include regions of unsuitable habitat, methods of predicting the presence of species or communities are constantly improving, and information is constantly being added and updated in our databases. **Field verification by professional biologists of the absence or presence of species and biological communities in a report area will always be an important obligation of users of our data. Users are encouraged to only use this environmental summary report as a starting point for more in depth analyses and are encouraged to contact state, federal, and tribal resource management agencies for additional data or management guidelines relevant to your efforts. Please see the Appendix for introductory materials to each section of the report, additional information resources, and a list of relevant agency contacts.**

Legend

Model Icons

- Suitable (native range)
- Optimal Suitability
- Moderate Suitability
- Low Suitability
- Suitable (introduced range)

Habitat Icons

- Common
- Occasional

Range Icons

- Native / Year-round
- Summer
- Winter
- Migratory
- Non-native
- Historical

Num Obs
Count of obs with
'good precision'
(≤1000m)
+ indicates
additional 'poor
precision' obs
(1001m-
10,000m)



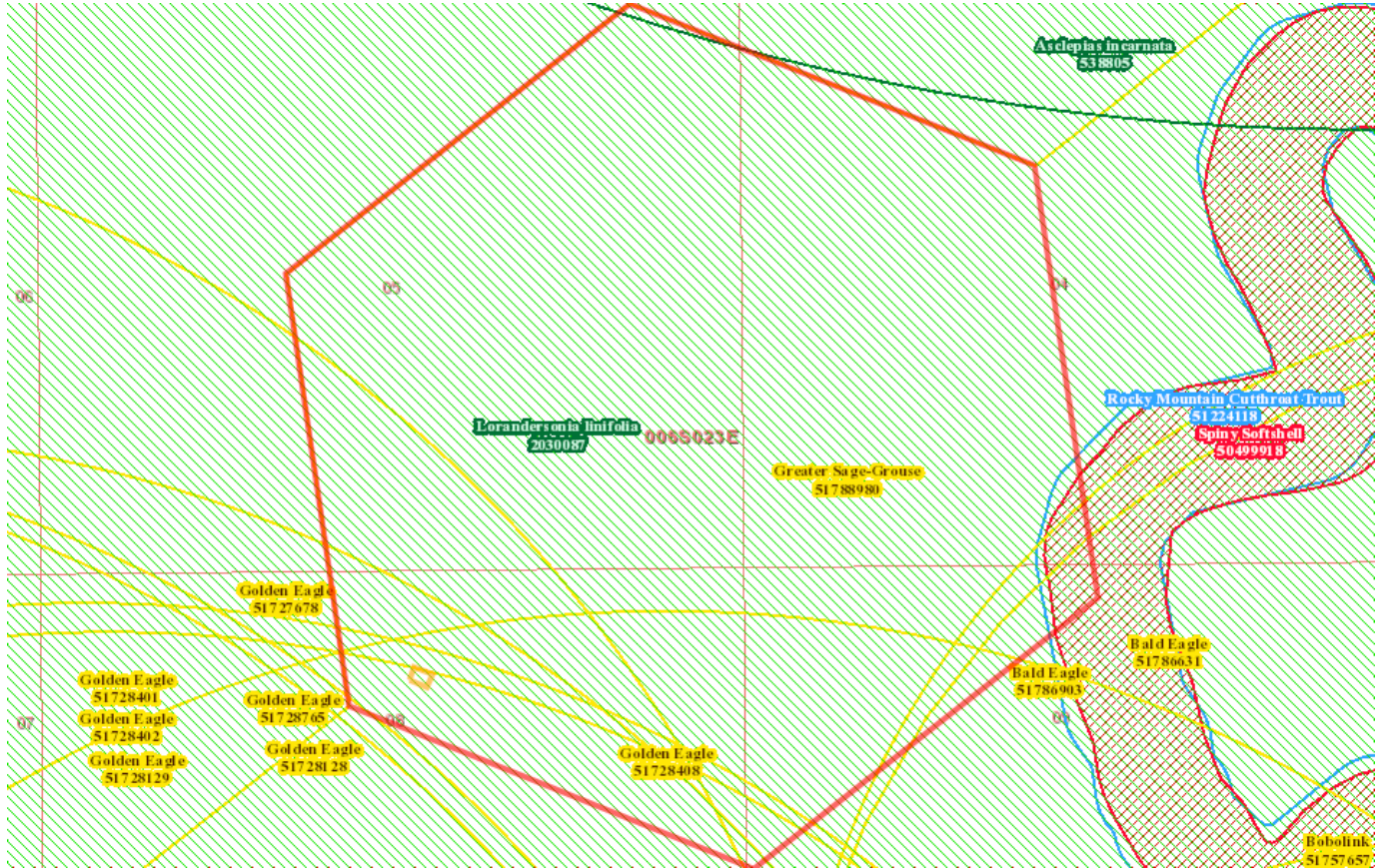
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Native Species

Summarized by: R Bar N - Environmental Summary (*Custom Area of Interest*)

Filtered by:

Native Species reports are filtered for Species with MT Status = Species of Concern, Special Status, Important Animal Habitat, Potential SOC



Species Occurrences

	USFWS Sec7	# SO	# Obs	Predicted Model	Range
F - Rocky Mountain Cutthroat Trout (<i>Oncorhynchus virginalis</i>) SOC		1			
View in Field Guide View Predicted Models View Range Maps Species of Concern - Native/Non-native Species - (depends on location or taxa) Global: GNR State: S2 BLM: SENSITIVE FWP SWAP: SGCN Delineation Criteria Stream reaches and standing water bodies where the species presence has been confirmed through direct capture or where they are believed to be present based on the professional judgement of a fisheries biologist due to confirmed presence in adjacent areas. In order to reflect the importance of adjacent terrestrial habitats to survival, stream reaches are buffered 100 meters, standing water bodies greater than 1 acre are buffered 50 meters, and standing water bodies less than 1 acre are buffered 30 meters into the terrestrial habitat based on PACFISH/INFISH Riparian Conservation Area standards. (Last Updated: Oct 22, 2024) Predicted Models: 100% Suitable (native range) (deductive)					
V - Asclepias incarnata (<i>Swamp Milkweed</i>) SOC		1			
View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G5 State: S1S2 Plant Threat Score: No Known Threats CCVI: Moderately Vulnerable Delineation Criteria Individual occurrences are generally based upon a discretely mapped area provided by an observer and are not separated by any pre-defined distance. Individual clusters of plants mapped at fine spatial scales (separated by less than approximately 25-50 meters) may be grouped together into one occurrence if they are not separated by distinct areas of habitat or terrain features. Point observations are buffered to encompass any locational uncertainty associated with the observation. (Last Updated: Apr 26, 2018) Predicted Models: 100% Suitable (native range) (deductive)					
B - Bald Eagle (<i>Haliaeetus leucocephalus</i>) SSS		2	1		
View in Field Guide View Predicted Models View Range Maps Special Status Species - Native Species Global: G5 State: S4 USFWS: BGEPA; MBTA USFS: Sensitive - Known in Forests (LOLO) BLM: SENSITIVE PIF: 2 Delineation Criteria Confirmed nesting area buffered by a minimum distance of 2,000 meters in order to be conservative about encompassing the breeding territory and area commonly used for re-nesting. Only nesting observations with a locational uncertainty of 1,000 meters or less will be used to delineate a nesting area. (Last Updated: Mar 19, 2026) Predicted Models: 100% Moderate (inductive)					
B - Golden Eagle (<i>Aquila chrysaetos</i>) SOC		6			
View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G5 State: S3 USFWS: BGEPA; MBTA BLM: SENSITIVE FWP SWAP: SGCN Delineation Criteria Confirmed nesting area buffered by a minimum distance of 3,000 meters in order to be conservative about encompassing the entire breeding territory and area commonly used for re-nesting and otherwise buffered by the locational uncertainty associated with the observation up to a maximum distance of 5,000 meters. (Last Updated: Mar 18, 2026) Predicted Models: 100% Low (inductive)					

R - Spiny Softshell <i>(Apalone spinifer)</i> SOC	1
View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G5 State: S3 BLM: SENSITIVE FWP SWAP: SGCN <u>Delineation Criteria</u> Stream reaches and impounded streams within the species' native range where the species naturally occurs and their presence has been confirmed through direct capture or where they are believed to be present based on the professional judgement of a biologist due to confirmed presence in adjacent areas. In order to reflect the importance of adjacent terrestrial habitats to survival, stream reaches are buffered 100 meters and impounded streams 50 meters into the terrestrial habitat based on PACFISH/INFISH Riparian Conservation Area standards. (Last Updated: Jan 30, 2026) Predicted Models: 100% Low (inductive)	
B - Greater Sage-Grouse <i>(Centrocercus urophasianus)</i> SOC	1 Not Assessed
View in Field Guide View Range Maps Species of Concern - Native Species Global: G3 State: S2 Species of Conservation Concern in Forests (CG) BLM: SENSITIVE FWP SWAP: SGCN PIF: 1 <u>Delineation Criteria</u> Confirmed breeding area based on the presence of a nest, chicks, juveniles, or adults on a lek. Point observations are mapped in the center of a one-square mile hexagon to protect the exact locations of leks. The outer edges of this hexagon are then buffered by a distance of 6,400 meters in order to encompass a body of research indicating that females typically nest within this distance of a lek and that lek numbers are negatively impacted by fossil fuel drilling activities within this distance of a lek. If the locational uncertainty associated with the observation is greater than 5,000 meters, the observation is not valid for creation of a species occurrence. All of the one-square mile hexagons intersecting this buffered area are presented as the Species Occurrence record. (Last Updated: Mar 19, 2026)	USFS: Sensitive - Known in Forests (BD)
V - Lorandersonia linifolia <i>(Spearleaf Rabbitbrush)</i> PSOC	1 Not Assessed
View in Field Guide View Range Maps Potential Species of Concern - Native Species Global: G5 State: S3S4 Plant Threat Score: No Known Threats	

Legend

Model Icons

-  Suitable (native range)
-  Optimal Suitability
-  Moderate Suitability
-  Low Suitability
-  Suitable (introduced range)

Habitat Icons

-  Common
-  Occasional

Range Icons

-  Native / Year-round
-  Summer
-  Winter
-  Migratory
-  Non-native
-  Historical

Num Obs
Count of obs with
'good precision'
(≤1000m)

+ indicates
additional 'poor
precision' obs
(1001m-
10,000m)



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Native Species

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Other Observed Species

	USFWS Sec7	# Obs	Predicted Model	Range
B - American White Pelican (<i>Pelecanus erythrorhynchos</i>) SOC		3		 
View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G4 State: S3B USFWS: MBTA FWP SWAP: SGCN PIF: 3 Predicted Models:  100% Moderate (inductive)				
B - Great Blue Heron (<i>Ardea herodias</i>) SOC		1		  
View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G5 State: S3 USFWS: MBTA FWP SWAP: SGCN Predicted Models:  100% Low (inductive)				

Legend

Model Icons

-  Suitable (native range)
-  Optimal Suitability
-  Moderate Suitability
-  Low Suitability
-  Suitable (introduced range)

Habitat Icons

-  Common
-  Occasional

Range Icons

-  Native / Year-round
-  Summer
-  Winter
-  Migratory
-  Non-native
-  Historical

Num Obs
Count of obs with
'good precision'
(≤1000m)
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precision' obs
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Native Species

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Other Potential Species

	USFWS Sec7	Predicted Model	Range
F - Burbot (<i>Lota lota</i>) PSOC			
View in Field Guide View Predicted Models View Range Maps Potential Species of Concern - Native Species Global: G5 State: S4 FWP SWAP: SGIN Predicted Models:  100% Suitable (native range) (deductive)			
I - Bombus pensylvanicus (<i>American Bumble Bee</i>) SOC			
View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G3G4 State: S3 FWP SWAP: SGCN Predicted Models:  100% Optimal (inductive)			
M - Little Brown Myotis (<i>Myotis lucifugus</i>) SOC			
View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G3G4 State: S2S3 USFS: Sensitive - Known in Forests (BD, BRT, KOOT) FWP SWAP: SGCN Predicted Models:  100% Moderate (inductive)			
M - North American Porcupine (<i>Erethizon dorsatum</i>) PSOC			
View in Field Guide View Predicted Models View Range Maps Potential Species of Concern - Native Species Global: G5 State: S3S4 FWP SWAP: SGCN Predicted Models:  100% Moderate (inductive)			
M - Townsend's Big-eared Bat (<i>Corynorhinus townsendii</i>) SOC			
View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G4 State: S3 USFS: Sensitive - Known in Forests (LOLO) BLM: SENSITIVE FWP SWAP: SGCN Predicted Models:  100% Moderate (inductive)			
M - Western Spotted Skunk (<i>Spilogale gracilis</i>) PSOC			
View in Field Guide View Predicted Models View Range Maps Potential Species of Concern - Native Species Global: G5 State: SU FWP SWAP: SGIN Predicted Models:  100% Moderate (inductive)			
B - Hooded Merganser (<i>Lophodytes cucullatus</i>) PSOC			 
View in Field Guide View Predicted Models View Range Maps Potential Species of Concern - Native Species Global: G5 State: S4 USFWS: MBTA PIF: 2 Predicted Models:  100% Moderate (inductive)			
B - Pinyon Jay (<i>Gymnorhinus cyanocephalus</i>) SOC			
View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G3 State: S3 USFWS: MBTA; BCC10; BCC17 FWP SWAP: SGCN Predicted Models:  100% Moderate (inductive)			
R - North American Snapping Turtle (<i>Chelydra serpentina</i>) SOC			
View in Field Guide View Predicted Models View Range Maps Species of Concern - Native/Non-native Species - (depends on location or taxa) Global: G4G5 State: S3 BLM: SENSITIVE FWP SWAP: SGCN Predicted Models:  100% Moderate (inductive)			
R - Western Milksnake (<i>Lampropeltis gentilis</i>) SOC			
View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G5 State: S2 BLM: SENSITIVE FWP SWAP: SGCN Predicted Models:  100% Moderate (inductive)			
V - Eleocharis rostellata (<i>Beaked Spikerush</i>) SOC			
View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G5 State: S3 USFS: Species of Conservation Concern in Forests (CG, FLAT, HLC) Plant Threat Score: Unknown CCVI: Less Vulnerable FWP SWAP: SGCN Predicted Models:  100% Moderate (inductive)			
M - Pallid Bat (<i>Antrozous pallidus</i>) SOC			 
View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G4 State: S3 BLM: SENSITIVE FWP SWAP: SGCN Predicted Models:  100% Moderate (inductive)			

<

R - Western Hog-nosed Snake (<i>Heterodon nasicus</i>) SOC View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G5T5 State: S2 BLM: SENSITIVE FWP SWAP: SGCN Predicted Models: 100% Low (inductive)
A - Great Plains Toad (<i>Anaxyrus cognatus</i>) SOC View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G5 State: S3 BLM: SENSITIVE FWP SWAP: SGCN Predicted Models: 100% Low (inductive)
A - Northern Leopard Frog (<i>Lithobates pipiens</i>) SOC View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G5 State: S3S4 USFS: Sensitive - Suspected in Forests (KOOT, LOLO) BLM: SENSITIVE FWP SWAP: SGCN Predicted Models: 100% Low (inductive)
I - Bombus insularis (<i>Indiscriminate Cuckoo Bumble Bee</i>) PSOC View in Field Guide View Predicted Models View Range Maps Potential Species of Concern - Native Species Global: G3 State: S3S4 Predicted Models: 100% Low (inductive)
I - Bombus occidentalis (<i>Western Bumble Bee</i>) SOC View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G3 State: S2 USFS: Sensitive - Known in Forests (BD, BRT, KOOT) BLM: SENSITIVE FWP SWAP: SGCN Predicted Models: 100% Low (inductive)
I - Bombus suckleyi (<i>Suckley's Cuckoo Bumble Bee</i>) SOC View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G2G3 State: S1 USFWS: P FWP SWAP: SGCN Predicted Models: 100% Low (inductive)
V - Carex crawei (<i>Crawe's Sedge</i>) SOC View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G5 State: S2S3 Plant Threat Score: Low Predicted Models: 100% Low (inductive)
V - Hymenoxys torreyana (<i>Torrey Bitterweed</i>) PSOC View in Field Guide View Predicted Models View Range Maps Potential Species of Concern - Native Species Global: G4 State: S3S4 Plant Threat Score: No Known Threats Predicted Models: 100% Low (inductive)
V - Stellaria crassifolia (<i>Fleshy Stitchwort</i>) SOC View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G5 State: S2 Plant Threat Score: No Known Threats Predicted Models: 100% Low (inductive)
M - Eastern Red Bat (<i>Lasiurus borealis</i>) SOC View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G3G4 State: S3B BLM: SENSITIVE FWP SWAP: SGCN Predicted Models: 100% Low (inductive)
M - Northern Hoary Bat (<i>Lasiurus cinereus</i>) SOC View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G3G4 State: S3B BLM: SENSITIVE FWP SWAP: SGCN Predicted Models: 100% Low (inductive)
M - Spotted Bat (<i>Euderma maculatum</i>) PSOC View in Field Guide View Predicted Models View Range Maps Potential Species of Concern - Native Species Global: G4 State: S4 BLM: SENSITIVE FWP SWAP: SGIN Predicted Models: 100% Low (inductive)
B - American Bittern (<i>Botaurus lentiginosus</i>) SOC View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G5 State: S3B USFWS: MBTA BLM: SENSITIVE FWP SWAP: SGCN PIF: 3 Predicted Models: 100% Low (inductive)
B - Black-billed Cuckoo (<i>Coccyzus erythrophthalmus</i>) SOC View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G5 State: S3B USFWS: MBTA; BCC11; BCC17 BLM: SENSITIVE FWP SWAP: SGCN PIF: 2 Predicted Models: 100% Low (inductive)
B - Black-necked Stilt (<i>Himantopus mexicanus</i>) SOC View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G5 State: S3B USFWS: MBTA FWP SWAP: SGCN PIF: 3 Predicted Models: 100% Low (inductive)
B - Bobolink (<i>Dolichonyx oryzivorus</i>) SOC View in Field Guide View Predicted Models View Range Maps Species of Concern - Native Species Global: G5 State: S3B USFWS: MBTA; BCC10; BCC11; BCC17 FWP SWAP: SGCN PIF: 3 Predicted Models: 100% Low (inductive)

B - Brewer's Sparrow (<i>Spizella breweri</i>)	SOC				
	View in Field Guide	View Predicted Models	View Range Maps		
	Species of Concern - Native Species Global: G5 State: S3B USFWS: MBTA BLM: SENSITIVE FWP SWAP: SGCN PIF: 2 Predicted Models: 100% Low (inductive)				
B - Broad-tailed Hummingbird (<i>Selasphorus platycercus</i>)	PSOC				
	View in Field Guide	View Predicted Models	View Range Maps		
	Potential Species of Concern - Native Species Global: G5 State: S4B USFWS: MBTA; BCC10 Predicted Models: 100% Low (inductive)				
B - Chimney Swift (<i>Chaetura pelagica</i>)	PSOC				
	View in Field Guide	View Predicted Models	View Range Maps		
	Potential Species of Concern - Native Species Global: G4G5 State: S3S4B USFWS: MBTA; BCC11 FWP SWAP: SGCN PIF: 3 Predicted Models: 100% Low (inductive)				
B - Common Poorwill (<i>Phalaenoptilus nuttallii</i>)	PSOC				
	View in Field Guide	View Predicted Models	View Range Maps		
	Potential Species of Concern - Native Species Global: G5 State: S4B USFWS: MBTA FWP SWAP: SGIN PIF: 3 Predicted Models: 100% Low (inductive)				
B - Long-billed Curlew (<i>Numenius americanus</i>)	SOC				
	View in Field Guide	View Predicted Models	View Range Maps		
	Species of Concern - Native Species Global: G4 State: S3B USFWS: MBTA; BCC11 BLM: SENSITIVE FWP SWAP: SGCN PIF: 2 Predicted Models: 100% Low (inductive)				
B - Plumbeous Vireo (<i>Vireo plumbeus</i>)	PSOC				
	View in Field Guide	View Predicted Models	View Range Maps		
	Potential Species of Concern - Native Species Global: G5 State: S3S4B USFWS: MBTA FWP SWAP: SGCN PIF: 3 Predicted Models: 100% Low (inductive)				
B - Sage Thrasher (<i>Oreoscoptes montanus</i>)	SOC				
	View in Field Guide	View Predicted Models	View Range Maps		
	Species of Concern - Native Species Global: G4 State: S3B USFWS: MBTA BLM: SENSITIVE FWP SWAP: SGCN PIF: 3 Predicted Models: 100% Low (inductive)				
B - Veery (<i>Catharus fuscescens</i>)	SOC				
	View in Field Guide	View Predicted Models	View Range Maps		
	Species of Concern - Native Species Global: G5 State: S3B USFWS: MBTA BLM: SENSITIVE FWP SWAP: SGCN PIF: 2 Predicted Models: 100% Low (inductive)				
B - White-faced Ibis (<i>Plegadis chihi</i>)	SOC				
	View in Field Guide	View Predicted Models	View Range Maps		
	Species of Concern - Native Species Global: G5 State: S3B USFWS: MBTA BLM: SENSITIVE FWP SWAP: SGCN PIF: 2 Predicted Models: 100% Low (inductive)				
B - Sprague's Pipit (<i>Anthus spragueii</i>)	SOC				
	View in Field Guide	View Predicted Models	View Range Maps		
	Species of Concern - Native Species Global: G3G4 State: S3B USFWS: MBTA; BCC11; BCC17 BLM: SENSITIVE FWP SWAP: SGCN PIF: 1				

Structured Surveys

Summarized by: **R Bar N - Environmental Summary** (*Custom Area of Interest*)

The Montana Natural Heritage Program (MTNHP) records information on the locations where more than 80 different types of well-defined repeatable survey protocols capable of detecting an animal species or suite of animal species have been conducted by state, federal, tribal, university, or private consulting biologists. Examples of structured survey protocols tracked by MTNHP include: visual encounter and dip net surveys for pond breeding amphibians, point counts for birds, call playback surveys for selected bird species, visual surveys of migrating raptors, kick net stream reach surveys for macroinvertebrates, visual encounter cover object surveys for terrestrial mollusks, bat acoustic or mist net surveys, pitfall and/or snap trap surveys for small terrestrial mammals, track or camera trap surveys for large mammals, and trap surveys for turtles. Whenever possible, photographs of survey locations are stored in MTNHP databases.

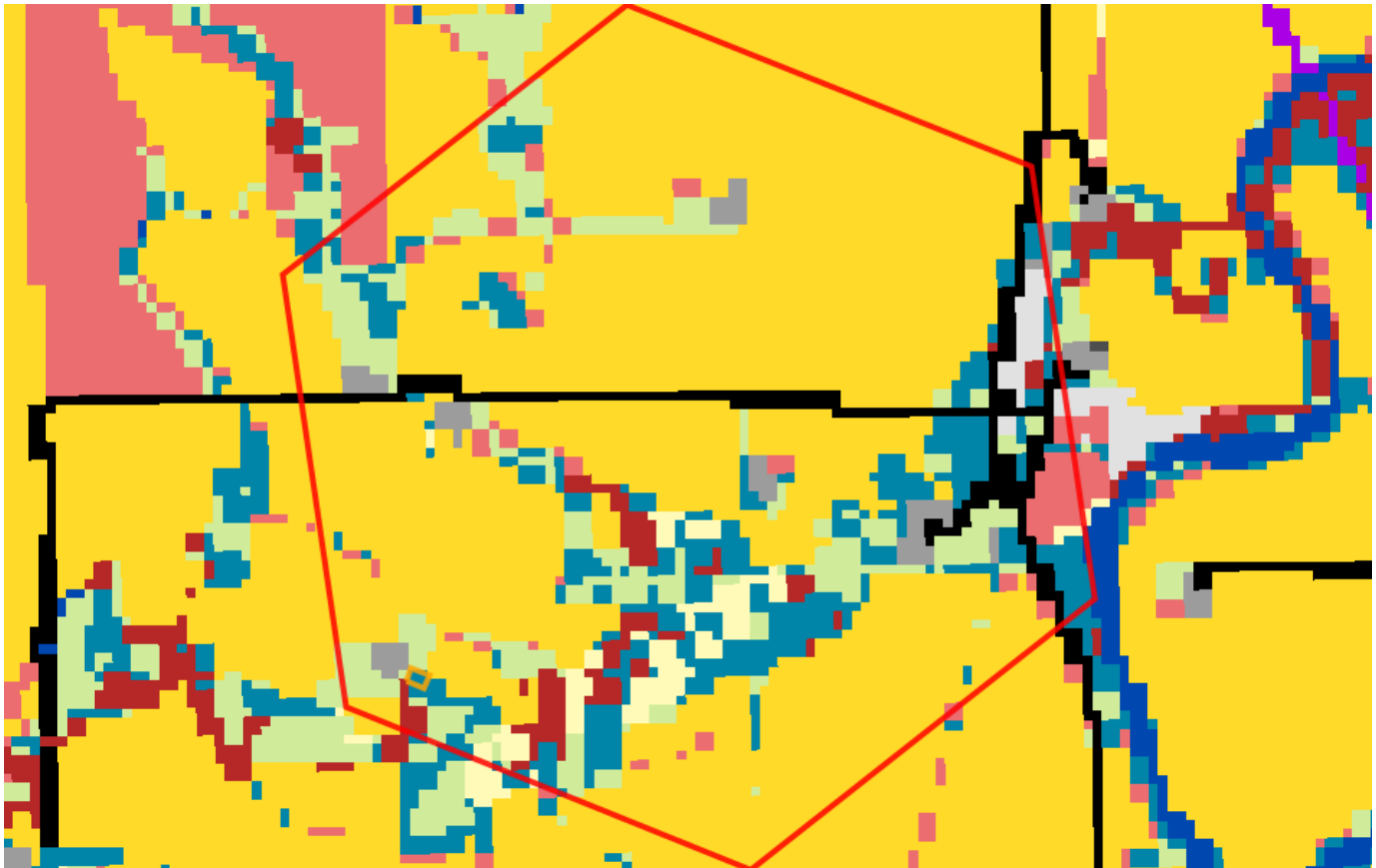
MTNHP does not typically manage information on structured surveys for plants; surveys for invasive species may be a future exception.

Within the report area you have requested, structured surveys are summarized by the number of each type of structured survey protocol that has been conducted, the number of species detections/observations resulting from these surveys, and the most recent year a survey has been conducted.

E-Noxious Weed, Road-based (<i>Noxious Weed Road-based Visual Surveys</i>)	Survey Count: 2	Obs Count: 4	Recent Survey: 2003
F-Fish Other Survey (<i>Fish Other Survey (FWP Survey Type)</i>)	Survey Count: 2	Obs Count: 4	Recent Survey: 1957
F-Fish Trapping/Netting (<i>Fish Trapping or Netting Surveys</i>)	Survey Count: 1	Obs Count: 7	Recent Survey: 2004
M-Bat Roost (Active Season) (<i>Bat Roost (Active Season) Survey</i>)	Survey Count: 1	Obs Count:	Recent Survey: 2003

Land Cover

Summarized by: **R Bar N - Environmental Summary** (*Custom Area of Interest*)



**66% (421
Acres)**

Human Land Use

Agriculture

Cultivated Crops

These areas used for the production of crops, such as corn, soybeans, small grains, sunflowers, vegetables, and cotton, typically on an annual cycle. Agricultural plant cover is variable depending on season and type of farming. Other areas include more stable land cover of orchards and vineyards.



**11% (69
Acres)**

Wetland and Riparian Systems

Floodplain and Riparian

Great Plains Floodplain

This system occurs along the Missouri and Yellowstone Rivers and their larger tributaries, including parts of the Little Missouri, Clark's Fork Yellowstone, Powder, Tongue, Bighorn, Milk, and Musselshell rivers. These are the big perennial rivers of the region, with hydrologic dynamics largely driven by snowmelt and rainfall originating in their headwater watersheds, rather than local precipitation events. In the absence of disturbance, periodic flooding of fluvial and alluvial soils and channel migration will create depressions and backwaters that support a mosaic of wetland and riparian vegetation, whose composition and structure is sustained, altered and redistributed by hydrology. Dominant communities within this system range from floodplain forests to wet meadows to gravel/sand flats, linked by underlying soils and flooding regimes. In the western part of the system's range in Montana, the overstory dominant species is black cottonwood (*Populus balsamifera* ssp. *trichocarpa*) with narrowleaf cottonwood (*Populus angustifolia*) and eastern cottonwood (*Populus deltoides*) occurring as co-dominants in the riparian/floodplain interface near the mountains. Further east, narrowleaf cottonwood and Plains cottonwood become dominant. In relatively undisturbed stands, willow (*Salix* species), redosier dogwood (*Cornus sericea*) and common chokecherry (*Prunus virginiana*) form a thick, multi-layered shrub understory, with a mixture of cool and warm season graminoid species below.

In Montana, many occurrences are now degraded to the point where the cottonwood overstory is the only remaining natural component. The hydrology of these floodplain systems has been affected by dams, highways, railroads and agricultural ditches, and as a result, they have lost their characteristic wetland /riparian mosaic structure. This has resulted in a highly altered community consisting of relict cottonwood stands with little regeneration. The understory vegetation is dominated by non-native pasture grasses, legumes and other introduced forbs, or by the disclimax western snowberry (*Symphoricarpos occidentalis*) and rose (*Rosa* species) shrub community.



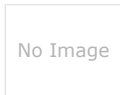
Grassland Systems

Lowland/Prairie Grassland

9% (59 Acres)

Great Plains Mixedgrass Prairie

The system covers much of the eastern two-thirds of Montana, occurring continuously for hundreds of square kilometers, interrupted only by wetland/riparian areas or sand prairies. Soils are primarily fine and medium-textured. The growing season averages 115 days, ranging from 100 days on the Canadian border to 130 days on the Wyoming border. Climate is typical of mid-continental regions with long severe winters and hot summers. Grasses typically comprise the greatest canopy cover, and western wheatgrass (*Pascopyrum smithii*) is usually dominant. Other species include thickspike wheatgrass (*Elymus lanceolatus*), green needlegrass (*Nassella viridula*), blue grama (*Bouteloua gracilis*), and needle and thread (*Hesperostipa comata*). Near the Canadian border in north-central Montana, this system grades into rough fescue (*Festuca campestris*) and Idaho fescue (*Festuca idahoensis*) grasslands. Remnants of shortbristle needle and thread (*Hesperostipa curti-seta*) dominated vegetation are found in northernmost Montana and North Dakota, and are associated with productive sites, now mostly converted to farmland. Forb diversity is typically high. In areas of southeastern and central Montana where sagebrush steppe borders the mixed grass prairie, common plant associations include Wyoming big sagebrush-western wheatgrass (*Artemisia tridentata* ssp. *wyomingensis*/*Pascopyrum smithii*). Fire and grazing are the primary drivers of this system. Drought can also impact it, in general favoring the shortgrass component at the expense of the mid-height grasses. With intensive grazing, cool season exotics such as Kentucky bluegrass (*Poa pratensis*), smooth brome (*Bromus inermis*), and Japanese brome (*Bromus japonicus*) increase in dominance; both of these rhizomatous species have been shown to markedly decrease species diversity. Previously cultivated acres that have been re-vegetated with non-native plants have been transformed into associations such as Kentucky bluegrass (*Poa pratensis*)/western wheatgrass (*Pascopyrum smithii*) or into pure crested wheatgrass (*Agropyron cristatum*) stands.



No Image

3% (19 Acres)

Human Land Use

Developed

Other Roads

County, city and or rural roads generally open to motor vehicles.



3% (16 Acres)

Recently Disturbed or Modified

Introduced Vegetation

Introduced Riparian and Wetland Vegetation

Areas where non-native vegetation dominates lands immediately adjacent to rivers and streams (riparian) or occupies 75% or more of a wetland. Typically this class describes Russian Olive along large rivers east of the Rocky Mountains.



2% (16 Acres)

Shrubland, Steppe and Savanna Systems

Sagebrush Steppe

Big Sagebrush Steppe

This widespread ecological system occurs throughout much of central Montana, and north and east onto the western fringe of the Great Plains. In central Montana, where this system occurs on both glaciated and non-glaciated landscapes, it differs slightly, with more summer rain than winter precipitation and more precipitation annually. Throughout its distribution, soils are typically deep and non-saline, often with a microphytic crust. This shrub-steppe is dominated by perennial grasses and forbs with greater than 25% cover. Overall shrub cover is less than 10 percent. In Montana and Wyoming, stands are more mesic, with more biomass of grass, and have less shrub diversity than stands farther to the west, and 50 to 90% of the occurrences are dominated by Wyoming big sagebrush with western wheatgrass (*Pascopyrum smithii*). Japanese brome (*Bromus japonicus*) and cheatgrass (*Bromus tectorum*) are indicators of disturbance, but cheatgrass is typically not as abundant as in the Intermountain West, possibly due to a colder climate. The natural fire regime of this ecological system maintains a patchy distribution of shrubs, preserving the steppe character. Shrubs may increase following heavy grazing and/or with fire suppression. In central and eastern Montana, complexes of prairie dog towns are common in this ecological system.



2% (16 Acres)

Recently Disturbed or Modified

Introduced Vegetation

Introduced Upland Vegetation - Annual and Biennial Forbland

Land cover is significantly altered/disturbed by introduced annual and biennial forbs. Natural vegetation types are no longer recognizable. Typical species that dominate these areas are knapweed, oxeye daisy, Canada thistle, leafy spurge, pepperweed, and yellow sweetclover.



2% (11 Acres)

Human Land Use

Developed

Low Intensity Residential

Includes areas with a mixture of constructed materials and vegetation. Impervious surfaces account for 20-50% of total cover. These areas most commonly include single-family housing units in rural and suburban areas. Paved roadways may be classified into this category.

Additional Limited Land Cover

1% (9 Acres) Major Roads

1% (5 Acres) Developed, Open Space

<1% (0 Acres) Open Water

Wetland and Riparian

Summarized by: **R Bar N - Environmental Summary** (*Custom Area of Interest*)



Wetland and Riparian Mapping

R - Riverine (Rivers)

2 - Lower Perennial

UB - Unconsolidated Bottom

H - Permanently Flooded	<1 Acres
(no modifier)	<1 Acres R2UBH

R - Riverine (Rivers), 2 - Lower Perennial, UB - Unconsolidated Bottom

Stream channels where the substrate is at least 25% mud, silt or other fine particles.

4 - Intermittent

SB - Stream Bed

A - Temporarily Flooded	7 Acres
(no modifier)	7 Acres R4SBA

C - Seasonally Flooded	1 Acres
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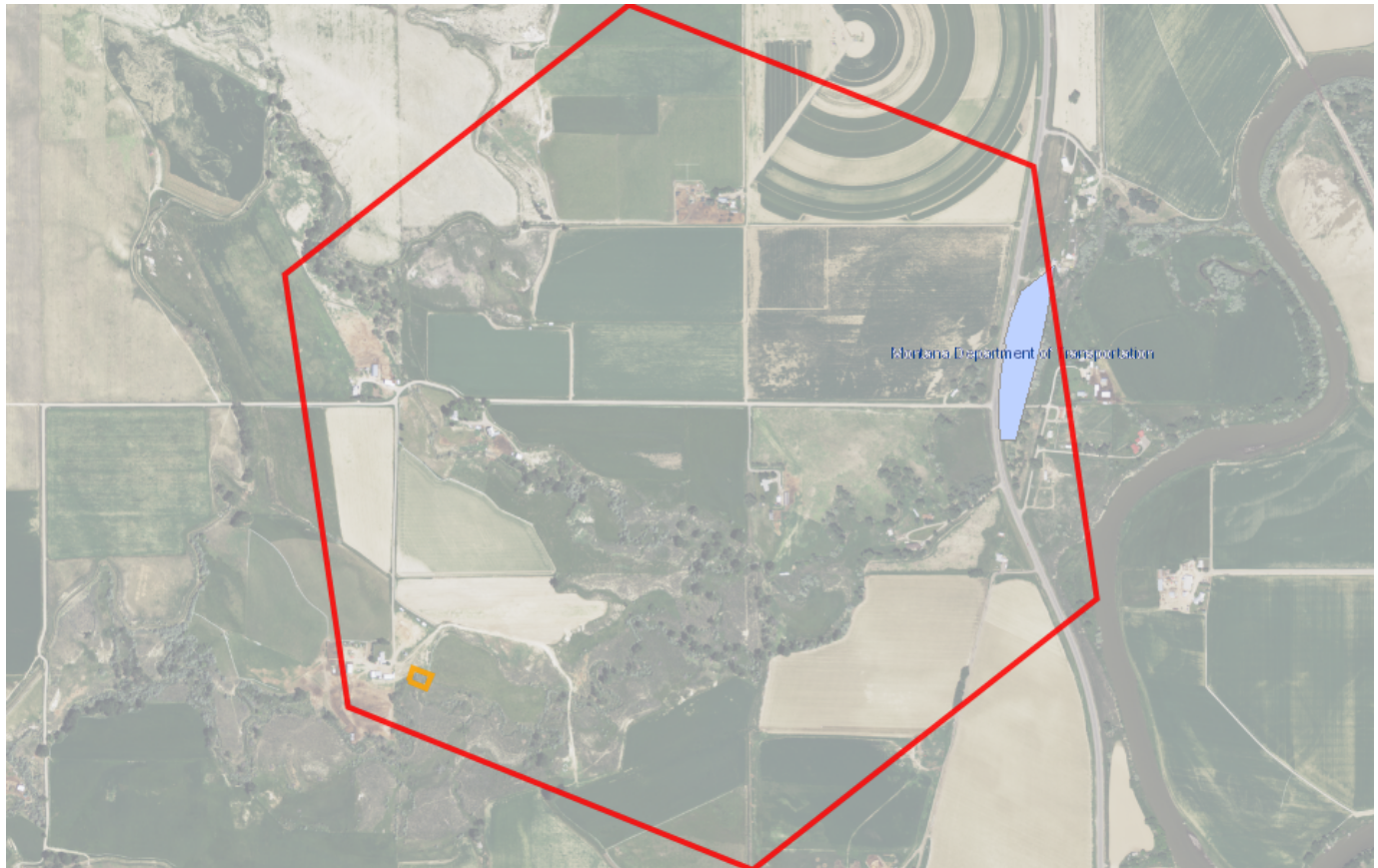
(no modifier)	<1 Acres R4SBC
x - Excavated	1 Acres R4SBCx

R - Riverine (Rivers), 4 - Intermittent, SB - Stream Bed

Active channel that contains periodic water flow.

Land Management

Summarized by: **R Bar N - Environmental Summary** (*Custom Area of Interest*)



Land Management Summary

	Ownership	Tribal	Easements	Other Boundaries (possible overlap)
Public Lands	6 Acres (1%)			
State	6 Acres (1%)			
Montana Department of Transportation	6 Acres (1%)			
MTDOT Owned	6 Acres (1%)			
Private Lands or Unknown Ownership	634 Acres (99%)			



Biological Reports

Summarized by: **R Bar N - Environmental Summary** (*Custom Area of Interest*)

Within the report area you have requested, citations for all reports and publications associated with plant or animal observations in Montana Natural Heritage Program (MTNHP) databases are listed and, where possible, links to the documents are included.

The MTNHP plans to include reports associated with terrestrial and aquatic communities in the future as allowed for by staff resources. If you know of reports or publications associated with species or biological communities within the report area that are not shown in this report, please let us know: mtnhp@mt.gov



Tobalske, Claudine and Linda Vance. 2017. ***Predicting the distribution of Russian Olive stands in eastern Montana valley bottoms using NAIP imagery***. Report to the US EPA. Montana Natural Heritage Program. Helena, MT. 40pp.

Legend

Model Icons

-  Suitable (native range)
-  Optimal Suitability
-  Moderate Suitability
-  Low Suitability
-  Suitable (introduced range)

Habitat Icons

-  Common
-  Occasional

Range Icons

-  Non-native

Num Obs
Count of obs with
'good precision'
(≤1000m)
+ indicates
additional 'poor
precision' obs
(1001m-
10,000m)



Latitude Longitude
45.32772 -108.91403
45.34537 -108.93788

Invasive and Pest Species

Summarized by: **R Bar N - Environmental Summary** (*Custom Area of Interest*)

Aquatic Invasive Species

# Obs	Predicted Model	Range
		
F - Common Carp (<i>Cyprinus carpio</i>) AIS		
View in Field Guide View Predicted Models View Range Maps Aquatic Invasive Species - Non-native Species Global: G5 State: SNA Predicted Models:  100% Suitable (introduced range) (deductive)		
		
V - Nymphaea odorata (<i>American Water-lily</i>) AIS		
View in Field Guide View Predicted Models View Range Maps Aquatic Invasive Species - Non-native Species Global: G5 State: SNA Predicted Models:  100% Suitable (introduced range) (deductive)		
		
V - Nymphoides peltata (<i>Yellow Floating Heart</i>) AIS		
View in Field Guide View Predicted Models View Range Maps Aquatic Invasive Species - Non-native Species Global: G5 State: SNA Predicted Models:  100% Suitable (introduced range) (deductive)		

Noxious Weeds: Priority 1A

		
V - Centaurea solstitialis (<i>Yellow Starthistle</i>) N1A		
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 1A - Non-native Species Global: GNR State: SNA Predicted Models:  100% Moderate (inductive)		
		
V - Isatis tinctoria (<i>Dyer's Woad</i>) N1A		
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 1A - Non-native Species Global: GNR State: SNA Predicted Models:  100% Moderate (inductive)		
		
V - Phragmites australis ssp. australis (<i>European Common Reed</i>) N1A		
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 1A - Non-native Species Global: G5T5 State: SNA Predicted Models:  100% Moderate (inductive)		

Noxious Weeds: Priority 1B

		
V - Lythrum salicaria (<i>Purple Loosestrife</i>) N1B		
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 1B - Non-native Species Global: G5 State: SNA Predicted Models:  100% Moderate (inductive)		
		
V - Echium vulgare (<i>Blueweed</i>) N1B		
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 1B - Non-native Species Global: GNR State: SNA Predicted Models:  100% Low (inductive)		
		
V - Polygonum cuspidatum (<i>Japanese Knotweed</i>) N1B		
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 1B - Non-native Species Global: GNRTNR State: SNA Predicted Models:  100% Low (inductive)		
		
V - Polygonum x bohemicum (<i>Bohemian Knotweed</i>) N1B		
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 1B - Non-native Species Global: GNA State: SNA Predicted Models:  100% Low (inductive)		

Noxious Weeds: Priority 2A

		
V - Ventenata dubia (<i>Ventenata</i>) N2A		
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 2A - Non-native Species Global: GNR State: SNA Predicted Models:  100% Moderate (inductive)		
		
V - Lepidium latifolium (<i>Perennial Pepperweed</i>) N2A		
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 2A - Non-native Species Global: GNR State: SNA Predicted Models:  100% Low (inductive)		
		
V - Rhamnus cathartica (<i>Common Buckthorn</i>) N2A		
View in Field Guide View Predicted Models View Range Maps Noxious Weed: Priority 2A - Non-native Species Global: GNR State: SNA Predicted Models:  100% Low (inductive)		

Noxious Weeds: Priority 2B

Biocontrol Species

	I - Oberea erythrocephala (<i>Red-headed Leafy Spurge Stem Borer</i>)	BIOCNTL		
	View in Field Guide View Predicted Models View Range Maps Biocontrol Species - Non-native Species Global: GNR State: SNA Predicted Models: 100% Moderate (inductive)			
	I - Aphthona lacertosa (<i>Brown-legged Leafy Spurge Flea Beetle</i>)	BIOCNTL		
	View in Field Guide View Predicted Models View Range Maps Biocontrol Species - Non-native Species Global: GNR State: SNA Predicted Models: 100% Low (inductive)			
	I - Aphthona nigricutis (<i>Black Dot Leafy Spurge Flea Beetle</i>)	BIOCNTL		
	View in Field Guide View Predicted Models View Range Maps Biocontrol Species - Non-native Species Global: GNR State: SNA Predicted Models: 100% Low (inductive)			
	I - Mecinus janthiniformis (<i>Dalmatian Toadflax Stem-boring Weevil</i>)	BIOCNTL		
	View in Field Guide View Predicted Models View Range Maps Biocontrol Species - Non-native Species Global: GNR State: SNA Predicted Models: 100% Low (inductive)			

Introduction to Montana Natural Heritage Program



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INTRODUCTION

The Montana Natural Heritage Program (MTNHP) is Montana's source for reliable and objective information on Montana's native species and habitats, emphasizing those of conservation concern. MTNHP was created by the Montana legislature in 1983 as part of the Natural Resource Information System (NRIS) at the Montana State Library (MSL). MTNHP is "a program of information acquisition, storage, and retrieval for data relating to the flora, fauna, and biological community types of Montana" (MCA 90-15-102). MTNHP's activities are guided by statute as well as through ongoing interaction with, and feedback from, principal data source agencies such as Montana Fish, Wildlife, and Parks, the Montana Department of Environmental Quality, the Montana Department of Natural Resources and Conservation, the Montana University System, the US Forest Service, and the US Bureau of Land Management. Since the first staff was hired in 1985, the Program has logged a long record of success, and developed into a highly respected, service-oriented program. MTNHP is widely recognized as one of the most advanced and effective of over 60 natural heritage programs that are distributed across North America.

VISION

Our vision is that public agencies, the private sector, the education sector, and the general public will trust and rely upon MTNHP as the source for information and expertise on Montana's species and habitats, especially those of conservation concern. We strive to provide easy access to our information to allow users to save time and money, speed environmental reviews, and make informed decisions.

CORE VALUES

- We endeavor to be a single statewide source of accurate and up-to-date information on Montana's plants, animals, and aquatic and terrestrial biological communities.
- We actively listen to our data users and work responsively to meet their information and training needs.
- We strive to provide neutral, trusted, timely, and equitable service to all of our information users.
- We make every effort to be transparent to our data users in setting work priorities and providing data products.

CONFIDENTIALITY

All information requests made to the Montana Natural Heritage Program are considered library records and are protected from disclosure by the Montana Library Records Confidentiality Act (MCA 22-1-11).

INFORMATION MANAGED

Information managed at the Montana Natural Heritage Program is botanical, zoological, and ecological information that describes the distribution (e.g., observations, structured surveys, range polygons, predicted habitat suitability models), conservation status (e.g., global and state conservation status ranks, including threats), and other supporting information (e.g., accounts and references) on the biology and ecology of species and biological communities.

Data Use Terms and Conditions

- Montana Natural Heritage Program (MTNHP) products and services are based on biological data and the objective interpretation of those data by professional scientists. MTNHP does not advocate any particular philosophy of natural resource protection, management, development, or public policy.
- MTNHP has no natural resource management or regulatory authority. Products, statements, and services from MTNHP are intended to inform parties as to the state of scientific knowledge about certain natural resources, and to further develop that knowledge. The information is not intended as natural resource management guidelines or prescriptions or a determination of environmental impacts. MTNHP recommends consultation with appropriate state, federal, and tribal resource management agencies and authorities in the area where your project is located.
- Information on the status and spatial distribution of biological resources produced by MTNHP are intended to inform parties of the state-wide status, known occurrence, or the likelihood of the presence of those resources. **These products are not intended to substitute for field-collected data, nor are they intended to be the sole basis for natural resource management decisions.**
- MTNHP does not portray its data as exhaustive or comprehensive inventories of rare species or biological communities. **Field verification of the absence or presence of sensitive species and biological communities will always be an important obligation of users of our data.**
- MTNHP responds equally to all requests for products and services, regardless of the purpose or identity of the requester.
- Because MTNHP constantly updates and revises its databases with new data and information, products will become outdated over time. Interested parties are encouraged to obtain the most current information possible from MTNHP, rather than using older products. We add, review, update, and delete records on a daily basis. Consequently, we strongly advise that you update your MTNHP data sets at a minimum of every four months for most applications of our information.
- MTNHP data require a certain degree of biological expertise for proper analysis, interpretation, and application. Our staff is available to advise you on questions regarding the interpretation or appropriate use of the data that we provide. See [Contact Information for MTNHP Staff](#)
- The information provided to you by MTNHP may include sensitive data that if publicly released might jeopardize the welfare of threatened, endangered, or sensitive species or biological communities. This information is intended for distribution or use only within your department, agency, or business. Subcontractors may have access to the data during the course of any given project, but should not be given a copy for their use on subsequent, unrelated work.
- MTNHP data are made freely available. Duplication of hard-copy or digital MTNHP products with the intent to sell is prohibited without written consent by MTNHP. Should you be asked by individuals outside your organization for the type of data that we provide, please refer them to MTNHP.
- MTNHP and appropriate staff members should be appropriately acknowledged as an information source in any third-party product involving MTNHP data, reports, papers, publications, or in maps that incorporate MTNHP graphic elements.
- Sources of our data include museum specimens, published and unpublished scientific literature, field surveys by state and federal agencies and private contractors, and reports from knowledgeable individuals. MTNHP actively solicits and encourages additions, corrections and updates, new observations or collections, and comments on any of the data we provide.
- MTNHP staff and contractors do not enter or cross privately-owned lands without express permission from the landowner. However, the program cannot guarantee that information provided to us by others was obtained under adherence to this policy.

Suggested Contacts for Natural Resource Management Agencies

As required by Montana statute (MCA 90-15), the Montana Natural Heritage Program works with state, federal, tribal, nongovernmental organizations, and private partners to ensure that the latest animal and plant distribution and status information is incorporated into our databases so that it can be used to inform a variety of permitting and planning processes and management decisions. We encourage you to contact state, federal, and tribal resource management agencies in the area where your project is located and review the permitting overviews by the [Montana Department of Environmental Quality](#), the [Montana Department of Natural Resources and Conservation](#) and the [Index of Environmental Permits for Montana](#) for guidelines relevant to your efforts. In particular, we encourage you to contact the Montana Department of Fish, Wildlife, and Parks for the latest data and management information regarding hunted and high-profile management species and to use the U.S. Fish and Wildlife Service's [Information Planning and Consultation \(IPAC\) website regarding](#) U.S. Endangered Species Act listed Threatened, Endangered, or Candidate species.

For your convenience, we have compiled a list of relevant agency contacts and links below:

Montana Fish, Wildlife, and Parks

Fish Species	Zachary Shattuck zshattuck@mt.gov (406) 444-1231
Aquatic Invasive Species	Tom Woolf thomas.woolf@mt.gov (406) 444-1230
American Bison Black-footed Ferret Black-tailed Prairie Dog Bald Eagle Golden Eagle Common Loon Least Tern Piping Plover Whooping Crane	Kristina Smucker kismucker@mt.gov (406) 444-5209
Grizzly Bear Greater Sage Grouse Trumpeter Swan Big Game Upland Game Birds Furbearers	Brian Wakeling brian.wakeling@mt.gov (406) 444-3940
Managed Terrestrial Game Data	Adam Messer – MFWP GIS Coordinator amesser@mt.gov (406) 444-0095
Fisheries Data and Nongame Animal Data	Adam Messer – MFWP GIS Coordinator amesser@mt.gov (406) 444-0095
Wildlife and Fisheries Scientific Collector's Permits	https://fwp.mt.gov/buyandapply/commercialwildlifeandscientificpermits/scientific Kristina Smucker for Wildlife kismucker@mt.gov (406) 444-5209 Dave Schmetterling for Fisheries dschmetterling@mt.gov (406) 542-5514
Fish and Wildlife Recommendations for Subdivision Development	Stevie Burton stevie.burton@mt.gov (406) 594-7354 See https://fwp.mt.gov/conservation/living-with-wildlife/subdivision-recommendations
Regional Contacts 	Region 1 (Kalispell) (406) 752-5501 fwprg12@mt.gov Region 2 (Missoula) (406) 542-5500 fwprg22@mt.gov Region 3 (Bozeman) (406) 577-7900 fwprg3@mt.gov Region 4 (Great Falls) (406) 454-5840 fwprg42@mt.gov Region 5 (Billings) (406) 247-2940 fwprg52@mt.gov Region 6 (Glasgow) (406) 228-3700 fwprg62@mt.gov Region 7 (Miles City) (406) 234-0900 fwprg72@mt.gov

Montana Conservation Districts

Clickable map for contact information across Montana: <https://macdnet.org/conservation-district-map/>
Montana Association of Conservation Districts Resources Directory: <https://macdnet.org/resources>

Montana Department of Agriculture

General Contact Information: <https://agr.mt.gov/About/Office-Locations/Office-Locations-and-Field-Offices>
Noxious Weeds: <https://agr.mt.gov/Noxious-Weeds>

Montana Department of Environmental Quality

Permitting and Operator Assistance for all Environmental Permits: <https://deq.mt.gov/Permitting>
Opencut Mining Web Mapping Application for review of opencut mining applications
<https://gis.mtdeq.us/portal/apps/webappviewer/index.html?id=7b60084bc4c444a19c9a7a0867e7635a>

Montana Department of Natural Resources and Conservation

Montana Sage Grouse Habitat Conservation Program: <https://sagegrouse.mt.gov/> (406) 444-6340

Permits and Services: <https://dnrc.mt.gov/Permits-Services>

Stream Permitting (310, 404, Section 10, SPA 124, floodplain, 318, Navigable Water, and other stream permits)
<https://dnrc.mt.gov/licenses-and-permits/stream-permitting/>

Montana Floodplains Program <https://dnrc.mt.gov/Water-Resources/Floodplains/>

Wildfire Resources: <https://dnrc.mt.gov/Forestry/Wildfire>

Regional Office Contacts: <https://dnrc.mt.gov/TrustLand/About/Regional-Offices>

Bureau of Land Management

Montana Field Office Contacts: 	Billings	(406) 896-5013	Lewistown	(406) 538-1900
	Butte	(406) 533-7600	Malta	(406) 654-5100
	Dillon	(406) 683-8000	Miles City	(406) 233-2800
	Glasgow	(406) 228-3750	Missoula	(406) 329-3914
	Havre	(406) 262-2820		

Natural Resources Conservation Service

Montana Home Page <https://www.nrcs.usda.gov/state-offices/montana>
State Office and Employee Directories
<https://www.nrcs.usda.gov/contact/state-office-contacts/montana-employee-directory-state-office>

United States Army Corps of Engineers

Montana Regulatory Office for federal permits related to construction in water and wetlands
<https://www.nwo.usace.army.mil/Missions/Regulatory-Program/Montana/>
Direct Link to Regulatory Request System: <https://rrs.usace.army.mil/rrs/home>
Email for questions: Montana.Reg@usace.army.mil
Phone for questions: (406) 441-1375

United States Environmental Protection Agency

Environmental information, notices, permitting, and contacts <https://www.epa.gov/mt>

Gateway to state resource locators <https://www.envcap.org/srl/index.php>

United States Fish and Wildlife Service

Information Planning and Conservation (IPAC) website: <https://ipac.ecosphere.fws.gov>

Montana Ecological Services Field Office: <https://www.fws.gov/office/montana-ecological-services> (406) 449-5225

Migratory Bird Joint Ventures: <https://www.fws.gov/partner/migratory-bird-joint-ventures>

United States Forest Service

Regional Office – Missoula, Montana Contacts

Assistant Regional TES PM

Diane Probasco

diane.probasco@usda.gov

(307) 709-2292

Regional Botanist

Amanda Hendrix

amanda.hendrix@usda.gov

(651) 447-3016

Invasive Species Program Manager

Michelle Cox

michelle.cox2@usda.gov

(406) 329-3669

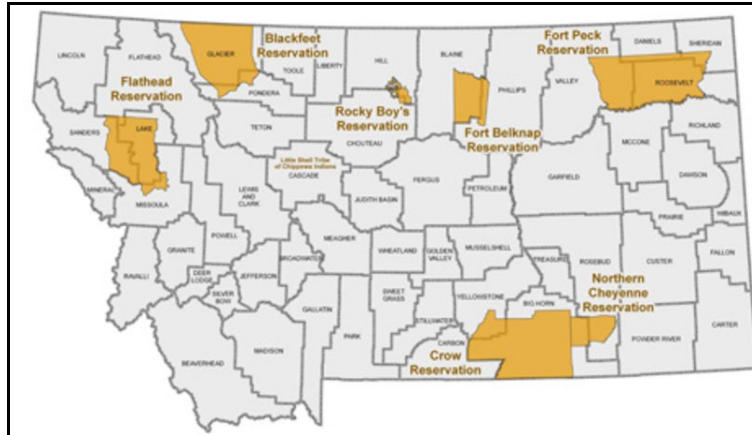
Regional Hydrologist

Andy Efta

james.efta@usda.gov

(406) 329-3447

Tribal Nations – General Websites



[Assiniboine & Gros Ventre Tribes – Fort Belknap Reservation](#)

[Assiniboine & Sioux Tribes – Fort Peck Reservation](#)

[Blackfeet Tribe - Blackfeet Reservation](#)

[Chippewa Creek Tribe - Rocky Boy's Reservation](#)

[Crow Tribe – Crow Reservation](#)

[Little Shell Chippewa Tribe](#)

[Northern Cheyenne Tribe – Northern Cheyenne Reservation](#)

[Salish & Kootenai Tribes - Flathead Reservation](#)

Tribal Nations – Specific Contacts

[Confederated Salish & Kootenai Tribes \(Flathead Reservation\)-Division of Wildlife, Recreation, & Conservation](#)

Whisper Camel-Means – Division Manager

Whisper.Means@cskt.org

(406) 675-2700

Kari Kingery – Wildlife Program Manager

Kari.Kingery@cskt.org

(406) 675-2700

Natural Heritage Programs and Conservation Data Centers in Surrounding States and Provinces

[Alberta Conservation Information Management System](#)

[British Columbia Conservation Data Centre](#)

[Idaho Natural Heritage Program](#)

[North Dakota Natural Heritage Program](#)

[Saskatchewan Conservation Data Centre](#)

[South Dakota Natural Heritage Program](#)

[Wyoming Natural Diversity Database](#)

Invasive Species Management Contacts and Information

General

[Montana Invasive Species Council \(MISC\)](#)

[Central and Eastern Montana Invasive Species Team \(CEMIST\)](#)

[Montana State University Integrated Pest Management Extension](#)

Aquatic Invasive Species

[Montana Fish, Wildlife, and Parks Aquatic Invasive Species staff](#)

[Montana Department of Natural Resources and Conservation's Aquatic Invasive Species Grant Program](#)

[Western Montana Conservation Commission](#)

Noxious Weeds

[Montana Weed Control Association Contacts Webpage](#)

[Montana Biological Weed Control Coordination Project](#)

[Montana Department of Agriculture - Noxious Weeds](#)

[Montana Weed Control Association](#)

[Montana Fish, Wildlife, and Parks - Noxious Weeds](#)

[Integrated Noxious Weed Management after Wildfires](#)

[Fire Management and Invasive Plants](#)

Introduction to Native Species

Within the report area you have requested, separate summaries are provided for: (1) Species Occurrences (SO) for plant and animal Species of Concern, Special Status Species (SSS), Important Animal Habitat (IAH) and some Potential Plant Species of Concern; (2) other observed non-Species of Concern filtered or requested as “Additional Species” or Species of Concern without suitable documentation to create Species Occurrence polygons; and (3) other non-documented Species of Concern or additionally filtered or requested that are potentially present based on their range, predicted suitable habitat model output, or presence of associated habitats. Each of these summaries provides the following information when present for a species: (1) the number of [Species Occurrences](#) and associated delineation criteria for construction of these polygons that have long been used for considerations of documented Species of Concern in environmental reviews; (2) the number of observations of each species; (3) the geographic range polygons for each species that the report area overlaps; (4) predicted habitat suitability classes that are present if a predicted suitable habitat model has been created; (5) the percent of the report area that is mapped as commonly associated or occasionally associated habitat as listed for each species in the [Montana Field Guide](#); and (6) a variety of conservation status ranks and links to species accounts in the [Montana Field Guide](#). Details on each of these information categories are included under relevant section headers below or are defined on our [Species Status Codes](#) page. In presenting this information, the Montana Natural Heritage Program (MTNHP) is working towards assisting the user with rapidly determining what species have been documented and what species are potentially present in the report area. We remind users that this information is likely incomplete as surveys to document native and introduced species are lacking in many areas of the state, the MTNHP’s staff and resources are restricted by budgets, and information is constantly being added and updated in our databases. **Thus, field verification by professional biologists of the absence or presence of species and biological communities will always be an important obligation of users of our data.**

If you are aware of observation datasets that the MTNHP is missing, please report them to the Program Botanist apipp@mt.gov or Senior Zoologist dbachen@mt.gov. If you have animal or plant observations that you would like to contribute, you can also submit them via Excel spreadsheets, geodatabases, iNaturalist, or a Survey123 form. Various methods of data submission are reviewed in this playlist of videos: <https://www.youtube.com/playlist?list=PLRaydtZpHu2qOHPoSPq9cnM9uXGmEXACx>

Observations

An observation is a visual, audio, specimen, genetic, or other documentation of a particular species at a location with an assigned spatial precision on a given date. Most observations are submitted in digital format from standardized databases associated with research or monitoring efforts and spreadsheets of incidental observations submitted by professional biologists and amateur naturalists. At a minimum, accepted observation records must contain a credible species identification (i.e. appropriate geographic range, date, and habitat and, if species are difficult to identify, a photograph and/or notes on key identifying features), a date or date range, observer name, locational information (ideally with latitude and longitude in decimal degrees), notes on numbers observed, and species behavior or habitat use (e.g., is the observation likely associated with reproduction). Bird records are also required to have information associated with date-appropriate breeding or overwintering status of the species observed. MTNHP reviews observation records to ensure that they are mapped correctly, occur within date ranges when the species is known to be present or detectable, occur within the known seasonal geographic range of the species, and occur in appropriate habitats. MTNHP also assigns each record a locational uncertainty value in meters to indicate the spatial precision associated with the record’s mapped coordinates. Only records with locational uncertainty values of 5,000 meters or less are included in environmental summary reports and number summaries are only provided for records with locational uncertainty values of 1,000 meters or less.

Species Occurrences

The MTNHP evaluates plant and animal observation records for Species of Concern, Potential Species of Concern, and Special Status Species to determine whether they are worthy of inclusion in the [Species Occurrence](#) (SO) (also known as an “element occurrence” or EO) layer for use in environmental reviews; observations not worthy of inclusion in this layer include long distance dispersal events, migrants observed away from key migratory stopover habitats, and winter observations. An SO is a polygon depicting what is known about a species occupancy from direct observation with a defined level of locational uncertainty and any inference that can be made about adjacent habitat use from the latest peer-reviewed science. If an observation can be associated with a map feature that can be tracked (e.g., a wetland boundary) then this polygon feature is used to represent the SO. Areas that can be inferred as probable occupied habitat based on direct observation of a species location and what is known about the foraging area or home range size of the species may be incorporated into the SO. Species Occurrences generally belong to one of the following categories:

Botanical Species

A documented location of a specimen collection or observed plant, lichen, or fungi population. In some instances, adjacent, spatially separated clusters are considered subpopulations and are grouped as one occurrence (e.g., the subpopulations occur in ecologically similar habitats, and their spatial proximity likely allows them to interbreed). Tabular information for multiple observations at the same SO location is generally linked to a single polygon.

Animal Species

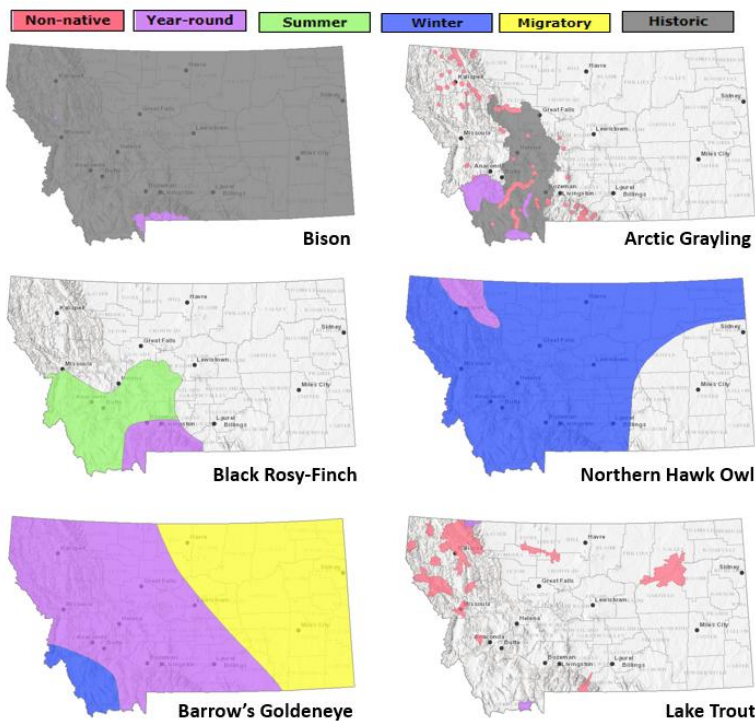
The location of a verified observation or specimen record typically known or assumed to represent a breeding population or a portion of a breeding population. Animal SO's are generally: (1) buffers of terrestrial point observations based on documented species' home range sizes; (2) buffers of stream segments to encompass occupied streams and immediate adjacent riparian habitats; (3) polygonal features encompassing known or likely breeding populations (e.g., a wetland for some amphibians or a forested portion of a mountain range for some wide-ranging carnivores); or (4) combinations of the above. Tabular information for multiple observations at the same SO location is generally linked to a single polygon. Species Occurrence polygons may encompass some unsuitable habitat in some instances in order to avoid heavy data processing associated with clipping out habitats that are readily assessed as unsuitable by the data user (e.g., a point buffer of a terrestrial species may overlap into a portion of a lake that is obviously inappropriate habitat for the species).

Other

Significant biological features not included in the above categories, such as Important Animal Habitats like bird rookeries and bat roosts, and peatlands or other wetland and riparian communities that support diverse plant and animal communities.

Geographic Range Polygons

Range polygons have been created for native vascular plants and vertebrate animal species with sufficient data and are being created for other taxa as staff time is available. Range polygons are refined over time with



assistance of additional survey and observation data and predicted habitat suitability models. Range polygons are classified as native year-round, summer, winter, migratory, historical, and non-native year-round (see examples to the left). Range polygons for native species and non-native aquatic species typically bound the extent of known or likely occupied habitats for non-migratory and relatively sedentary species and the regular extent of known or likely occupied habitats for migratory and long-distance dispersing species; polygons may include unsuitable intervening habitats. Unless predicted invasion risk models indicate unsuitable habitat for large portions of Montana, range polygons for non-native vascular plant species are typically mapped as statewide to reflect their possible invasion across Montana; please see relative density maps for reported distributions of these

species. For most species, a single polygon can represent the year-round or seasonal range, but breeding ranges of some colonial nesting water birds and some non-native species are represented more patchily when supported by data. Some ranges are mapped more broadly than actual distributions to be visible on statewide maps (e.g., streams with fish are buffered for visibility)

Predicted Suitable Habitat Models

Predicted habitat suitability models have been created for plant and animal Species of Concern and are undergoing development for non-Species of Concern. For species for which models have been completed, the environmental summary report includes simple rule-based associations with streams for aquatic species and seasonal habitats for game species as well as mathematically complex Maximum Entropy models (Phillips et al. 2006, Ecological Modeling 190:231-259) constructed from a variety of statewide biotic and abiotic layers and presence only data for individual species for most terrestrial species. For the Maximum Entropy models, we reclassified 90 x 90-meter continuous model output into suitability classes (unsuitable, low, moderate, and optimal) then aggregated that into the one square mile hexagons used in the environmental summary report; this is the finest spatial scale we suggest using this information in management decisions and survey planning. Full model write ups for individual species that discuss model goals, inputs, outputs, and evaluation in much greater detail are posted on the MTNHP's [Predicted Suitable Habitat Models](#) webpage. Evaluations of predictive accuracy and specific limitations are included with the metadata for models of individual species.

Model outputs should not be used in place of on-the-ground surveys for species. Instead model outputs should be used in conjunction with habitat evaluations to determine the need for on-the-ground surveys for species. We suggest that the percentage of predicted optimal and moderate suitable habitat within the report area be used in conjunction with geographic range polygons and the percentage of commonly associated habitats to generate lists of potential species that may occupy broader landscapes for the purposes of landscape-level planning.

Other Habitat Information for Species

1. The excel spreadsheet accompanying this report contains a field labeled “Habitat” in all the species related worksheets that contains brief text describing the predominant habitat or habitats each species is dependent on. This field can be useful for quickly determining whether a species needs considerations in environmental permitting and planning. For example, if the report area includes a large area of forest and grassland habitat and the project is only affecting a small portion of the grassland habitat without any disturbance to the forest habitat, the Habitat field can be useful for removing the forest dependent species from further consideration.
2. Species accounts in the [Montana Field Guide](#) each contain a section on Ecological Communities Associated with this Species that lists and links to accounts for associated natural habitats.
3. Accounts for natural habitats in the Ecological Communities portion of the [Montana Field Guide](#) each contain a section on Species Associated with this Community that lists and links to accounts for associated species. This is divided between: (1) Species of Concern Associated with this Community; (2) Diagnostic, Dominant, or Codominant Plant Species for this Community; and (3) Other Native Species Commonly Associated with this Community.

Introduction to Land Cover

Land Use/Land Cover is one of 15 [Montana Spatial Data Infrastructure](#) framework layers considered vital for making statewide maps of Montana and understanding its geography. The layer records all Montana natural vegetation, land cover and land use, classified from satellite and aerial imagery, mapped at a scale of 1:100,000, and interpreted with supporting ground-level data. The baseline map is adapted from the Northwest ReGAP (NWGAP) project land cover classification, which used 30m resolution multi-spectral Landsat imagery acquired between 1999 and 2001. Vegetation classes were drawn from the Ecological System Classification developed by NatureServe (Comer et al. 2003). The land cover classes were developed by Anderson et al. (1976). The NWGAP effort encompasses 12 map zones. Montana overlaps seven of these zones. The two NWGAP teams responsible for the initial land cover mapping effort in Montana were Sanborn and NWGAP at the University of Idaho. Both Sanborn and NWGAP employed a similar modeling approach in which Classification and Regression Tree (CART) models were applied to Landsat ETM+ scenes. The Spatial Analysis Lab within the Montana Natural Heritage Program was responsible for developing a seamless Montana land cover map with a consistent statewide legend from these two separate products. Additionally, the Montana land cover layer incorporates several other land cover and land use products (e.g., MSDI Structures and Transportation themes and the Montana Department of Revenue Final Land Unit classification) and reclassifications based on plot-level data and the latest NAIP imagery to improve accuracy and enhance the usability of the theme. Updates are done as partner support and funding allow, or when other MSDI datasets can be incorporated. Recent updates include fire perimeters and agricultural land use (annually), energy developments such as wind, oil and gas installations (2014), roads, structures and other impervious surfaces (various years): and local updates/improvements to specific ecological systems (e.g., central Montana grassland and sagebrush ecosystems). Current and previous versions of the Land Use/Land Cover layer with full metadata are available for download from the Montana State Library's [GIS Data List](#). More information on the land cover layer is available at: https://msl.mt.gov/geoinfo/msdi/land_use_land_cover/

Within the report area you have requested, land cover is summarized by acres of Level 1, Level 2, and Level 3 Ecological Systems.

Literature Cited

- Anderson, J.R. E.E. Hardy, J.T. Roach, and R.E. Witmer. 1976. A land use and land cover classification system for use with remote sensor data. U.S. Geological Survey Professional Paper 964.
- Comer, P., D. Faber-Langendoen, R. Evans, S. Gawler, C. Josse, G. Kittel, S. Menard, M. Pyne, M. Reid, K. Schulz, K. Snow, and J. Teague. 2003. Ecological systems of the United States: A working classification of U.S. terrestrial systems. NatureServe, Arlington, VA.

Introduction to Wetland and Riparian

Within the report area you have requested, wetland and riparian mapping is summarized by acres of each classification present. Summaries are only provided for modern MTNHP wetland and riparian mapping and not for outdated (NWI Legacy) or incomplete (NWI Scalable) mapping efforts; [described here](#). MTNHP has made all three of these datasets and associated metadata available for separate download on the [Montana Wetland and Riparian Framework](#) web page.

Wetland and Riparian mapping is one of 15 [Montana Spatial Data Infrastructure](#) framework layers considered vital for making statewide maps of Montana and understanding its geography. The wetland and riparian framework layer consists of spatial data representing the extent, type, and approximate location of wetlands, riparian areas, and deep water habitats in Montana.

Wetland and riparian mapping is completed through photointerpretation of 1-m resolution color infrared aerial imagery acquired from 2005 or later. A coding convention using letters and numbers is assigned to each mapped wetland. These letters and numbers describe the broad landscape context of the wetland, its vegetation type, its water regime, and the kind of alterations that may have occurred. Ancillary data layers such as topographic maps, digital elevation models, soils data, and other aerial imagery sources are also used to improve mapping accuracy. Wetland mapping follows the federal Wetland Mapping Standard and classifies wetlands according to the Cowardin classification system of the National Wetlands Inventory (NWI) (Cowardin et al. 1979, FGDC Wetlands Subcommittee 2013). Federal, State, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands differently than the NWI. Similar coding, based on U.S. Fish and Wildlife Service conventions, is applied to riparian areas (U.S. Fish and Wildlife Service 2009). These are mapped areas where vegetation composition and growth is influenced by nearby water bodies, but where soils, plant communities, and hydrology do not display true wetland characteristics. **These data are intended for use at a scale of 1:12,000 or smaller. Mapped wetland and riparian areas do not represent precise boundaries and digital wetland data cannot substitute for an on-site determination of jurisdictional wetlands.**

See detailed overviews, with examples, of both wetland and riparian classification systems and associated codes as a [storymap](#) and companion [guide](#)

Literature Cited

- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. U.S. Fish and Wildlife Service, FWS/OBS-79/31. Washington, D.C. 103pp.
- Federal Geographic Data Committee. 2013. Classification of wetlands and deepwater habitats of the United States. FGDC-STD-004-2013. Second Edition. Wetlands Subcommittee, Federal Geographic Data Committee and U.S. Fish and Wildlife Service, Washington, D.C.
- U.S. Fish and Wildlife Services. 2009. A system for mapping riparian areas in the western United States. Division of Habitat and Resource Conservation, Branch of Resource and Mapping Support, Arlington, Virginia.

Introduction to Land Management

Within the report area you have requested, land management information is summarized by acres of federal, state, and local government lands, tribal reservation boundaries, private conservation lands, and federal, state, local, and private conservation easements. Acreage for “Owned”, “Tribal”, or “Easement” categories represents non-overlapping areas that may be totaled. However, “Other Boundaries” represents managed areas such as National Forest boundaries containing private inholdings and other mixed ownership which may cause boundaries to overlap (e.g. a wilderness area within a forest). Therefore, acreages may not total in a straight-forward manner.

Because information on land stewardship is critical to effective land management, the Montana Natural Heritage Program (MTNHP) began compiling ownership and management data in 1997. The goal of the Montana Land Management Database is to manage a single, statewide digital data set that incorporates information from both public and private entities. The database assembles information on public lands, private conservation lands, and conservation easements held by state and federal agencies and land trusts and is updated on a regular basis. Since 2011, the Information Management group in the Montana State Library’s Digital Library Division has led the Montana Land Management Database in partnership with the MTNHP.

Public and private conservation land polygons are attributed with the name of the entity that owns it. The data are derived from the statewide [Montana Cadastral Parcel layer](#). Conservation easement data shows land parcels on which a public agency or qualified land trust has placed a conservation easement in cooperation with the landowner. The dataset contains no information about ownership or status of the mineral estate. For questions about the dataset or to report errors, please contact the Montana Natural Heritage Program at (406) 444-5363 or mtnhp@mt.gov. You can download various components of the Land Management Database and view associated metadata at the Montana State Library’s [GIS Data List](#) at the following links:

[Public Lands](#)

[Conservation Easements](#)

[Private Conservation Lands](#)

[Managed Areas](#)

Map features in the Montana Land Management Database or summaries provided in this report are not intended as a legal depiction of public or private surface land ownership boundaries and should not be used in place of a survey conducted by a licensed land surveyor. Similarly, map features do not imply public access to any lands. The Montana Natural Heritage Program makes no representations or warranties whatsoever with respect to the accuracy or completeness of this data and assumes no responsibility for the suitability of the data for a particular purpose. The Montana Natural Heritage Program will not be liable for any damages incurred as a result of errors displayed here. Consumers of this information should review or consult the primary data and information sources to ascertain the viability of the information for their purposes.

Introduction to Invasive and Pest Species

Within the report area you have requested, separate summaries are provided for: Aquatic Invasive Species, Noxious Weeds, Agricultural Pests, Forest Pests, and Biocontrol species that have been documented or potentially occur there based on the predicted suitability of habitat. Definitions for each of these invasive and pest species categories can be found on our [Species Status Codes](#) page.

Each of these summaries provides the following information when present for a species: (1) the number of observations of each species; (2) the geographic range polygons for each species, if developed, that the report area overlaps; (3) predicted relative habitat suitability classes that are present if a predicted suitable habitat model has been created; (4) the percent of the report area that is mapped as commonly associated or occasionally associated habitat as listed for each species in the [Montana Field Guide](#); and (5) links to species accounts in the [Montana Field Guide](#). Details on each of these information categories are included under relevant section headers under the Introduction to Native Species above or are defined on our [Species Status Codes](#) page. In presenting this information, the Montana Natural Heritage Program (MTNHP) is working towards assisting the user with rapidly determining what invasive and pest species have been documented and what species are potentially present in the report area. We remind users that this information is likely incomplete as surveys to document introduced species are lacking in many areas of the state, information on introduced species has only been tracked relatively recently, the MTNHP's staff and resources are limited, and information is constantly being added and updated in our databases. **Thus, field verification by professional biologists of the absence or presence of species will always be an important obligation of users of our data.**

If you are aware of observation or survey datasets for invasive or pest species that the MTNHP is missing, please report them to the Program Coordinator bmaxell@mt.gov Program Botanist apipp@mt.gov or Senior Zoologist dbachen@mt.gov If you have animal or plant observations that you would like to contribute, you can also submit them via Excel spreadsheets, geodatabases, iNaturalist, or a Survey123 form. Various methods of data submission are reviewed in this playlist of videos:

<https://www.youtube.com/playlist?list=PLRaydtZpHu2qOHPoSPq9cnM9uXGmEXACx>

Additional Information Resources

[Effects of Recreation on Rocky Mountain Wildlife](#)

[FEMA Flood Insurance Study Data](#)

[Fire Effects Information System \(species reviews, fire regimes, fire studies\)](#)

[Gilly – tool for simplifying stream, wetland, and floodplain permitting applications](#)

[Identification Resources for Montana Species and Citizen Science](#)

[Laws, Treaties, Regulations, and Agreements on Animals and Plants](#)

[Migratory Bird Joint Ventures and Associated Resources](#)

[Intermountain West Joint Venture](#)

[Northern Great Plains Joint Venture](#)

[Prairie Pothole Joint Venture](#)

[MTNHP Staff Contact Information](#)

[MTNHP Species of Concern Report - Animals and Plants](#)

[MTNHP Species Status Codes - Explanation](#)

[MTNHP Predicted Suitable Habitat Models](#) (for select Animals and Plants)

[MTNHP Request Information page](#)

[Montana Cadastral](#)

[Montana Climate Office](#)

[Montana Code Annotated](#)

[Montana Field Guide](#)

[Montana Fisheries Information System](#)

[Montana Fish, Wildlife, and Parks Subdivision Recommendations](#)

[Montana Forestry Best Management Practices](#)

[Montana GIS Data Layers](#)

[Montana GIS Data Bundler](#)

[Montana Guide to Streamside Management Zone Law and Rules](#)

[Montana Ground Water Information Center](#)

[Montana Index of Environmental Permits, 21st Edition \(2018\)](#)

[Montana Environmental Policy Act \(MEPA\)](#)

[Montana Environmental Policy Act Analysis Resource List](#)

[Montana Sage Grouse Project Submittal Site](#)

[Montana Native Plant Conservation Strategy](#)

[Montana Spatial Data Infrastructure Layers](#)

[Montana State Historic Preservation Office Review and Compliance](#)

[Montana Statewide Fisheries Management Plan 2023-2026](#)

[Montana Stream Permitting: a guide for conservation district supervisors and others](#)

[Montana Water Information System](#)

[Montana Web Map Services](#)

[Montana's 2025 State Wildlife Action Plan](#)

[Montana's Statewide Comprehensive Outdoor Recreation Plan \(SCORP\)](#)

[National Environmental Policy Act](#)

[Penalties for Misuse of Fish and Wildlife Location Data](#) (MCA 87-6-222)

[Rangeland Analysis Platform](#)

[U.S. Fish and Wildlife Service Information for Planning and Consultation](#) (Section 7 Consultation)

[Uses of Information from the Montana Natural Heritage Program](#)

[Web Soil Survey Tool](#)

[Wildfire Risk to Communities](#)

[Xerces Society for Invertebrate Conservation Resources](#)

Soil Map—Carbon County Area, Montana (R Bar N Ranch - 43D 30171861)



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

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

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

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

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

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Carbon County Area, Montana

Survey Area Data: Version 21, Aug 30, 2025

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

Date(s) aerial images were photographed: Jun 22, 2021—Oct 4, 2021

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Hn	Haverson-Heldt silty clay loams, 0 to 4 percent slopes	0.0	10.3%
Ht	Heldt silty clay loam, 2 to 4 percent slopes	0.3	89.7%
Totals for Area of Interest		0.3	100.0%

Draft Preliminary Determinations

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

Draft Preliminary Determinations

THE MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

GOVERNOR GREG GIANFORTE



DNRC DIRECTOR AMANDA KASTER

DNRC Water Resources
Billings Regional Office
1371 Rimtop Dr.
Billings, MT 59105-1978

June 19, 2026

R Bar N Ranch, LLC
89 Sand Creek Rd
Bridger, MT 59014

Subject: Draft Preliminary Determination to Grant Beneficial Water Use Permit Application No. 43D 30171861

Dear Applicant,

The Department of Natural Resources and Conservation (Department or DNRC) has completed a preliminary review of your application. This review consists of an evaluation of the criteria for issuance of a permit authorization found in §85-2-311, MCA. The Department has preliminarily determined that the criteria are met, and this application should be granted. A copy of the Draft Preliminary Determination to Grant your application is attached.

You have the opportunity to request an extension of time to submit additional information for the Department to consider in the decision, within 15 business days of the date of this letter. If no written request for an extension is received by July 13, 2026, the Department will prepare a notice of opportunity to provide public comment per §85-2-307(4), MCA.

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

Please let me know if you have any questions.

Sincerely,

A handwritten signature in blue ink that reads "Cassey Strebeck". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Cassey Strebeck
Water Resource Specialist
Billings Regional Office, Montana DNRC
Cassey.Strebeck@mt.gov
406-247-4422



DNRC.MT.GOV

CC:
Scott M. Griswold
33 Sand Creek Road
Bridger, MT, 59014



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

* * * * *

APPLICATION FOR BENEFICIAL WATER USE)	
PERMIT NO. 43D 30171861)	DRAFT PRELIMINARY DETERMINATION
BY R BAR N RANCH, LLC)	TO GRANT PERMIT

* * * * *

On April 10, 2026, R Bar N Ranch, LLC (Applicant) submitted Application for Beneficial Water Use Permit No. 43D 30171861 to the Billings Regional Office of the Department of Natural Resources and Conservation (Department or DNRC) for a flow rate of 1.0 CFS, up to 17.09 AF in volume for the irrigation of 6.85 AC. The Department published receipt of the application on its website. A preapplication meeting was held between the Department and the Applicant on September 22, 2025, in which the Applicant designated that the technical analyses for this application would be completed by the Department. The Applicant returned the completed Preapplication Meeting Form 600P-B on February 9, 2026. The Department delivered the Department-completed Technical Analyses on March 30, 2026. The application was determined to be correct and complete as of April 20, 2026. An Environmental Assessment for this application was completed on April 20, 2026.

INFORMATION

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

Application as filed:

- Application for Beneficial Water Use Permit, Form 600
- Attachments:
 - Montana Sage Grouse Habitat Conservation Program Letter for project no. 7184, dated October 15, 2025
 - Pump Data Sheet provided by Agri Industries for a Cornell pump 3RB, dated October 10, 2025

- Maps:
 - Map 1, titled: Cadastral Records provided by the Montana State Library; no date of aerial or map
 - Map 2, titled: R Bar N Ranch LLC – DNRC Form 600; on Google Earth imagery; no date of aerial or map
 - Map 3, titled: R Bar N Ranch LLC – DNRC Form 600P-B; on Google Earth imagery; no date of aerial or map
 - Map 4, titled: 43D 30171861 – R Bar N Ranch LLC – Proposed; map created by the Department for the Technical Analyses Report created March 26, 2026, with ESRI World Imagery basemap layer
 - Map 5, titled: 43D 30171861 – R Bar N Ranch LLC – Proposed – Overlapping Water Rights; map created by the Department for the Technical Analyses Report created March 26, 2026, with ESRI World Imagery basemap layer with hand-drawn overlay of overlapping water right area
- Department-completed Technical Analyses Report based on information provided in the Preapplication Meeting Form, dated March 30, 2026

Information within the Department's Possession/Knowledge

- Float Area Method Measurements, provided by the Applicant
- Emails from Water Sciences Bureau Department Groundwater Hydrologist Jack Landers dated September 23, 2025, and October 23, 2025
- Department site visit on May 28, 2025
- DNRC Water Right Information System (WRIS)
- DNRC Water Calculation Guide
- The Department also routinely considers the following information. The following information is not included in the administrative file for this application but is available upon request. Please contact the Billings Regional Office at 406-247-4415 to request copies of the following documents.
 - Department Permit Application Manual, February 2025
 - Department Change Application Manual, February 2025

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

For the purposes of this document, Department or DNRC means the Department of Natural Resources & Conservation; AF means acre-feet; AF/AC means acre-feet per acre; AF/YR means acre-feet per year; AOPI means area of potential impact; AU means animal unit; CFS means cubic feet per second; GPD means gallons per day; GPM means gallons per minute; POD means point of diversion; POU means place of use; R means range; Sec. means section; STOC means Statement of Claim; and T means township.

PROPOSED APPROPRIATION

FINDINGS OF FACT

1. The Applicant proposes to divert water from Sand Creek, from May 1 to September 30, by means of a pump. The proposed point of diversion is located in the SWNWNE Section 8, Township 6 South, Range 23 East, Carbon County. The proposed use includes diverting at a flow rate of 1.0 CFS, up to 17.09 AF in volume per year, for irrigation from May 1 to September 30. The Applicant proposes to use a portable sprinkler and pipeline system to irrigate 6.85 acres, consisting of 2.2 AC in the NWNWNE, 0.15 AC in the NENWNE, 1.7 AC in the SWNWNE, and 2.8 AC in the SENWNE, all in Sec. 8, T6S, R23E, Carbon County. A summary of this application is in Tables 1 and 2.

Table 1: Summary of Proposed Use

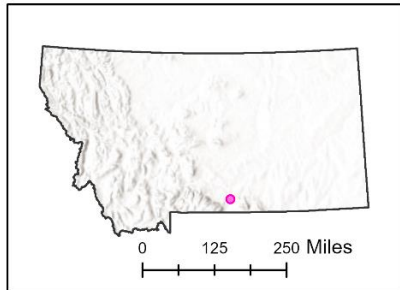
Source	Flow Rate	Volume	Purpose	Period Of Use	Place Of Use	Point Of Diversion	Priority Date
Sand Creek	1.0 CFS	17.09 AF	Irrigation	5/1 – 9/30	See Table 2	SWNWNE Sec. 8, T6S, R23E, Carbon County	5/1 – 9/30

Table 2. Proposed place of use

POU	Legal Land Description	Acres
1	NWNWNE Sec. 8, T6S, R23, Carbon County	2.2
2	NENWNE Sec. 8, T6S, R23, Carbon County	0.15
3	SWNWNE Sec. 8, T6S, R23, Carbon County	1.7
4	SENWNE Sec. 8, T6S, R23, Carbon County	2.8

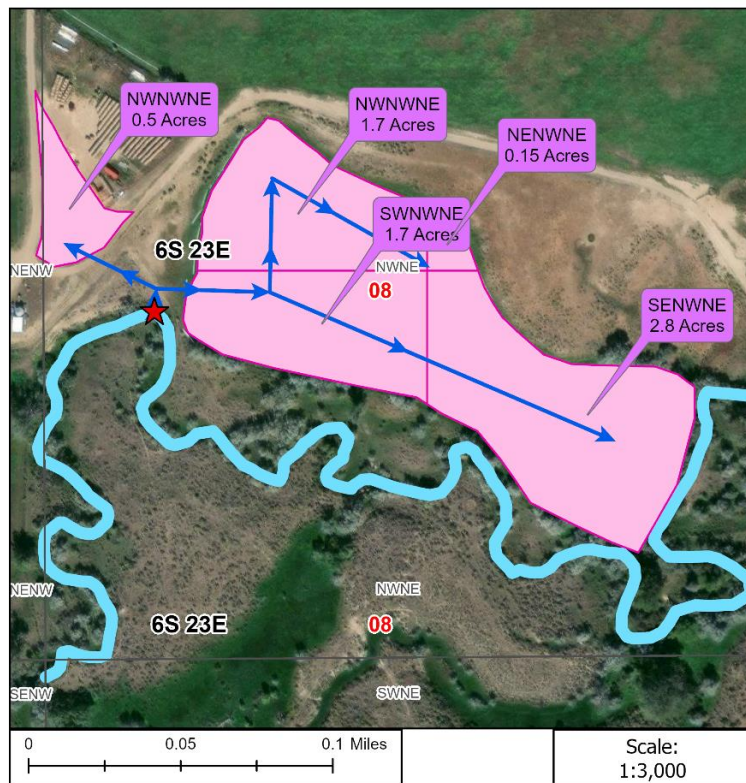
2. The proposed appropriation is supplemental to the Applicant's Sand Creek Canal Co. ditch shares under Statement of Claim 43D 199996-00. This Application has become necessary as the ditch shares are not always available. The Applicant proposes to use the ditch shares when available and utilize this proposed appropriation when shares are not available.

43D 30171861 - R Bar N Ranch, LLC - Proposed



Legend

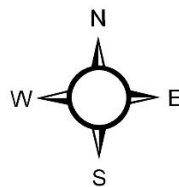
- ★ Proposed Point of Diversion - Pump Site
- ➡ Proposed Pipeline System
- Proposed Place of Use
- Sand Creek
- AOPT
- ▲ Water Rights in AOPT



Elements depicted on this map are for illustrative purposes and have not been surveyed by the Department.



Map Created: 2/6/2026
Author: Cassey Strebeck,
Water Resource Specialist



MSDI PLSS:
World Imagery: Vantor
World Imagery: Earthstar Geographics
Hybrid Reference Layer: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
World Hillshade: Esri, USGS

Figure 1. Proposed Place of Use, Conveyance, and AOPT for Application 43D 30171861

BENEFICIAL WATER USE PERMIT CRITERIA (§ 85-2-311, MCA)

GENERAL CONCLUSIONS OF LAW

3. The Montana Constitution expressly recognizes in relevant part that:

- (1) All existing rights to the use of any waters for any useful or beneficial purpose are hereby recognized and confirmed.
- (2) The use of all water that is now or may hereafter be appropriated for sale, rent, distribution, or other beneficial use . . . shall be held to be a public use.
- (3) All surface, underground, flood, and atmospheric waters within the boundaries of the state are the property of the state for the use of its people and are subject to appropriation for beneficial uses as provided by law.

Mont. Const. Art. IX, § 3. While the Montana Constitution recognizes the need to protect senior appropriators, it also recognizes a policy to promote the development and use of the waters of the state by the public. This policy is further expressly recognized in the water policy adopted by the Legislature codified at § 85-2-102, MCA, which states in relevant part:

- (1) Pursuant to Article IX of the Montana constitution, the legislature declares that any use of water is a public use and that the waters within the state are the property of the state for the use of its people and are subject to appropriation for beneficial uses as provided in this chapter. . . .
- (3) It is the policy of this state and a purpose of this chapter to encourage the wise use of the state's water resources by making them available for appropriation consistent with this chapter and to provide for the wise utilization, development, and conservation of the waters of the state for the maximum benefit of its people with the least possible degradation of the natural aquatic ecosystems. In pursuit of this policy, the state encourages the development of facilities that store and conserve waters for beneficial use, for the maximization of the use of those waters in Montana . . .

4. Pursuant to § 85-2-302(1), MCA, except as provided in §§ 85-2-306 and 85-2-369, MCA, a person may not appropriate water or commence construction of diversion, impoundment, withdrawal, or related distribution works except by applying for and receiving a permit from the Department. See § 85-2-102(1), MCA. An Applicant in a beneficial water use permit proceeding must affirmatively prove all of the applicable criteria in § 85-2-311, MCA. Section § 85-2-311(1) states in relevant part:

- ... the department shall issue a permit if the Applicant proves by a preponderance of evidence that the following criteria are met:
- (a) (i) there is water physically available at the proposed point of diversion in the amount that the Applicant seeks to appropriate; and

(ii) water can reasonably be considered legally available during the period in which the Applicant seeks to appropriate, in the amount requested, based on the records of the department and other evidence provided to the department. Legal availability is determined using an analysis involving the following factors:

(A) identification of physical water availability;

(B) identification of existing legal demands on the source of supply throughout the area of potential impact by the proposed use; and

(C) analysis of the evidence on physical water availability and the existing legal demands, including but not limited to a comparison of the physical water supply at the proposed point of diversion with the existing legal demands on the supply of water.

(b) the water rights of a prior appropriator under an existing water right, a certificate, a permit, or a state water reservation will not be adversely affected. In this subsection (1)(b), adverse effect must be determined based on a consideration of an Applicant's plan for the exercise of the permit that demonstrates that the Applicant's use of the water will be controlled so the water right of a prior appropriator will be satisfied;

(c) the proposed means of diversion, construction, and operation of the appropriation works are adequate;

(d) the proposed use of water is a beneficial use;

(e) the Applicant has a possessory interest or the written consent of the person with the possessory interest in the property where the water is to be put to beneficial use, or if the proposed use has a point of diversion, conveyance, or place of use on national forest system lands, the Applicant has any written special use authorization required by federal law to occupy, use, or traverse national forest system lands for the purpose of diversion, impoundment, storage, transportation, withdrawal, use, or distribution of water under the permit;

(f) the water quality of a prior appropriator will not be adversely affected;

(g) the proposed use will be substantially in accordance with the classification of water set for the source of supply pursuant to 75-5-301(1); and

(h) the ability of a discharge permit holder to satisfy effluent limitations of a permit issued in accordance with Title 75, chapter 5, part 4, will not be adversely affected.

(2) The Applicant is required to prove that the criteria in subsections (1)(f) through (1)(h) have been met only if a valid objection is filed. A valid objection must contain substantial credible information establishing to the satisfaction of the department that the criteria in subsection (1)(f), (1)(g), or (1)(h), as applicable, may not be met. For the criteria set forth in subsection (1)(g), only the department of environmental quality or a local water quality district established under Title 7, chapter 13, part 45, may file a valid objection.

To meet the preponderance of evidence standard, “the Applicant, in addition to other evidence demonstrating that the criteria of subsection (1) have been met, shall submit hydrologic or other evidence, including but not limited to water supply data, field reports, and other information developed by the Applicant, the department, the U.S. geological survey, or

the U.S. natural resources conservation service and other specific field studies.” Section 85-2-311(5), MCA (emphasis added). The determination of whether an application has satisfied the § 85-2-311, MCA criteria is committed to the discretion of the Department. *Bostwick Properties, Inc. v. Montana Dept. of Natural Resources and Conservation*, 2009 MT 181, ¶ 21. The Department is required grant a permit only if the § 85-2-311, MCA, criteria are proven by the Applicant by a preponderance of the evidence. *Id.* A preponderance of evidence is “more probably than not.” *Hohenlohe v. DNRC*, 2010 MT 203, ¶¶ 33, 35, 357 Mont. 438, 240 P.3d 628.

5. Pursuant to § 85-2-312, MCA, the Department may condition permits as it deems necessary to meet the statutory criteria:

(1) (a) The department may issue a permit for less than the amount of water requested, but may not issue a permit for more water than is requested or than can be beneficially used without waste for the purpose stated in the application. The department may require modification of plans and specifications for the appropriation or related diversion or construction. The department may issue a permit subject to terms, conditions, restrictions, and limitations it considers necessary to satisfy the criteria listed in 85-2-311 and subject to subsection (1)(b), and it may issue temporary or seasonal permits. A permit must be issued subject to existing rights and any final determination of those rights made under this chapter.

E.g., Montana Power Co. v. Carey (1984), 211 Mont. 91, 96, 685 P.2d 336, 339 (requirement to grant applications as applied for, would result in, “uncontrolled development of a valuable natural resource” which “contradicts the spirit and purpose underlying the Water Use Act.”); *see also, In the Matter of Application for Beneficial Water Use Permit No. 65779-76M by Barbara L. Sowers* (DNRC Final Order 1988)(conditions in stipulations may be included if it further compliance with statutory criteria); *In the Matter of Application for Beneficial Water Use Permit No. 42M-80600 and Application for Change of Appropriation Water Right No. 42M-036242 by Donald H. Wyrick* (DNRC Final Order 1994); Admin. R. Mont. (ARM) 36.12.207.

6. The Montana Supreme Court further recognized in *Matter of Beneficial Water Use Permit Numbers 66459-76L, Ciotti: 64988-G76L, Starnier*, 278 Mont. 50, 60-61, 923 P.2d 1073, 1079, 1080 (1996), *superseded by legislation on another issue*:

Nothing in that section [85-2-313], however, relieves an Applicant of his burden to meet the statutory requirements of § 85-2-311, MCA, before DNRC may issue that provisional permit. Instead of resolving doubts in favor of appropriation, the Montana Water Use Act requires an Applicant to make explicit statutory showings that there are unappropriated waters in the source of supply, that the water rights of a prior appropriator will not be adversely affected, and that the proposed use will not unreasonably interfere with a planned use for which water has been reserved.

See also, Wesmont Developers v. DNRC, CDV-2009-823, First Judicial District Court,

Memorandum and Order (2011). The Supreme Court likewise explained that:

.... unambiguous language of the legislature promotes the understanding that the Water Use Act was designed to protect senior water rights holders from encroachment by junior appropriators adversely affecting those senior rights.

Montana Power Co., 211 Mont. at 97-98, 685 P.2d at 340; *see also* Mont. Const. art. IX § 3(1).

7. An appropriation, diversion, impoundment, use, restraint, or attempted appropriation, diversion, impoundment, use, or restraint contrary to the provisions of § 85-2-311, MCA is invalid. An officer, agent, agency, or employee of the state may not knowingly permit, aid, or assist in any manner an unauthorized appropriation, diversion, impoundment, use, or other restraint. A person or corporation may not, directly or indirectly, personally or through an agent, officer, or employee, attempt to appropriate, divert, impound, use, or otherwise restrain or control waters within the boundaries of this state except in accordance with this § 85-2-311, MCA. Section 85-2-311(6), MCA.

8. The Department may take notice of judicially cognizable facts and generally recognized technical or scientific facts within the Department's specialized knowledge, as specifically identified in this document. ARM 36.12.221(4).

PHYSICAL AVAILABILITY

FINDINGS OF FACT

9. The Applicant proposes to divert water from Sand Creek using a pump from a POD located in the SWNWNE Sec. 8, T6S, R23E, Carbon County, at a flow rate of 1.0 CFS, up to

17.09 AF in volume per year, to be conveyed via a pipeline system to irrigate 6.85 acres generally within the NWNE Sec. 8, T6S, R23E, Carbon County.

10. Sand Creek is considered to be a naturally intermittent surface water source. During a site visit by Department staff on May 28, 2025, the Applicant stated that much of the water in Sand Creek at the proposed POD originated as spillage from the Sand Creek Canal crossing upstream. Department staff observed the flow in Sand Creek above and below the Sand Creek Canal crossing. Above the canal crossing, the stream was boggy and not well channelized. Below the crossing, the stream had a well-defined channel. The Department determined that the source should be classified as "other" under ARM 36.12.1702(4) because the source receives water from the Sand Creek Canal and therefore does not follow a natural hydrograph. Department Groundwater Hydrologist Jack Landers (Landers) stated that, according to USGS PROSPER, the canal has a low probability of affecting upstream streamflow and a moderate (0.5) probability of affecting downstream streamflow; additionally, no hydric conditions or shallow wells exist near Sand Creek that would indicate Sand Creek is a naturally occurring perennial source, agreeing with the Applicant's statement of water coming from the canal (email dated October 23, 2025).

11. During the Department site visit on May 28, 2025, staff assisted the Applicant by taking surface water measurements at the proposed POD using a FlowTracker 2 velocity meter and demonstrating how to use the float area method for Applicant-collected streamflow measurements. The Applicant collected measurements in June, July, August, and September using the float area method.

12. Landers found the measurements acceptable, stating that they were consistent on each date and that those collected in August and September showed similar channel conditions and yielded similar discharge measurements, increasing confidence that the Applicant's measurement methods were repeatable (email dated September 23, 2025). Pursuant to ARM 36.12.1702(4), the Applicant-provided measurements were used to evaluate physical availability. Discharge measured in May using the velocity meter was approximately 2.38 CFS less than the discharge measured with the float area method and was excluded. Use of the Applicant-collected flow measurements is appropriate because the source does not follow a

natural hydrograph, as determined by the Department; therefore, the estimation techniques available to the Department cannot be applied and would not accurately estimate the physically available flow rate and volume. No gage or other measurements exist on Sand Creek. Table 3 shows the physically available flow rate by month.

Table 3: Physical availability at the proposed POD

Measurement Number:	Date:	Collected By:	Method	Flow Rate (CFS):
1	5/28/2025	DNRC	Velocity Meter	19.39
1	5/28/2025	DNRC	Float Method	21.77
2	06/26/2025	Applicant	Float Method	3.86
3	07/31/2025	Applicant	Float Method	6.02
4	08/19/2025	Applicant	Float Method	5.03
5	09/04/2025	Applicant	Float Method	5.05

All values were rounded to the hundredths place after calculations/conversions

13. Table 4 summarizes the estimated monthly flow and volume of Sand Creek based on the float area method measurements. Monthly volume in AF is calculated by multiplying the flow rate in CFS by 1.98 (the number of AF per day per CFS) and the number of days in the respective month.

Table 4: Measured Monthly Flow Rate and Volume

Month	May	June	July	August	September
Flow Rate (CFS)	21.77	3.86	6.02	5.03	5.05
Volume (AF)	1,336.24	229.28	369.51	308.74	299.97

14. The Department finds that water is physically available in excess of the proposed flow rate, 1.0 CFS, during the proposed period of diversion, May 1 to September 30.

15. The Department finds that water is physically available in excess of the proposed volume, 17.09 AF, during the proposed period of diversion, May 1 to September 30.

LEGAL AVAILABILITY

FINDINGS OF FACT

16. To determine the amount of water legally available at the Applicant's proposed POD, the Department identified an area of potential impact (AOPI). The AOPI spans a reach of Sand

Creek extending from the proposed POD located in the SWNWNE Sec. 8, T6S, R23E, Carbon County, downstream, approximately 2.9 river miles, to the confluence of Sand Creek and the Clarks Fork Yellowstone River located in the Government Lot 9 (NENWSE) Sec. 4, T6S, R23E, Carbon County. This is an acceptable area of the potential adverse effect as the reach includes the remaining 2.9 river miles of Sand Creek, includes a drainage basin of 45.2 square miles, and the Clarks Fork Yellowstone River is a significant hydrological boundary.

17. There are two active water rights on Sand Creek within the AOPI: one Statement of Claim is for stock direct from source, and one Statement of Claim is for irrigation. Table 5.

Table 5: Water Rights located in the AOPI

Water Right Owner	WR Type	Owners	Purposes	Flow Rate (CFS)	Acres	AU	Volume (AF)	Period of Diversion	Period of Use
43D 43402 - 00	STOC	Robin A Schalla, Tammy S Schalla	Irrigation	1.0	40	N/A	122.8*	04/15 - 10/01	04/15 - 10/01
43D 30134926	STOC	Heidema Ranch LP	Stock	0.11 ¹	N/A	700	23.8*	01/01 - 12/31	01/01 - 12/31

*Calculated by DNRC

¹ Calculated flow rate and Department standard for stock direct from source (0.033 CFS + 35 GPM (0.078 CFS) = 0.11 CFS)
All values were rounded to the hundredths place after calculations/conversions

18. The Department calculated the volume (122.8 AF) for Statement of Claim 43D 43402-00, located in climatic area 1, based on 3.07 AF/AC, which is the lower end of the higher range at 60% efficiency flood irrigation (ARM 36.12.115).

19. Statement of Claim 43D 30134926 had its flow rate (0.033 CFS) and volume (23.8 AF) quantified by Department standard practice. The volume was determined using the adjudication standard of 30 GPD per AU (0.034 AF/YR). The flow rate in GPM was back-calculated using the following equation: volume in AF x 325,851 gallons / 365 days / 1,440 minutes per day = GPM. The flow rate in GPM was converted to the flow rate in CFS, using the following equation: GPM / 448.8 GPM/CFS = CFS. To provide a conservative estimate with stock direct from the source, the Department adds 35 GPM (0.078 CFS) to the calculated flow rate, giving the total flow rate of 0.11 (0.033 CFS + 0.078 CFS = 0.111 CFS).

20. The flow rate of existing legal demands is calculated by combining the flow rate of all water rights within the AOPI, for each month of the proposed period of diversion. The comparison between the physically and legally available flow rate in Sand Creek at the proposed POD located in the SWNWNE Sec. 8, T6S, R23E, Carbon County is shown in Table 6.

Table 6: Legal Availability Analysis of Flow Rate at the Proposed POD on Sand Creek

Month	May	June	July	Aug	Sept
Physically Available Flow Rate (CFS)	21.77	3.86	6.02	5.03	5.05
Existing Legal Demands in AOPI (CFS)	1.11	1.11	1.11	1.11	1.11
Legally Available Water (CFS)	20.66	2.75	4.91	3.92	3.94
Applicant's Requested Flow Rate (CFS)	1.0	1.0	1.0	1.0	1.0
Legal Availability Minus Applicant's Requested Flow Rate (CFS)	19.66	1.75	3.91	2.92	2.94

All values were rounded to the hundredths place after calculations/conversions

21. The volume of existing legal demands is calculated by combining the volume of all water rights within the AOPI for each month of the proposed period of diversion. To find the volume for a specific month of a water right, the volume is divided by the number of days in the period of diversion, giving the volume per day, then multiplying the volume per day by the number of days in the respective month. The comparison between the physically and legally available volume in Sand Creek at the proposed POD located in SWNWNE Sec. 8, T6S, R23E, Carbon County is shown in Table 7.

Table 7: Legal Availability Analysis of Volume at the Proposed POD on Sand Creek

Month	May	June	July	Aug	Sept
Physically Available Volume (AF)	1,336.24	229.28	369.51	308.74	299.97
Existing Legal Demands in AOPI (AF)	24.41	23.63	24.41	24.41	23.63
Legally Available Water (AF)	1,311.83	205.65	345.10	284.33	276.34
Applicant's Requested Volume (AF)	3.46	3.35	3.46	3.46	3.35
Legal Availability Minus Applicant's Requested Volume (AF)	1,308.37	202.30	341.63	280.87	273.0

All values were rounded to the hundredths place after calculations/conversions

22. The Department finds that the physically available flow rate exceeds the existing legal demand during the Applicant's proposed period of diversion. The Department finds that the

requested flow rate of 1.0 CFS is legally available to the Applicant during the proposed period of diversion, May 1 to September 30.

23. The Department finds that the physically available volume exceeds the existing legal demand during the Applicant's proposed period of diversion. The Department finds that the requested volume of 17.09 AF is legally available to the Applicant during the proposed period of diversion, May 1 to September 30.

ADVERSE EFFECT

FINDINGS OF FACT

24. There are two senior water rights downstream of the proposed POD, which were considered for adverse effects: Statements of Claim 43D 43402-00 and 43D 30134926. These two STOC are located in the AOPI that extends 2.9 river miles from the proposed POD to the confluence of Sand Creek and the Clarks Fork Yellowstone River. The Applicant's plan to prevent adverse effect is to shut down the pump and cease diversion if a valid call is made by a senior water user.

25. The Applicant has proven that enough water remains in Sand Creek to meet both the existing legal demands within the AOPI and the proposed appropriation of 1.0 CFS and 17.09 AF in volume. The Department finds that the proposed flow rate and volume to irrigate 6.85 acres will not have adverse effect on existing water users, and that the Applicant's plan to prevent adverse effect is sufficient.

ADEQUATE MEANS OF DIVERSION

FINDINGS OF FACT

26. The Applicant proposes to use a POD located on Sand Creek in the SWNWNE Sec. 8, T6S, R23E, Carbon County, to irrigate the proposed place of use with a portable sprinkler and pipeline system.

27. The Applicant proposes to pump water from Sand Creek using a Cornell model 3RB pump, with a 20 HP engine, and a suction apparatus. The proposed pump is configured with a 5-inch suction and a 3-inch discharge with a pumping capacity up to 510 GPM (1.13 CFS),

which is sufficient to supply the requested flow rate of 1.0 CFS. The Applicant proposes to convey water from the pump via a main pipeline to auxiliary pipelines throughout the proposed place of use. From the pump, the main pipeline will travel northward for approximately 40 feet to the first split. From split one, a pipeline will travel approximately 180 feet northwestward to the acres located in the NWNWNE. From split one, a pipeline will travel approximately 200 feet eastward to the second split located in the SWNWNE. From split two, a pipeline will travel approximately 655 feet southeastward into the SENWNE. From split two, a pipeline will travel approximately 200 feet northward into the NWNWNE to the third split. From split three, a pipeline will travel approximately 315 feet southeastward into the NENWNE, as indicated in Figure 1 (following FOF 2). This project design was prepared by Agri Industries and consists of a performance evaluation for analysis and estimation purposes.

28. The Department finds that the proposed means of diversion and conveyance are capable of diverting and conveying the proposed flow rate and volume.

BENEFICIAL USE

FINDINGS OF FACT

29. The Applicant proposes to divert up to 17.09 AF in volume, at a flow rate of 1.0 CFS, to irrigate 6.85 acres. Irrigation is a recognized beneficial use under the Montana Water Use Act § 85-2-102(5), MCA. While this proposed appropriation is supplemental to the Applicant's Sand Creek Canal Co. ditch shares, the ditch water is not always available. The Applicant proposes to use water from the ditch when available and utilize this proposed appropriation when Sand Creek Canal water is not available (FOF 2).

30. The Applicant specified that the volume be calculated using the mean acre-feet per acre for sprinkler irrigation for climatic area 2, as 2.495 AF/AC. The Department's standard for sprinkler irrigation in climatic area 2 ranges from 2.30 AF/AC to 2.69 AF/AC. A mean is found by taking the sum of all numbers in a set and dividing by the total count; to find the mean for this application, the Applicant used the following equation: $2.30 \text{ AF/AC} + 2.69 \text{ AF/AC} = 4.99 \text{ AF/AC}$; then, $4.99 \text{ AF/AC} \text{ divided by } 2 \text{ numbers} = 2.495 \text{ AF/AC}$, which is within the

Department's standard (ARM 36.12.115(2)(e)). Thus, the volume requested is 17.09 AF (2.495 AF/AC x 6.85 AC = 17.09 AF).

31. The Applicant requests a period of diversion and period of use from May 1 to September 30, which is within the standard period of diversion for irrigation, April 1 to October 15, for climatic area 2 (ARM 36.12.112 (1)(c)).

32. The Department finds that the proposed water use is beneficial and that the flow rate of 1.0 CFS, up to 17.09 AF in volume, during the proposed period of diversion, is reasonably justified per ARM 36.12.1801(3).

POSSESSORY INTEREST

FINDINGS OF FACT

33. The Applicant signed the application form affirming that the Applicant has 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.

CONCLUSIONS OF LAW

PHYSICAL AVAILABILITY

34. Pursuant to § 85-2-311(1)(a)(i), MCA, an Applicant must prove by a preponderance of the evidence that “there is water physically available at the proposed point of diversion in the amount that the Applicant seeks to appropriate.”

35. It is the Applicant’s burden to produce the required evidence. *In the Matter of Application for Beneficial Water Use Permit No. 27665-41I by Anson* (DNRC Final Order 1987) (Applicant produced no flow measurements or any other information to show the availability of water; permit denied); *In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC.*, (DNRC Final Order 2005).

36. An Applicant must prove that at least in some years there is water physically available at the point of diversion in the amount the Applicant seeks to appropriate. *In the Matter of Application for Beneficial Water Use Permit No. 72662s76G by John Fee and Don Carlson* (DNRC Final Order 1990); *In the Matter of Application for Beneficial Water Use Permit No. 85184s76F by Wills Cattle Co. and Ed McLean* (DNRC Final Order 1994).

37. The Applicant has proven that water is physically available at the proposed point of diversion in the amount Applicant seeks to appropriate. Section 85-2-311(1)(a)(i), MCA. (FOF 9-15)

LEGAL AVAILABILITY

38. Pursuant to § 85-2-311(1)(a), MCA, an Applicant must prove by a preponderance of the evidence that:

(ii) water can reasonably be considered legally available during the period in which the Applicant seeks to appropriate, in the amount requested, based on the records of the department and other evidence provided to the department. Legal availability is determined using an analysis involving the following factors:

(A) identification of physical water availability;

(B) identification of existing legal demands on the source of supply throughout the area of potential impact by the proposed use; and

(C) analysis of the evidence on physical water availability and the existing legal demands, including but not limited to a comparison of the physical water supply at the proposed point of diversion with the existing legal demands on the supply of water.

E.g., ARM 36.12.101 and 36.12.120; *Montana Power Co.*, 211 Mont. 91, 685 P.2d 336 (Permit granted to include only early irrigation season because no water legally available in late irrigation season); *In the Matter of Application for Beneficial Water Use Permit No. 81705-g76F by Hanson* (DNRC Final Order 1992).

39. It is the Applicant's burden to present evidence to prove water can be reasonably considered legally available. *Sitz Ranch v. DNRC*, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, (2011) Pg. 7 (the legislature set out the criteria (§ 85-2-311, MCA) and placed the burden of proof squarely on the Applicant. The Supreme Court has instructed that those burdens are exacting.); *see also Matter of Application for Change of Appropriation Water Rights Nos. 101960-41S and 101967-41S by Royston* (1991), 249 Mont. 425, 816 P.2d 1054 (burden of proof on Applicant in a change proceeding to prove required criteria); *In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC.*, (DNRC Final Order 2005) (it is the Applicant's burden to produce the required evidence.); *In the Matter of Application for Beneficial Water Use Permit No. 41H 30023457 by*

Utility Solutions, LLC (DNRC Final Order 2007) (permit denied for failure to prove legal availability); *see also* ARM 36.12.1705.

40. Applicant has proven by a preponderance of the evidence that water can reasonably be considered legally available during the period in which the Applicant seeks to appropriate, in the amount requested, based on the records of the Department and other evidence provided to the Department. Section 85-2-311(1)(a)(ii), MCA. (FOF 16-23)

ADVERSE EFFECT

41. Pursuant to § 85-2-311(1)(b), MCA, the Applicant bears the affirmative burden of proving by a preponderance of the evidence that the water rights of a prior appropriator under an existing water right, a certificate, a permit, or a state water reservation will not be adversely affected. Analysis of adverse effect must be determined based on a consideration of an Applicant's plan for the exercise of the permit that demonstrates that the Applicant's use of the water will be controlled so the water right of a prior appropriator will be satisfied. *See Montana Power Co.*, 211 Mont. 91, 685 P.2d 336 (1984) (purpose of the Water Use Act is to protect senior appropriators from encroachment by junior users); *Bostwick Properties, Inc.*, ¶ 21.

42. An Applicant must analyze the full area of potential impact under the § 85-2-311, MCA criteria. *In the Matter of Beneficial Water Use Permit No. 76N-30010429 by Thompson River Lumber Company* (DNRC Final Order 2006). While § 85-2-361, MCA, limits the boundaries expressly required for compliance with the hydrogeologic assessment requirement, an Applicant is required to analyze the full area of potential impact for adverse effect in addition to the requirement of a hydrogeologic assessment. *Id.* ARM 36.12.120(5).

43. Applicant must prove that no prior appropriator will be adversely affected, not just the objectors. *Sitz Ranch v. DNRC*, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, 4 (2011).

44. In analyzing adverse effect to other appropriators, an Applicant may use the water rights claims of potentially affected appropriators as evidence of their "historic beneficial

use.” See *Matter of Application for Change of Appropriation Water Rights Nos. 101960-41S and 101967-41S by Royston*, 249 Mont. 425, 816 P.2d 1054 (1991).

45. It is the Applicant’s burden to produce the required evidence. *E.g., Sitz Ranch v. DNRC*, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, 7 (2011) (legislature has placed the burden of proof squarely on the Applicant); *In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC.*, (DNRC Final Order 2005). The Department is required to grant a permit only if the § 85-2-311, MCA, criteria are proven by the Applicant by a preponderance of the evidence. *Bostwick Properties, Inc.*, ¶ 21.

46. Section 85-2-311 (1)(b) of the Water Use Act does not contemplate a de minimis level of adverse effect on prior appropriators. *Wesmont Developers v. DNRC*, CDV-2009-823, First Judicial District Court, *Memorandum and Order*, 8 (2011).

47. The Applicant has proven by a preponderance of the evidence that the water rights of a prior appropriator under an existing water right, a certificate, a permit, or a state water reservation will not be adversely affected. Section 85-2-311(1)(b), MCA. (FOF 24-25)

ADEQUATE DIVERSION

48. Pursuant to § 85-2-311(1)(c), MCA, an Applicant must demonstrate that the proposed means of diversion, construction, and operation of the appropriation works are adequate.

49. The adequate means of diversion statutory test merely codifies and encapsulates the case law notion of appropriation to the effect that the means of diversion must be reasonably effective, i.e., must not result in a waste of the resource. *In the Matter of Application for Beneficial Water Use Permit No. 33983s41Q by Hoyt* (DNRC Final Order 1981); § 85-2-312(1)(a), MCA.

50. Applicant has proven by a preponderance of the evidence that the proposed means of diversion, construction, and operation of the appropriation works are adequate for the proposed beneficial use. Section 85-2-311(1)(c), MCA (FOF 26-28).

BENEFICIAL USE

51. Under § 85-2-311(1)(d), MCA, an Applicant must prove by a preponderance of the evidence the proposed use is a beneficial use.

52. An appropriator may appropriate water only for a beneficial use. See also, § 85-2-301 MCA. It is a fundamental premise of Montana water law that beneficial use is the basis, measure, and limit of the use. *E.g., McDonald; Toohey v. Campbell* (1900), 24 Mont. 13, 60 P. 396. The amount of water under a water right is limited to the amount of water necessary to sustain the beneficial use. *E.g., Bitterroot River Protective Association v. Siebel, Order on Petition for Judicial Review*, Cause No. BDV-2002-519, Montana First Judicial District Court, Lewis and Clark County (2003), *affirmed on other grounds*, 2005 MT 60, 326 Mont. 241, 108 P.3d 518; *In The Matter Of Application For Beneficial Water Use Permit No. 43C 30007297 by Dee Deaterly* (DNRC Final Order), *affirmed other grounds, Dee Deaterly v. DNRC*, Cause No. 2007-186, Montana First Judicial District, *Order Nunc Pro Tunc on Petition for Judicial Review* (2009); *Worden v. Alexander* (1939), 108 Mont. 208, 90 P.2d 160; *Allen v. Petrick* (1924), 69 Mont. 373, 222 P. 451; *In the Matter of Application for Beneficial Water Use Permit No. 41S-105823 by French* (DNRC Final Order 2000).

53. Amount of water to be diverted must be shown precisely. *Sitz Ranch v. DNRC*, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, 3 (2011) (citing *BRPA v. Siebel*, 2005 MT 60, and rejecting Applicant's argument that it be allowed to appropriate 800 acre-feet when a typical year would require 200-300 acre-feet).

54. It is the Applicant's burden to produce the required evidence. *Bostwick Properties, Inc. v. DNRC*, 2013 MT 48, ¶ 22, 369 Mont. 150, 296 P.3d 1154 ("issuance of the water permit itself does not become a clear, legal duty until [the applicant] proves, by a preponderance of the evidence, that the required criteria have been satisfied"); *Sitz Ranch v. DNRC*, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, (2011) Pg. 7; *In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC.*, (DNRC Final Order 2005); *see also Royston; Ciotti*.

55. Applicant proposes to use water for irrigation, which is a recognized beneficial use. Section 85-2-102(5), MCA. Applicant has proven by a preponderance of the evidence that

irrigation is a beneficial use and that 17.09 AF of diverted volume and 1.0 CFS is the amount needed to sustain the beneficial use. Section 85-2-311(1)(d), MCA. (FOF 29-32)

POSSESSORY INTEREST

56. Pursuant to § 85-2-311(1)(e), MCA, an Applicant must prove by a preponderance of the evidence that it has a possessory interest or the written consent of the person with the possessory interest in the property where the water is to be put to beneficial use, or if the proposed use has a point of diversion, conveyance, or place of use on national forest system lands, the Applicant has any written special use authorization required by federal law to occupy, use, or traverse national forest system lands for the purpose of diversion, impoundment, storage, transportation, withdrawal, use, or distribution of water under the permit.

57. Pursuant to ARM 36.12.1802:

(1) An Applicant or a representative shall sign the application affidavit to affirm the following:

(a) the statements on the application and all information submitted with the application are true and correct and

(b) except in cases of an instream flow application, or 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, the Applicant has possessory interest in the property where the water is to be put to beneficial use or has the written consent of the person having the possessory interest.

(2) If a representative of the Applicant signs the application form affidavit, the representative shall state the relationship of the representative to the Applicant on the form, such as president of the corporation, and provide documentation that establishes the authority of the representative to sign the application, such as a copy of a power of attorney.

(3) The department may require a copy of the written consent of the person having the possessory interest.

58. The Applicant has proven by a preponderance of the evidence that it has a possessory interest, or the written consent of the person with the possessory interest, in the property where the water is to be put to beneficial use. Section 85-2-311(1)(e), MCA. (FOF 33)

PRELIMINARY DETERMINATION

Subject to the terms, analysis, and conditions in this Order, the Department preliminarily determines that this Application for Beneficial Water Use Permit No. 43D 30171861 should be GRANTED.

The Department determines the Applicant may divert water from Sand Creek, from May 1 to September 30, by means of a pump, at a flow rate of 1.0 CFS and up to 17.09 AF in volume, from a proposed point of diversion located in the SWNWNE Section 8, Township 6 South, Range 23 East, Carbon County. The Applicant may use water for crop irrigation from May 1 to September 30, to irrigate 6.85 acres, consisting of 2.2 AC in the NWNWNE, 0.15 AC in the NENWNE, 1.7 AC in the SWNWNE, and 2.8 acres in the SENWNE, all in Section 8, Township 6 South, Range 23 East, Carbon County.

NOTICE

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

Dated this 19th day of June 2026

Christine Schweigert
Hydrologist
Billings Regional Office, Department of
Natural Resources and Conservation
Water Resources Division
1371 Rimtop Drive
Billings, MT, 59105

CERTIFICATE OF SERVICE

This certifies that a true and correct copy of the DRAFT PRELIMINARY DETERMINATION TO GRANT was served upon all parties listed below on this 19th day of June, 2026, by first class United States mail.

R BAR N RANCH, LLC
89 SAND CREEK RD
BRIDGER, MT 59014-9581
RBARNRANCH2@GMAIL.COM

CC:
SCOTT M. GRISWOLD
33 SAND CREEK ROAD
BRIDGER, MT 59014
GRISWOLDSMGLLC@GMAIL.COM

Cassey Strebeck
Water Resource Specialist
Billings Regional Office, Department of
Natural Resources and Conservation
Cassey.Strebeck@mt.gov
406-247-4422

Processing Materials

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

Processing Materials

THE MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

GOVERNOR GREG GIANFORTE



DNRC DIRECTOR AMANDA KASTER

DNRC Water Resources
Billings Regional Office
1371 Rimtop Dr.
Billings, MT 59105-1978

April 20, 2026

R Bar N Ranch, L.L.C.
89 Sand Creek Rd
Bridger, MT 59014

Subject: Correct and Complete Application for (Form 600) for Beneficial Water Use Permit Application No. 43D 30171861

Dear Applicant,

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

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

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

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

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

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

Sincerely,

Cassey Strebeck
Water Resource Specialist
Billings Regional Office, Montana DNRC
Cassey.Strebeck@mt.gov
406-247-4422



DNRC.MT.GOV

Application Materials

- Application
- Any information submitted with Application including maps

Application Materials



APPLICATION FOR
**BENEFICIAL WATER USE
PERMIT**

§ 85-2-302, MCA

Form No. 600 (10/2025)

For Department Use Only

RECEIVED

APR 10 2026

DNRC-WRD-BILLINGS

FILING FEE

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

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

INFORMATION

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

Application # 30171861 Basin 43D
Priority Date Apr 10, 2026 Time 12:34 AM/PM (P)
Rec'd By CSZ
Fee Rec'd \$ 700.00 Check # 008857
Deposit Receipt # BLS2625839
Payor R BAR N RANCH LLC
Refund \$ _____ Date _____

Applicant Information: Add more as necessary.

Applicant Name R Bar N Ranch, LLC
Mailing Address 89 Sand Creek Road City Bridger State MT Zip 59014
Phone Numbers: Home N/A Work Rick Cline: 406-560-3018 Cell Nancy Cline: 406-560-3014
Email Address rbarnranch2@gmail.com

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

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

Contact/Representative Information: Add more as necessary.

Contact/Representative is: ☐ Applicant ☒ Consultant ☐ Attorney ☐ Other
Contact/Representative Name Scott Griswold
Mailing Address 33 Sand Creek Road City Bridger State MT Zip 59014
Phone Numbers: Home 406-662-3500 Work N/A Cell 406-690-9765
Email Address griswoldsmgllc@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 (ARM 36.12.122(2)). If a contact person is identified as a consultant, employee, or lessee, the individual filing the water right form or objection form will receive all correspondences, and a copy may be sent to the contact person (ARM 36.12.122(3)).



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

PREAPPLICATION AND TECHNICAL ANALYSES INFORMATION

1. ☒ Y ☐ N Do you elect for Department technical analyses to be used for criteria assessment?
2. ☒ Y ☐ N Did you have a preapplication meeting AND complete a Permit Preapplication Meeting Form Part A and Part B (Form 600P-A and 600P-B)?

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

- 2.a. ☐ S Submit the Technical Analyses Addendum (Form 600-TAA).
- 2.b. ☐ S ☐ NA Submit the technical analyses, if you elected in question 1 for Applicant technical analyses to be used for criteria assessment. Select "NA" if you elected for Departmental technical analyses.

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

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

2.c.i. Please explain.

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

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

2.d.i. Please explain.

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

- 2.e. ☒ Y ☐ N Did you elect in Question 1 for Department technical analyses to be used for criteria assessment? **If no:**

2.e.i. ☐ S Submit the technical analyses.



APPLICATION ADDENDA AND REVIEW

3. ☐ S ☒ NA If your application is for groundwater, not surface water, and one or more of your points of diversion are in a Basin Closure Area, then submit the Basin Closure Area Addendum (Form 600-BCA).
4. ☐ S ☒ NA If your application is for groundwater and one or more points of diversion are in a Basin Closure Area, then your project must have a Hydrogeologic Report that conforms with MCA 85-2-361 to comply with the requirements of § 85-2-360, MCA. A Hydrogeologic Report Addendum (Form 600-HRA) or Department Technical Analyses may be used to meet these requirements. Please mark the box below that best applies, then select "S" if submitting a Hydrogeologic Report or "NA" if one is not required. This question does not apply to surface water points of diversion in a Basin Closure Area.
- ☐ If you elected to conduct Technical Analyses, you must submit the Hydrogeologic Report Addendum (Form 600-HRA).
 - ☐ If you elected for DNRC to conduct Technical Analyses but did not have a preapplication meeting AND complete a Form 600P Permit Preapplication Meeting Form (or changes have occurred since the completed Form 600P), you must submit the Hydrogeologic Report Addendum (Form 600-HRA).
 - ☐ If you elected for DNRC to conduct Technical Analyses, had a preapplication meeting, completed a Form 600P, and the Technical Analyses remain unchanged since the preapplication meeting, you do not need to submit Form 600-HRA because the Department's Technical Analyses meet the report requirements of § 85-2-360 and § 85-2-361, MCA.
5. ☐ S ☒ NA If the project is for one or more groundwater points of diversion located in a Controlled Groundwater Area, then submit the Controlled Groundwater Area Addendum (Form 600-CGWA).
6. ☐ S ☒ NA If the project involves an appropriation that is greater than 5.5 CFS and 4,000 acre-feet, then submit a Criteria Addendum Application for Beneficial Water Use Permit for Appropriations Greater than 5.5 CFS and 4,000 AC-FT (Form 600-B).
7. ☐ S ☒ NA If the project involves out-of-state water use, then submit the Out-of-State Use Addendum (Form 600/606-OSA).
8. ☐ S ☒ NA If you require mitigation water to meet the criteria of issuance, then submit a Mitigation Purpose Addendum (Form 600/606-MIT).
9. ☐ S ☒ NA If the proposed purposes include marketing or selling water, (not marketing for mitigation/aquifer recharge), then submit the Marketing Purpose Addendum (Form 600/606-WMA).
10. ☐ S ☒ NA If the project involves one or more places of storage, then submit a Permit Storage Addendum (Form 600-SA). This does not include reservoirs, pits, pit-dams, or ponds with a capacity less than 0.1 AF; water tanks; or cisterns (ARM 36.12.113(6)).
11. ☒ S ☐ NA If the project is in designated sage grouse habitat, then submit a review letter from the Montana Sage Grouse Habitat Conservation Program.
12. ☐ S ☒ NA If the project includes a point of diversion and/or place of use on State of Montana Trust Land, submit documentation of consent from the DNRC Trust Lands Management Division.
13. ☐ S ☒ NA You must provide a written notice of the application to each owner of an appropriation right sharing a point of diversion or means of conveyance (e.g., canal, ditch, flume, pipeline, or constructed waterway) pursuant to §85-2-302(4)(c), MCA. Submit a copy of this notice and the recipient list.



PURPOSE AND DIVERSION INFORMATION

14. ☐ Y ☒ N Is the proposed use temporary?

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

15. Is the proposed source surface water or groundwater? Surface Water

16. What is the source name? Sand Creek

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

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

Purpose	Means of Diversion	Acres Irrigated (if appl.)	Period of Diversion (Month/Day - Month/Day)	Period of Use (Month/Day - Month/Day)	Flow Rate ☐ GPM ☒ CFS	Volume (Acre-Feet)
Irrigation	Pump	6.85	05/01-09/30	05/01-09/30	1.0	17.09
Total Flow Rate and Volume Required					1.0	17.09

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

Purpose	Requested Information	Response
Domestic or multiple domestic	Number of households and bedrooms served per household	
Stock	Number of animal units	
Irrigation	Method of irrigation type (sprinkler or flood) and subtype (if flood: level border, graded border, furrow, contour ditch, or other; if sprinkler: center pivot, wheel line, or other)	Sprinkler - Big Gun Portable Sprinkler
Irrigation (flood only)	Design slope	

POINT(S) OF DIVERSION

20. Describe the proposed location of the point(s) diversion to the nearest $\frac{1}{4}$ $\frac{1}{4}$ $\frac{1}{4}$ Section. Label each POD with the POD ID number used for the project map (question 17).

POD #	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	Sec.	Twp.	Rge.	County	Lot	Block	Tract	Subdivision	Gov. Lot
1	SW	NW	NE	8	6S	23E	Carbon					

PLACE OF USE

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

10-0449-08-2-01-01-0000	

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

Acres	Gov. Lot	Block	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	Sec.	Twp.	Rge.	County
2.2			NW	Nw	NE	8	6S	23E	Carbon
0.15			NE	Nw	NE	8	6S	23E	Carbon
1.7			SW	Nw	NE	8	6S	23E	Carbon
2.8			SE	Nw	NE	8	6S	23E	Carbon

SUPPLEMENTAL AND OVERLAPPING WATER RIGHTS

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

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

Existing Sand Creek Canal Company Ditch Shares (Statement of Claim 43D 199996-00) are not always available; thus, applicant will continue to use the ditch shares when available, and utilize the proposed water right to supplement needed water when shares are not available. The proposed water right will have 6.35 AC that overlap with acreage irrigated under the ditch shares. The overlapped acreage uses 15.88 AF of water.

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

Water Right #	Average Period of Diversion	Average Period of Use	Flow Rate	Volume Contributed
43D 199996-00	04/01 - 10/15	04/01 - 10/15	225 CFS	0.0-15.88 AF

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

25.a. If yes, explain.

Existing Sand Creek Canal Company Ditch Shares (43D 199996-00) are not reliable or always available. The proposed water right (permit) will be used when the ditch shares water is not available or is inadequate for the purpose; thereby, replacing unavailable ditch share water or supplementing an insufficient supply of ditch share water.

ADVERSE EFFECT

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

The applicant can cease diversion by stopping pump operation if a valid call is made.

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

The applicant can/will cease diversion pumping if valid call is made, in order to defer to senior water rights on Sand Creek; and will comply with any/all directives regarding the use of Sand Creek Canal Company ditch shares water in the event of a water shortage.

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

28.a. If yes, explain.

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

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

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

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

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

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



ADEQUATE MEANS OF DIVERSION AND OPERATION

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

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

The main diversionary feature will consist of a stationary pump unit and suction apparatus.

The proposed pump (Cornell Mod. 3RB, 20 HP, 1,800 RPM, 11.5" impeller) will provide flow of 425 GPM at a head of 133 ft at an operating speed of 1,775 RPM and efficiency of 78%.

This pump unit will produce a maximum output of 510 GPM @ 1,775 RPM (78% efficiency) at a head of 121 ft. This output range is sufficient to provide the 1.0 CFS / 448.8 GPM flow rate the applicant is requesting.

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

The main diversionary feature will consist of a stationary pump unit and suction apparatus.

The proposed pump (Cornell Mod. 3RB, 20 HP, 1,800 RPM, 11.5" impeller) is configured w/ a 5-inch suction and 3-inch discharge. Pumping capacity is from 425 GPM - 510 GPM. Water will be conveyed from the pump by a pipeline system designed to supply a mobile/portable Big Gun sprinkler. The pipeline consists of a main line from the pump feeding (5) auxiliary lines that service the various areas of the POU. The Big Gun sprinkler unit is designed to be supplied by the pipeline system, enabling it to be utilized at multiple locations throughout the POU. Pipe loss from the POD to the sprinkler head is estimated to be minimal.

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

The proposed diversion and conveyance infrastructure is designed to provide adequate flow and volume for the proper irrigation of the POU. Pump capacity is from 425 GPM - 510 GPM.

This capacity is consistent with the 1.0 CFS/448.8 GPM flow rate the applicant is requesting.

Sand Creek water flow/volume is sufficient throughout the proposed period of diversion, the pipeline and sprinkler system is designed for efficient water usage, and water losses during conveyance and application are anticipated to be minimal. Applicant believes the proposed conveyance infrastructure is adequate for the intended irrigation purposes plus any losses.

36. Provide a plan of operations, which includes specific information about how water is delivered within the place of use. This may include, where applicable, the range of flow rates needed for a pivot.
The applicant plans to utilize the proposed pump system to divert water from Sand Creek at
times during the period of use (05/01-09/30) when Sand Creek Canal water is not available,
or is insufficient, and the flow in Sand Creek is adequate to supply the volume required to
irrigate the POU. Water diverted from Sand Creek will be conveyed/delivered to the POU via
a pipeline system, and applied to the land by a mobile/portable Big Gun sprinkler system.

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

37.a. If yes, explain.

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

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

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

IF YES,

39.a. Explain the wastewater disposal method.

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

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

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



POSSESSORY INTEREST

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

45.a. If yes, explain.

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

IF NO,

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

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

46.b.i. If no, explain.

PROPOSED COMPLETION PERIOD

47. How much time will be needed to complete this project and to submit to the DNRC a Project Completion Notice (Form 617)? Approximately 5 years / 60 months.
48. Please describe why this amount of time is needed to complete this project.
The project will require sufficient time to schedule, acquire the necessary equipment and materials, and perform the installation/construction of utility/water lines and pump apparatus.
The time to complete this will be dependent upon labor, equipment and materials availability.



AFFIDAVIT & CERTIFICATION

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

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

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

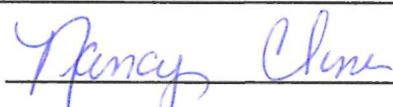
I understand that making a false statement under oath or affirmation in this application and official proceedings throughout the examination of my application may subject me to prosecution under § 45-7-202, MCA, a misdemeanor punishable by a jail term not to exceed 6 months or a fine not to exceed \$500,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

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

Printed Name Rick Cline - On Behalf of R Bar N Ranch, LLC

Applicant Signature  Date: 4-7-26

Printed Name Nancy Cline - On Behalf of R Bar N Ranch, LLC

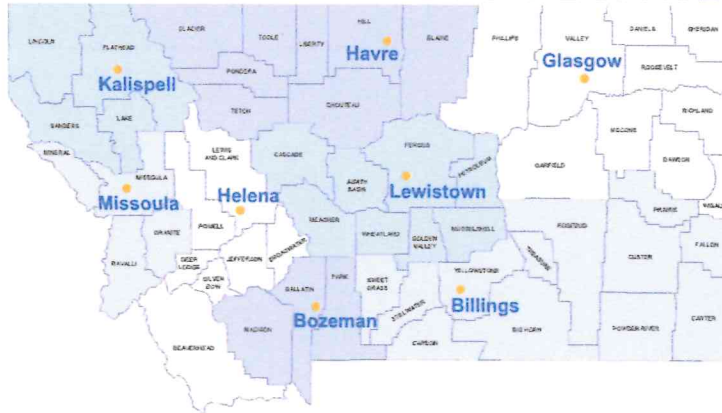
Applicant Signature  Date: 4-7-26

Printed Name _____

Applicant Signature _____ Date: _____



WATER RESOURCES REGIONAL OFFICES



BILLINGS

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

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

EMAIL DNRCBillingsWater@mt.gov

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



HELENA

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

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

EMAIL DNRCHelenaWater@mt.gov

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



BOZEMAN

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

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

EMAIL DNRCBozemanWater@mt.gov

Gallatin, Madison, and Park Counties



KALISPELL

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

PHONE 406-752-2288

EMAIL DNRCKalispellWater@mt.gov

Flathead, Lake, Lincoln, and Sanders Counties



GLASGOW

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

PHONE 406-228-2561

EMAIL DNRCGlasgowWater@mt.gov

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



LEWISTOWN

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

PHONE 406-538-7459

EMAIL DNRCLeWistownWater@mt.gov

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



HAVRE

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

PHONE 406-265-5516

EMAIL DNRCHavreWater@mt.gov

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



MISSOULA

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

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

EMAIL DNRCMissoulaWater@mt.gov

Granite, Mineral, Missoula, and Ravalli Counties



QUESTION 11.

ATTACHMENTS

APPLICATION FOR BENEFICIAL WATER USE PERMIT

APPLICATION NO. 43D 30171861

R BAR N RANCH LLC

DNRC FORM NO. 600

ADDENDUM

ATTACHMENTS

Question 11 - Letter from the Montana Sage Grouse Habitat Conservation Program

(4 Pages) Review Letter from Therese Hartman, MSGHCP Mgr; R Bar N Ranch, LLC Sand Creek Pump Diversion Project (No. 7184) and Lek Location Map.

Question 17 - (5 Pages) Maps showing (3) aerial overviews of the subject property, (1) map detailing the proposed POD (#1), conveyance facilities and all proposed POUs, and (1) map designating those POUs for overlapping water rights.

Question 32 - (1 Page) Diagram of system operation indicating POD, pump station, main pipeline, and auxiliary pipelines. See Notes regarding operation of system on "QUESTION 32. ATTACHMENTS" title page.

Question 33 - (1 Page) Project material prepared by Agri Industries (Billings, MT): Consisting of a pump design utilizing a Cornell 3RB pump curve / performance evaluation for analysis and estimation purposes.

MONTANA SAGE GROUSE HABITAT CONSERVATION PROGRAM



GREG GIANFORTE, GOVERNOR

1539 ELEVENTH AVENUE

STATE OF MONTANA

PHONE: (406) 444-8554
FAX: (406) 444-6721

PO BOX 201601
HELENA, MONTANA 59620-1601

Project No. 7184
Governor's Executive Orders 12-2015 and 21-2015
R Bar N Sand Creek Pump Diversion

Rick Cline
89 Sand Creek Road
Bridger, MT 59014

October 15, 2025

Dear Mr. Cline,

The Montana Sage Grouse Habitat Conservation Program received a request for consultation and review of your project or proposed activity on October 4, 2025. Additional information necessary for Program review was received on October 10, 2025. Based on the information provided, this Project is located within General Habitat for sage grouse. The Bureau of Land Management (BLM) classifies this area as a General Habitat Management Area (GHMA).

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

The Program has completed its review, including:

Project Description:

Project Type: Agriculture – Water

Project Disturbance: 0.52 Miles of Aboveground Water Pipeline; 373.75-Foot-Long Buried Power Line; 0.002 Acre Pump Site

Construction Timeframe: March 2, 2026 to April 15, 2026; Temporary (<1 Year)

Operations Timeframe: April 16, 2026; Permanent (>25 Years)



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



Project Location:

Legal: Township 6 South, Range 23 East, Section 8

County: Carbon

Ownership: Private

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

The R Bar N Sand Creek Pump Diversion Project proposes to install an aboveground water line and buried power line for irrigation purposes in General Habitat for sage grouse.

The private landowner proposes to install an aboveground water pipeline and buried power line approximately 1.68 miles from Bridger, Montana in Carbon County. See Figure 1 (R Bar N Sand Creek Pump Diversion Project and Lek Location Map). The water line will bring water from Sand Creek via an above ground pump to irrigate existing croplands on private property. The new buried power line will provide power to the new pump from the existing residence.

To implement the Project, a trencher will be used to dig along the north side of Sand Creek to bring power to the pump from the landowners' residence. Aboveground water lines will be connected to deliver water to three separate irrigation sprinklers to irrigate existing croplands.

At the conclusion of the Project, all disturbed areas will be reseeded with a pasture mix. Reclamation will occur in April 2026.

Based on the information you provided, your Project is not within two miles of an active sage grouse lek in General Habitat. See Figure 1 (R Bar N Sand Creek Pump Diversion Project and Lek Location Map).

Discussion:

The R Bar N Sand Creek Pump Diversion Project involves installing a new point of diversion, above ground water pipeline, and buried power line to irrigate existing croplands.

Exempt activities are identified in Executive Order 12-2015 (EO) as described in Attachment F. The activities described for the R Bar N Sand Creek Pump Diversion Project (item e. agricultural electrical distribution line and item g. irrigation without conversion of sagebrush to newly irrigated land) are exempt from stipulations per Executive Order 12-2015. Your proposed project or activity may need to obtain additional permits or authorizations from other Montana state agencies or possibly federal agencies. They are very likely to request a copy of this consultation letter, so please retain it for your records.



Program Recommendations:

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

- Reclamation should re-establish native grasses, forbs, and/or shrubs during interim and final reclamation. The goal of reclamation is to achieve cover, species composition, and life form diversity commensurate with the surrounding plant community or desired ecological condition to the benefit of sage grouse and replace or enhance sage grouse habitat to the degree that environmental conditions allow.
- Weed management is required within General Habitat for sage grouse. Reclamation of disturbed areas must include control of noxious weeds and invasive plant species, including cheatgrass (*Bromus tectorum*) and Japanese brome (*Bromus japonicas*).

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

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

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

Sincerely,



Therese Hartman
Montana Sage Grouse Habitat Conservation Program Manager

Attachments:

1. Figure 1. R Bar N Sand Creek Pump Diversion Project and Lek Location Map



7184_R Bar N Sand Creek Pump Diversion Project and Lek Location

Figure 1



Permit Agencies:

Department of Natural Resources and Conservation

Vegetation Removal:

No

Reclamation of Surface Disturbance:

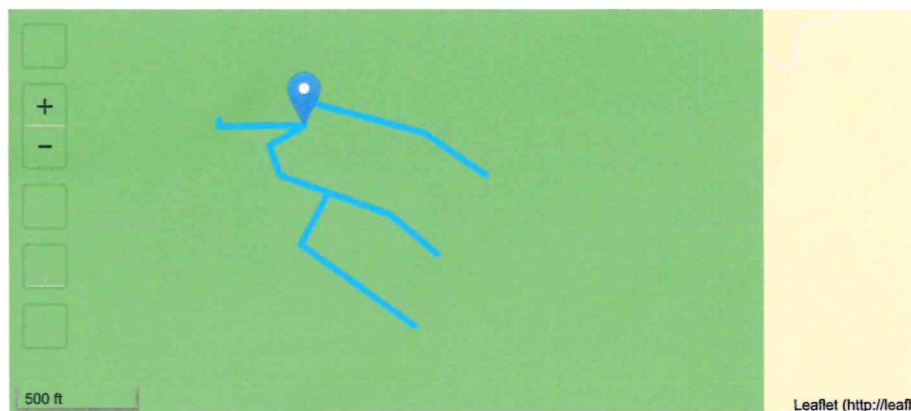
Yes, using a proposed seed mix of "Pasture Mix", occurring in April, 2026

State or Federal Funding:

No

Reviewer:

Hair, Daniel

LOCATION DETAILS

Leaflet (<http://leafletjs.com>) | Esri (<https://services.arcgis.com/arcgis/rest/services>)

EO Habitat Class:

EO-General Habitat

Core Area Names:

Not in any Core Area

Management Zones:

Wyoming Basins Management Zone

Service Areas:

Central

No Surface Occupancy Areas:

Not in any NSOA

Exempt Community Boundaries:

Not in any Exempt Community Boundary

In BLM Priority Habitat Area?

No

Counties:

Carbon

TRS:

Township 6 South, Range 23 East, Section 8

TRS By Habitat Classification**EO-General Habitat**

Township 6 South, Range 23 East, Section 8

Land Owner Information:

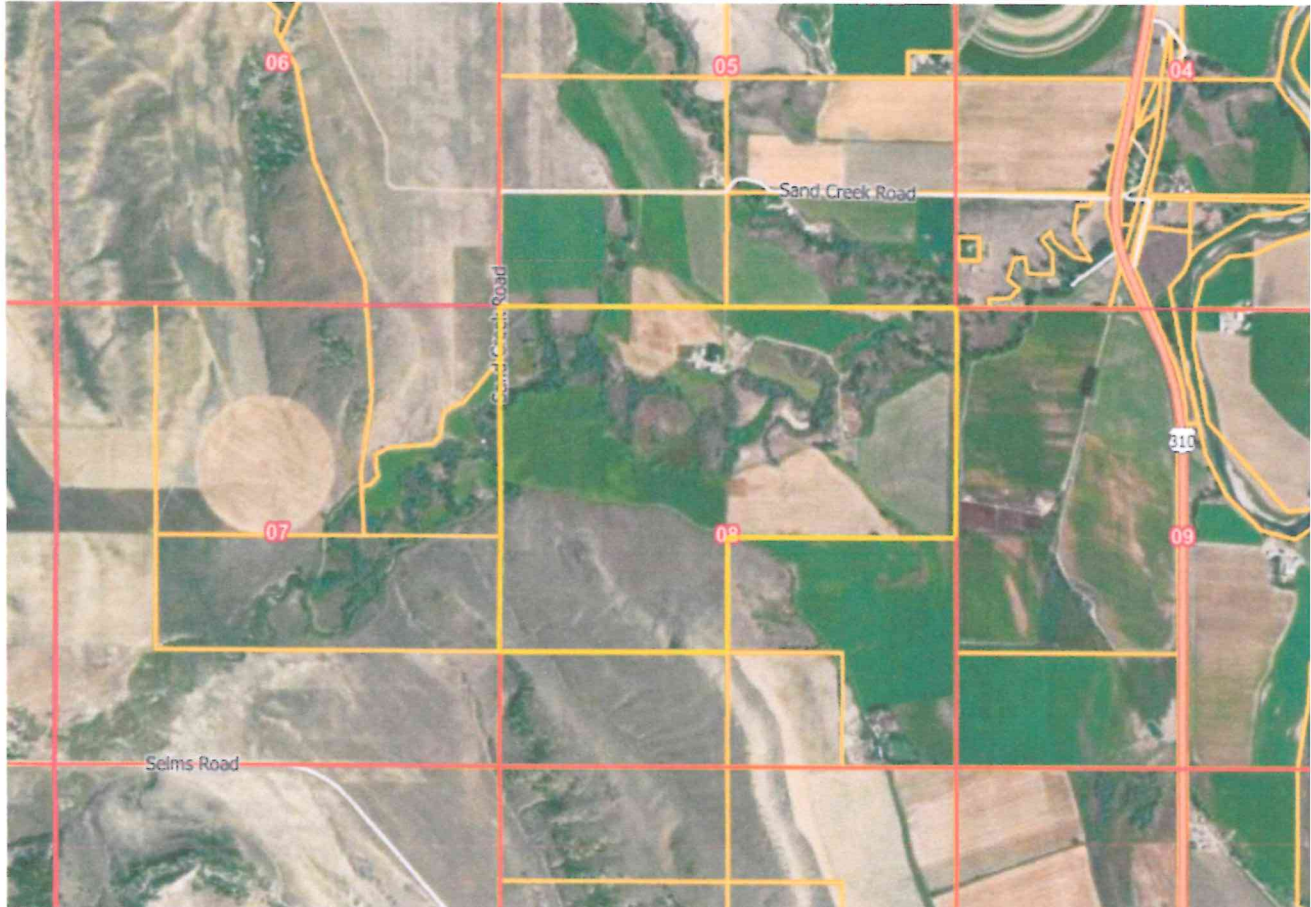
Private

REVIEWER COMMENTS

QUESTION 17.

ATTACHMENTS

Scale: 1:33324.32 Basemap: Imagery Hybrid



1

Geocode: [10-0449-08-2-01-01-0000](#)

Property Address: 89 SAND CREEK RD BRIDGER, MT 59014

Property Type: N/A

Disclaimer

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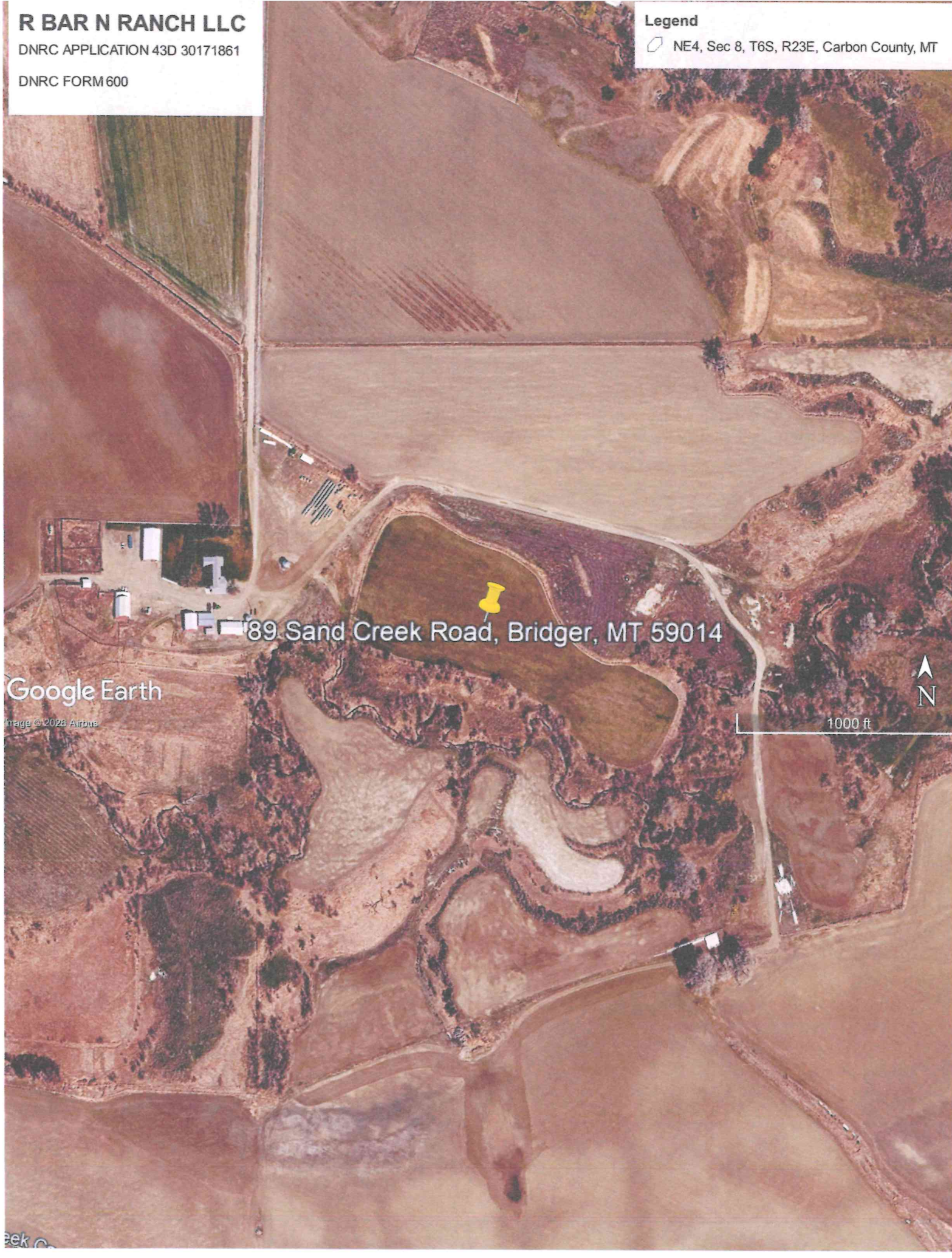
R BAR N RANCH LLC

DNRC APPLICATION 43D 30171861

DNRC FORM 600

Legend

NE4, Sec 8, T6S, R23E, Carbon County, MT



89 Sand Creek Road, Bridger, MT 59014

Google Earth

Image © 2026 Airbus



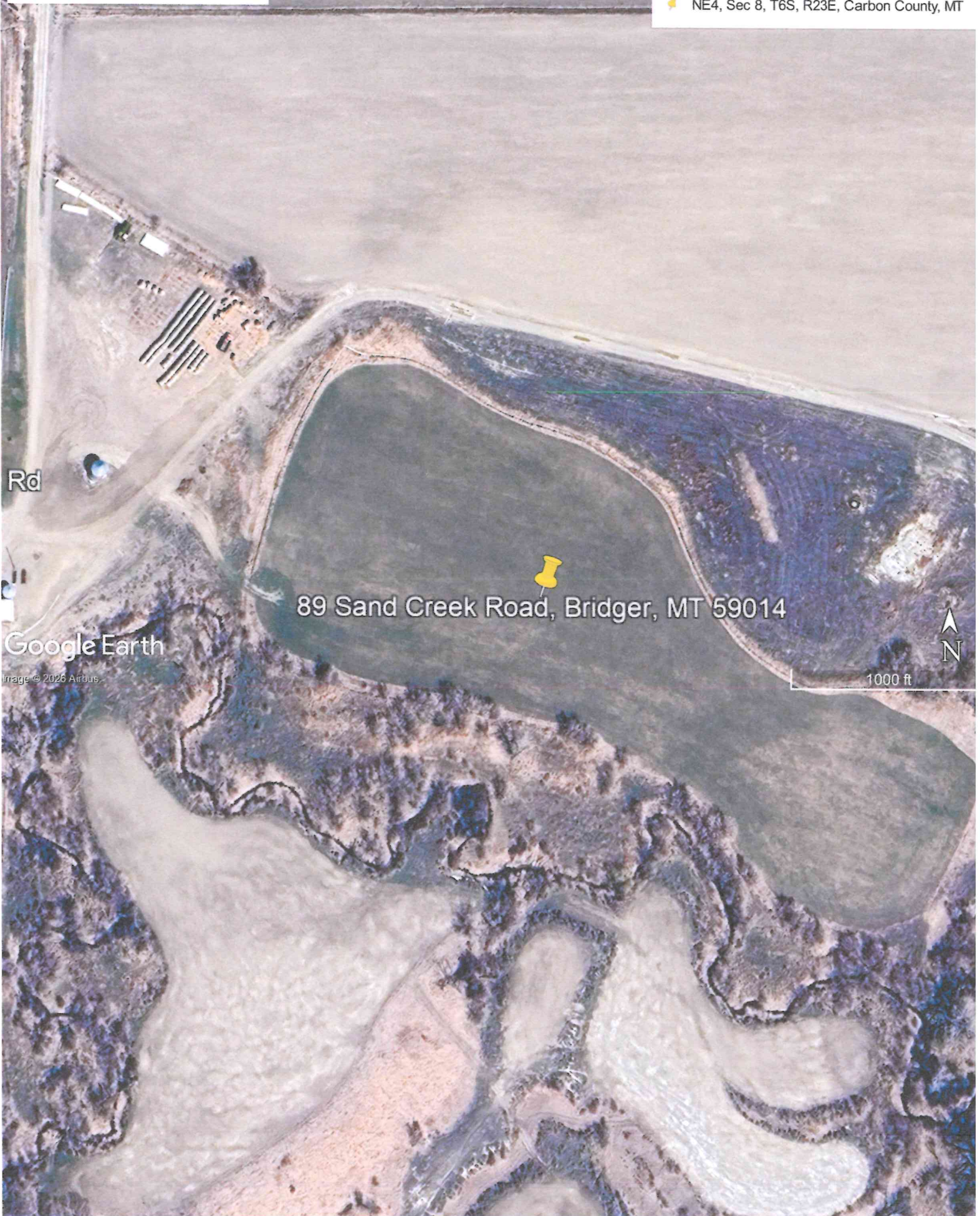
1000 ft

R BAR N RANCH LLC

DNRC FORM 600P-B

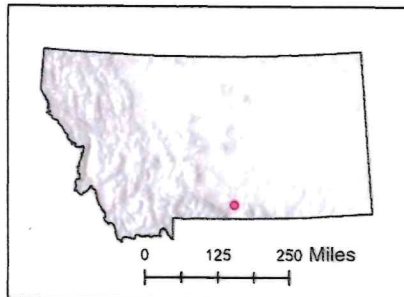
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-  89 Sand Creek Rd, Bridger, MT 59014
-  NE4, Sec 8, T6S, R23E, Carbon County, MT



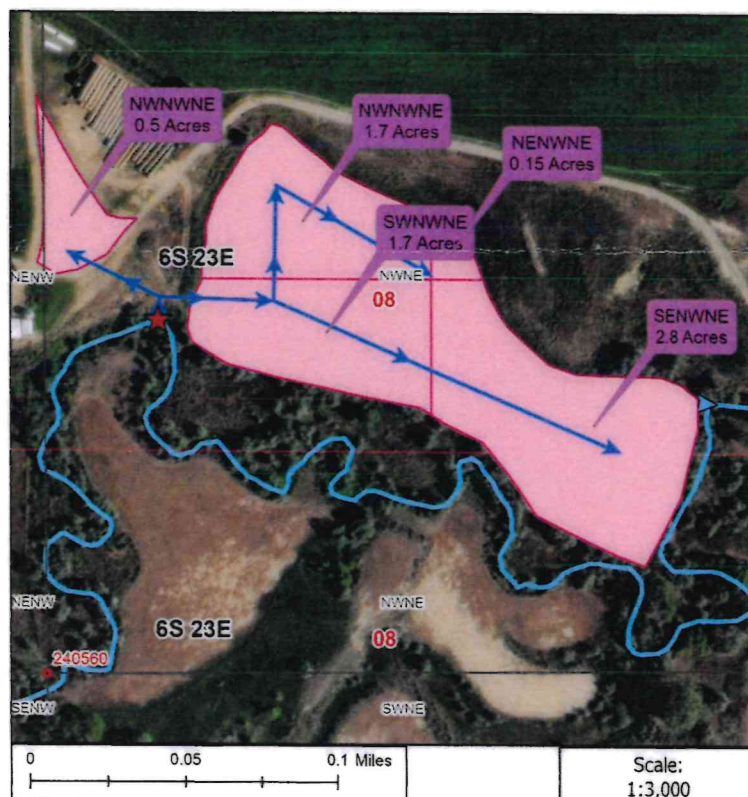
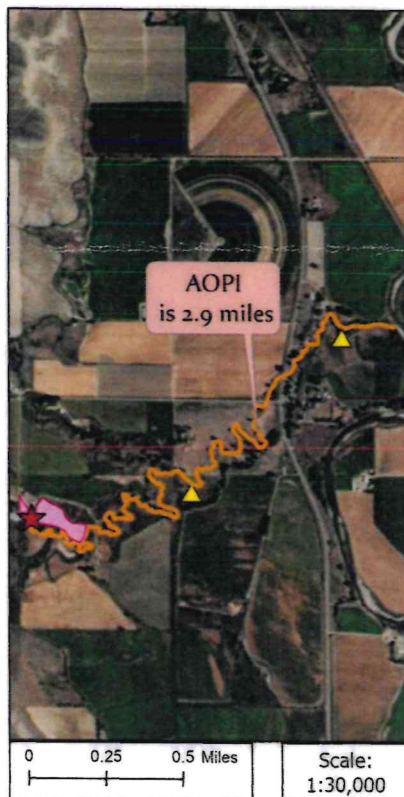


43D 30171861 - R Bar N Ranch, LLC - Proposed



Legend

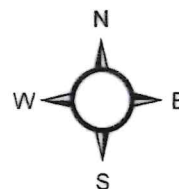
- ★ Proposed Point of Diversion - Pump Site 1
- ➡ Proposed Pipeline System
- Proposed Place of Use
- ➡ Sand Creek
- AOP1
- ▲ Water Rights in AOP1



Elements depicted on this map are for illustrative purposes and have not been surveyed by the Department.



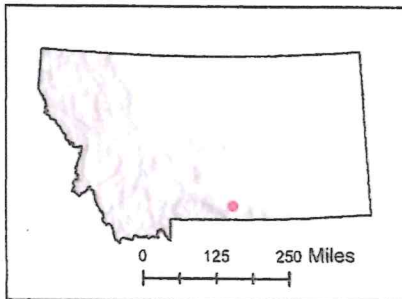
Map Created: 3/26/2026
Author: Cassey Strebeck,
Water Resource Specialist



State Boundary: US Bureau of Land Management, Geographic Coordinate Database, US Geological Survey 1:24,000 Digital Raster Graphics, Montana State Library
MSDI PLSS:
World Imagery: Vantor
World Imagery: Earthstar Geographics



43D 30171861 - R Bar N Ranch, LLC - Proposed

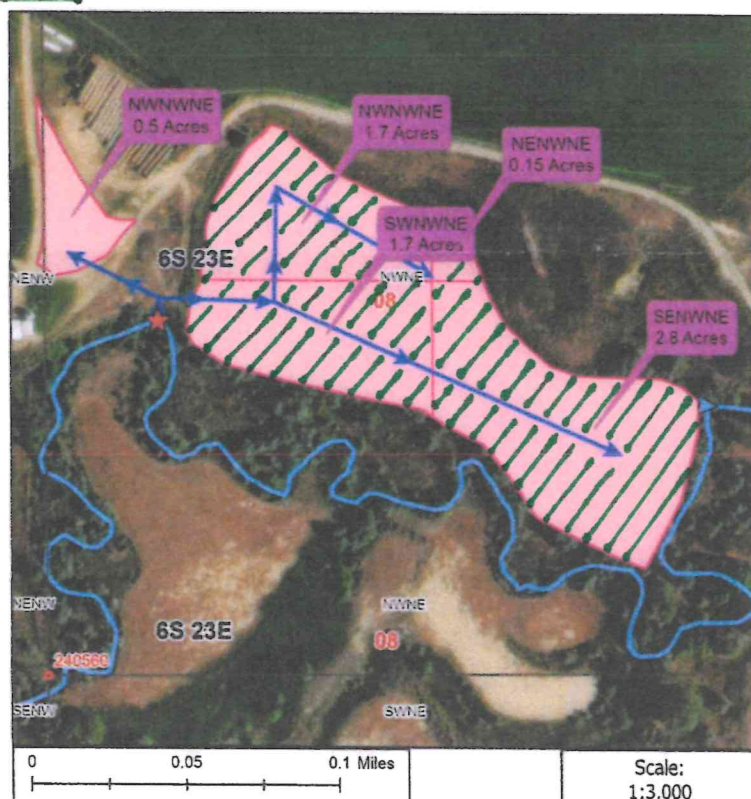
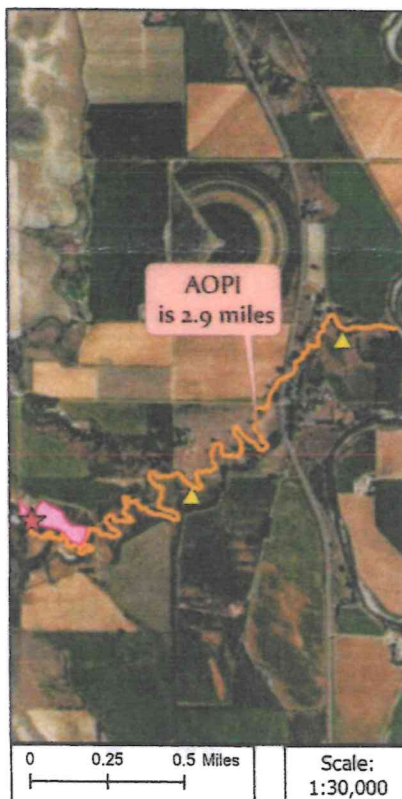


Legend

- ★ Proposed Point of Diversion - Pump Site
- ➡ Proposed Pipeline System
- Proposed Place of Use
- ➡ Sand Creek
- AOPi
- ▲ Water Rights in AOPi



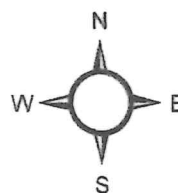
Overlapping Water Rights



Elements depicted on this map are for illustrative purposes and have not been surveyed by the Department.



Map Created: 3/26/2026
Author: Cassey Strebeck,
Water Resource Specialist



State Boundary: US Bureau of Land Management, Geographic Coordinate Database, US Geological Survey 1:24,000 Digital Raster Graphics, Montana State Library
MSDI PLSS:
World Imagery: Vantor
World Imagery: Earthstar Geographics

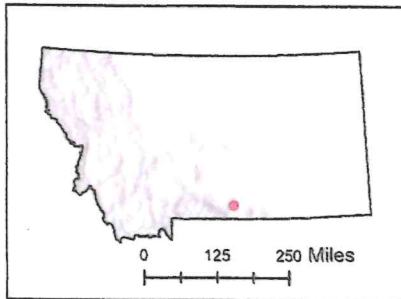
QUESTION 32.

ATTACHMENTS

NOTE: The attached diagrams/maps indicate the infrastructure layout of the proposed project under Application No. 43D 30171861. Operation of the system involves diversion of water from Sand Creek at the proposed point of diversion (POD) utilizing a stationary pump unit with suction apparatus. Conveyance of the diverted water is via a main pipeline to an auxiliary pipeline system, providing water distribution throughout the 6.85-acre place of use (POU) by a Big Gun Irrigation sprinkler system.

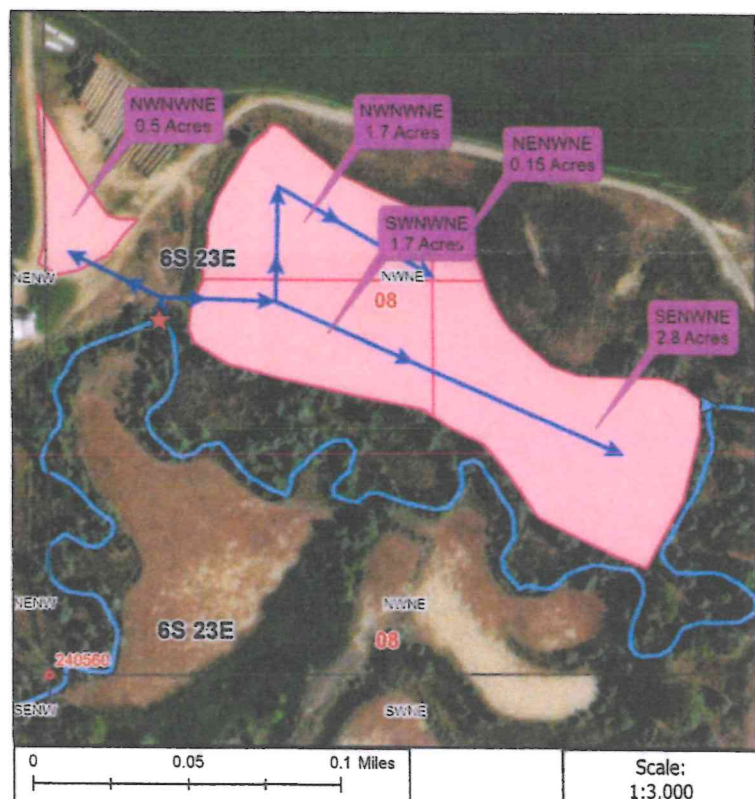
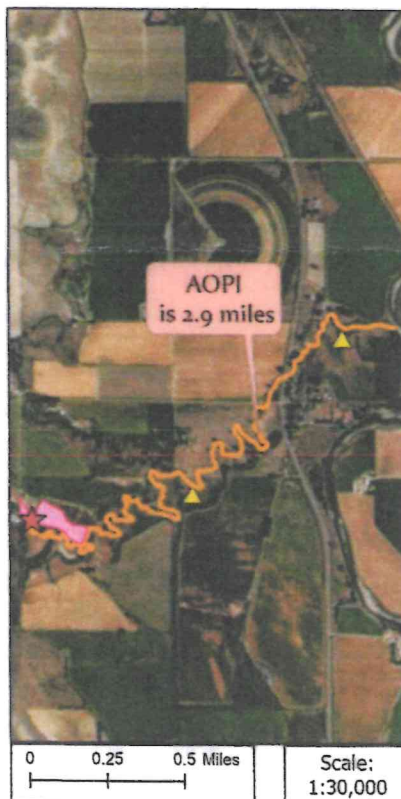


43D 30171861 - R Bar N Ranch, LLC - Proposed



Legend

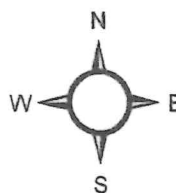
- ★ Proposed Point of Diversion - Pump Site
- ➡ Proposed Pipeline System
- Proposed Place of Use
- ➡ Sand Creek
- AOPI
- ▲ Water Rights in AOPI



Elements depicted on this map are for illustrative purposes and have not been surveyed by the Department.



Map Created: 3/26/2026
Author: Cassey Strebeck,
Water Resource Specialist



State Boundary: US Bureau of Land Management, Geographic Coordinate Database, US Geological Survey 1:24,000 Digital Raster Graphics, Montana State Library
MSDI PLSS:
World Imagery: Vantor
World Imagery: Earthstar Geographics

QUESTION 33.

ATTACHMENTS

Company: Agri Industries

Name:

Date: 10/10/2025



Pump:

Size: 3RB

Type: Clear Liquids

Synch speed: 1800 rpm

Curve: 3RB18

Specific Speeds:

Dimensions:

Speed: 1775 rpm

Dia: 11.5 in

Impeller:

Ns: 918

Nss: ---

Suction: 5 in

Discharge: 3 in

Search Criteria:

Flow: 425 US gpm

Head: 132 ft

Fluid:

Water

Density: 62.32 lb/ft³

Viscosity: 0.9946 cP

NPSHa: ---

Temperature: 68 °F

Vapor pressure: 0.3391 psi a

Atm pressure: 14.7 psi a

Motor:

Standard: NEMA

Enclosure: TEFC

Size: 25 hp

Speed: 1800

Frame: 284T

Sizing criteria: Max Power on Design Curve

Pump Limits:

Temperature: 250 °F

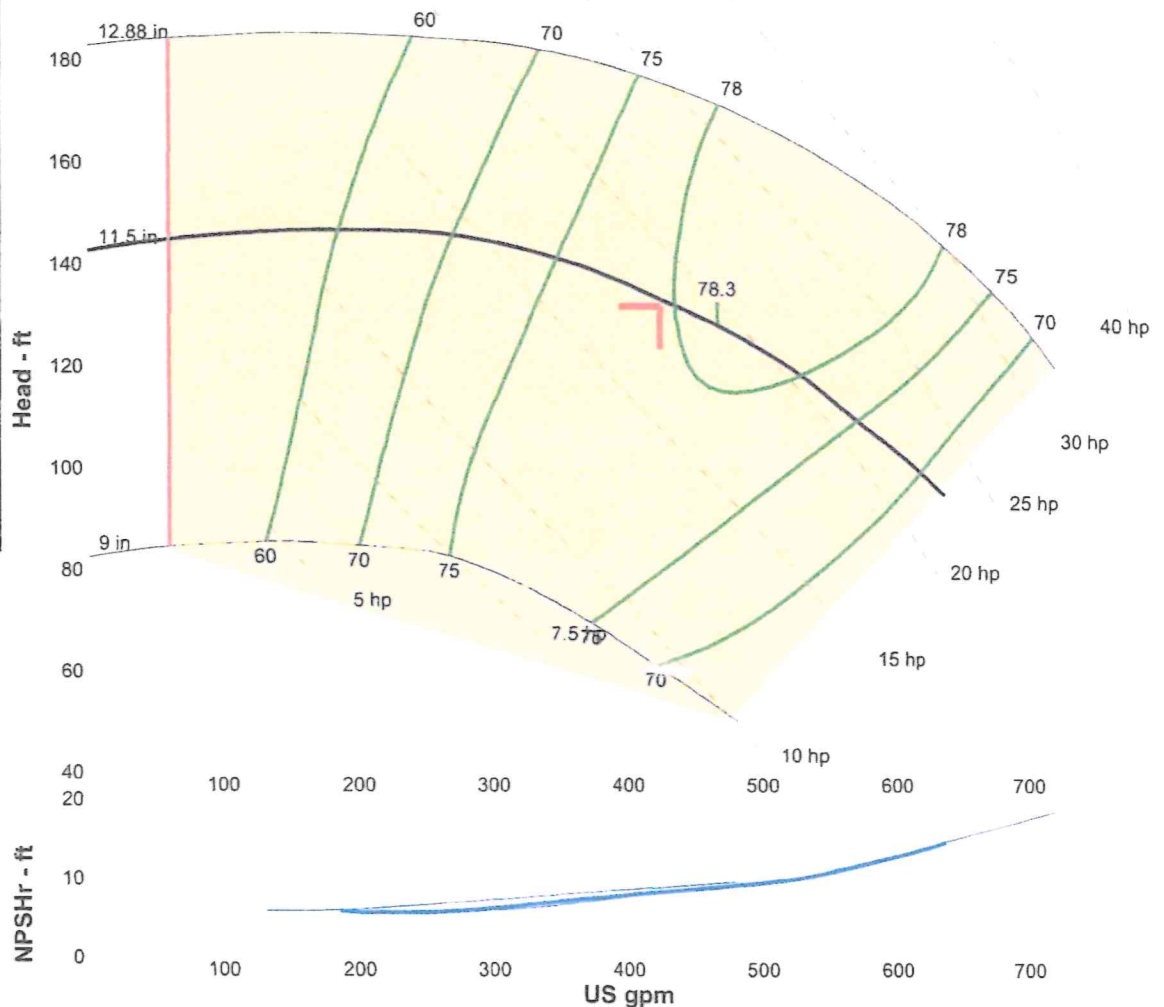
Pressure: 175 psi g

Sphere size: 0.5 in

Power: ---

Eye area: ---

--- Data Point ---	
Flow:	425 US gpm
Head:	133 ft
Eff:	78%
Power:	18.4 hp
NPSHr:	8.45 ft
--- Design Curve ---	
Shutoff head:	143 ft
Shutoff dP:	61.8 psi
Min flow:	60 US gpm
BEP:	78% @ 468 US gpm
NOL power:	22.8 hp @ 638 US gpm
--- Max Curve ---	
Max power:	32.9 hp @ 720 US gpm



Performance Evaluation:

Flow US gpm	Speed rpm	Head ft	Efficiency %	Power hp	NPSHr ft
510	1775	121	78	20	9.92
425	1775	133	78	18.4	8.45
340	1775	142	75	16.3	7.1
255	1775	146	68	13.7	6
170	1775	147	58	11	6

Technical Analyses Report/ Scientific Credibility Review

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

Technical Analyses
Report /
Scientific Credibility
Review

THE MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

GOVERNOR GREG GIANFORTE



DNRC DIRECTOR AMANDA KASTER

DNRC Water Resources
Billings Regional Office
1371 Rintop Dr.
Billings, MT 59105-1978

March 30, 2026

R Bar N Ranch, LLC
89 Sand Creek Rd
Bridger, MT 59014

Subject: Completed Technical Analysis for Beneficial Water Use Permit Preapplication No. 43D 30171861

Dear Applicant,

As designated on the submitted Preapplication Meeting Form per §85-2-302(3)(b), MCA, the Department of Natural Resources and Conservation (DNRC or Department) has completed the technical analyses for Beneficial Water Use Permit Preapplication No. 43D 30171861 based on the information provided in your Preapplication Meeting Form accepted by the Department on February 17, 2026. The technical analyses can be found in the attached report.

This Technical Analyses Report **IS**: A collection of facts that the DNRC has gathered, including content provided in the Preapplication Meeting Form materials. The Department will use these data to analyze the criteria in §85-2-311, MCA if you submit an application for the project described in the completed Preapplication Meeting Form.

This Technical Analyses Report **IS NOT**: An analysis or discussion of whether the Preapplication Meeting Form as filed meets the criteria (§85-2-311, MCA).

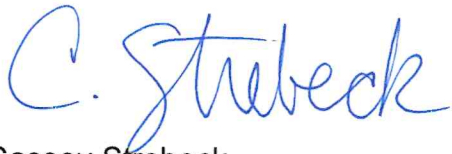
You have 180 days to submit the Beneficial Water Use Permit Application Form 600 considering the information provided in the technical analyses and Preapplication Meeting Form. If the Application Form is not submitted to the Billings Regional Office by **September 26, 2026**, a new preapplication meeting will be required to process the Application with expedited timelines (ARM 36.12.1302(6)(b)). If any details described in the submitted Application are changed from that of the submitted Preapplication Meeting Form, the discounted filing fee and expedited timelines will not apply (ARM 36.12.1302(6)(a)). Please note that the technical analyses will expire one year from the date of this letter (ARM 36.12.1302(8)).



DNRC.MT.GOV

Please let me know if you have any questions.

Sincerely,



Cassey Strebeck
Water Resource Specialist
Billings Regional Office, Montana DNRC
Cassey.Strebeck@mt.gov
406-247-4422

CC:
Scott M. & Pamela K. Griswold
33 Sand Creek Road
Bridger, MT, 59014



Surface Water Permit Technical Analyses Report

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

Cassey Strebeck, Water Resource Specialist, Billings Regional Office

Applicant	R Bar N Ranch, LLC
Application No.	43D 30171861
Proposed Point of Diversion	SWNWNE of Sec. 8, T6S, R23E, Carbon County

Overview

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

For the purposes of this document, AC means acres; AF means acre-feet; AF/YR means acre-feet per year; AU means animal unit; CFS means cubic feet per second; Co. means Company; GPM means gallons per minute; POD means point of diversion; POU means place of use; Sec. means Section; mi² means square miles, T means Township; and R means Range.

This Surface Water Permit Technical Analyses Report contains the following sections:

Overview.....	1
1.0 Application Details	2
2.0 Surface Water Analysis.....	4
2.1 Source Description	4
2.2 Method of Estimation.....	4
2.3 Monthly Flow Rate and Volume	5
3.0 Area of Potential Impact Analysis	5
Review.....	7
References	7



1.0 Application Details

The Applicant proposes to divert up to 17.09 AF of water from May 1 to September 30, at a rate of 1.0 CFS, from Sand Creek, by means of a pump located on Sand Creek in the SWNWNE of Sec. 8, T6S, R23E, Carbon County. The Applicant proposes to use water between May 1 and September 30 for the irrigation of 6.85 AC in the NWNE of Sec. 8, T6S, R23E, Carbon County, consisting of 2.2 AC in the NWNWNE, 0.15 AC in the NENWNE, 1.7 AC in the SWNWNE, and 2.8 AC in the SENWNE.

This application for appropriation on Sand Creek has become necessary as the Applicant's Sand Creek Canal Co. ditch shares (Statement of Claim 43D 199996-00) are not always available. When the shares are available, they are used from April 1 to October 15. The Applicant will continue to use the ditch shares when available and utilize this Provisional Permit, if authorized, when shares are not available. If authorized, this water right will have 6.35 AC that overlap with the acreage irrigated under the ditch shares. The overlapped acreage uses 15.88 AF in water.

Table 1. Summary of the proposed use.

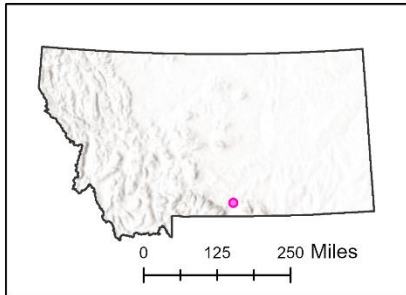
Source	Flow Rate	Total Acres	Diverted Volume	Purpose	Period of Use	Place of Use	Point of Diversion	Period of Diversion
Sand Creek	1.0 CFS	6.85	17.09 AF	Irrigation	05/01-09/30	Table 2	SWNWNE of Sec. 8, T6S, R23E, Carbon County	05/01-09/30

Table 2. Proposed place of use.

POU	Legal Land Description	Acres
1	NWNWNE Sec. 8, T6S, R23, Carbon County	2.2
2	NENWNE Sec. 8, T6S, R23, Carbon County	0.15
3	SWNWNE Sec. 8, T6S, R23, Carbon County	1.7
4	SEWNNE Sec. 8, T6S, R23, Carbon County	2.8

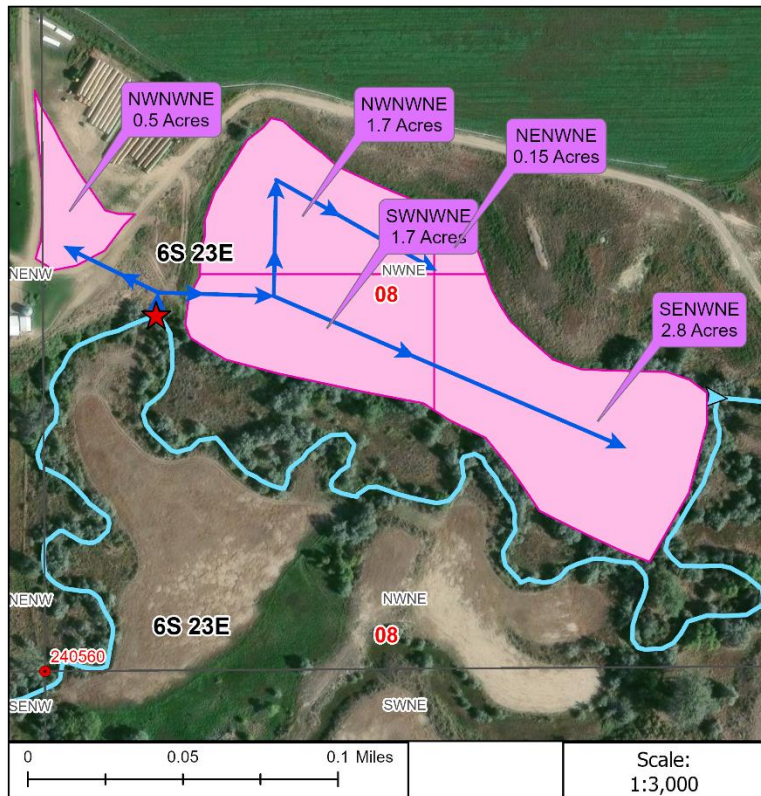


43D 30171861 - R Bar N Ranch, LLC - Proposed



Legend

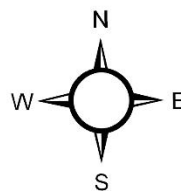
- ★ Proposed Point of Diversion - Pump Site
- ➡ Proposed Pipeline System
- Proposed Place of Use
- ➡ Sand Creek
- AOPT
- ▲ Water Rights in AOPT



Elements depicted on this map are for illustrative purposes and have not been surveyed by the Department.



Map Created: 3/26/2026
Author: Cassey Strebeck,
Water Resource Specialist



State Boundary: US Bureau of Land Management, Geographic Coordinate Database, US Geological Survey 1:24,000 Digital Raster Graphics, Montana State Library
MSDI PLSS:
World Imagery: Vantor
World Imagery: Earthstar Geographics

2.0 Surface Water Analysis

2.1 Source Description

Proposed Source of Water: Sand Creek.

Proposed Source Type: Other.

Sand Creek is naturally intermittent. However, Sand Creek below the Sand Creek Canal flume crossing is heavily influenced by anthropogenic activities and does not follow a natural hydrograph. Water in Sand Creek below the canal crossing, during the proposed period of diversion, is largely due to water spilled from the Sand Creek Canal.

Proposed Point of Diversion: SWNWNE Sec. 8, T6S, R23E, Carbon County.

2.2 Method of Estimation

Method of Measurement Used: DNRC collected initial measurements in May using both a FlowTracker 2 velocity meter and the float area method. Measurements collected in June, July, August, and September were collected by the Applicant utilizing the float area method. For consistency, only the data from the float area method measurements were used to evaluate physical availability. This provided more representative measurements since the Applicant's only available method of measurement was the float area method. All measurements were found acceptable by the Department. This data is shown below in Table 3.

Table 3: DNRC and Applicant-Collected Measurements of Sand Creek

Measurement Number:	Date:	Collected By:	Method	Flow Rate (CFS):
1	5/28/2025	DNRC	Velocity Meter	19.39
1	5/28/2025	DNRC	Float Method	21.77
2	06/26/2025	Applicant	Float Method	3.86
3	07/31/2025	Applicant	Float Method	6.02
4	08/19/2025	Applicant	Float Method	5.03
5	09/04/2025	Applicant	Float Method	5.05

Method of Estimation Used: Measurements collected by the DNRC and the Applicant were taken as the physical availability of water from May through September, at the proposed POD. No additional estimation technique is suitable.

Why this method is considered appropriate: Use of DNRC and Applicant collected flow measurements are appropriate because the source does not follow a natural hydrograph and therefore, the estimation techniques available to the Department cannot be applied and would not accurately estimate the physically available flow rate and volume. Per ARM 36.12.1702(4), Applicant-provided measurements will be used.

The contributing drainage basin of Sand Creek above the proposed POD consists of 44.3 mi². There are no stream gages on Sand Creek, and no similar gaged streams due to the heavy influence of anthropogenic activity. Therefore, the paired drainage analysis is not feasible.

There are two irrigation ditches, Sand Creek Extension Ditch and Sand Creek Canal, that cross the Sand Creek drainage basin and supplement natural flow. Sand Creek only flows consistently through the irrigation season due to overflow from the Sand Creek Canal; therefore, Sand Creek does not follow a natural hydrograph.

2.3 Monthly Flow Rate and Volume

Methodology: The monthly flow rate at the proposed POD was taken as the monthly measurements, utilizing the float area method, only, supplied by DNRC and the Applicant. Monthly volume was calculated as the flow rate times 1.98 times the number of days in the month [CFS x 1.98 (AF/day/1 CFS) x days per month = AF/month]. All values were rounded to the hundredths place after conversion (Table 4).

Table 4: Measured Monthly Flow Rate and Calculated Volume

Month	Mean Monthly Flow Rate (CFS)	Mean Monthly Volume (AF)
May	21.77	1,336.24
June	3.86	229.28
July	6.02	369.51
August	5.03	308.74
September	5.05	299.97

3.0 Area of Potential Impact Analysis

The Area of Potential Impact (AOPI) for this application is: approximately 2.9 river miles extending from the proposed POD located in the SWNWNE Sec. 8, T6S, R23E, Carbon County, downstream to the confluence of Sand Creek and the Clarks Fork Yellowstone River located in Lot 9 (NENWSE) Sec. 4, T6S, R23E, Carbon County. There are two (2) active water rights on Sand Creek within the AOPI, shown in Table 5.

Table 5: Water Rights in the AOPI

Water Right Number	Water Right Type	Owners	Purposes	Flow Rate (CFS)	Acres	AU	Volume (AF)	Period of Diversion	Period of Use
43D 43402-00	Statement of Claim	Robin A Schalla, Tammy S Schalla	Irrigation	1	40	N/A	122.8	04/15 to 10/01	04/15 to 10/01
43D 30134926	Statement of Claim	Heidema Ranch LP	Stock	0.033*	N/A	700	23.8	01/01 to 12/31	01/01 to 12/31
Stock Direct Standard		-	-	0.078	-	-	-	-	-

*Calculated by DNRC using standard practice



Why this is an appropriate Area of Potential Impact: This is an appropriate AOPi because it includes the remaining 2.9 river miles of Sand Creek from the proposed POD to the confluence with the Clarks Fork Yellowstone River. The AOPi adds 0.90mi² (45.2mi² - 44.3mi²) to the drainage area. The confluence with the Clarks Fork Yellowstone River is a significant hydrological boundary.

Methodology: The Department determined the AOPi and quantified the surface water rights using the following methods:

1. The AOPi was assessed moving downstream from the proposed POD to the first major perennial stream.
 - a. The drainage basin above the proposed POD on Sand Creek encompasses 44.3mi². The first confluence on Sand Creek is with the Clarks Fork Yellowstone River. The Clarks Fork Yellowstone River is a major perennial stream and a substantial hydrologic boundary. This reach encompasses 2.9 river miles of Sand Creek from the proposed POD to the confluence with the Clarks Fork Yellowstone River. This confluence encompasses a drainage basin of 45.2mi² and is an appropriate location to end the AOPi.
2. Water rights without quantifications were quantified using further analysis:
 - a. There is one (1) stock direct from source water right within the AOPi, without a flow rate or volume: Statement of Claim 43D 30134926.
 - i. The adjudication standard of 30 gallons per day per animal unit was used for stock claim volumes (0.034 AF/YR).
 - ii. The flow rate in GPM was back-calculated using the following equation: volume in AF x 325,851 gallons / 365 days / 1,440 minutes per day = GPM.
 - iii. The flow rate in GPM was converted to the flow rate in CFS using the following equation: GPM / 448.8 GPM/CFS = CFS.
 - iv. As per the standard practice for calculating stock direct from source, 35 GPM (0.078 CFS) was added to the flow rate.
 - b. There is one (1) irrigation claim that had acreage, a flow rate, and is located in climatic area 1, without a quantified volume: Statement of Claim 43D 43402-00.
 - i. The volume was calculated by taking the lower end of 60% efficiency for climatic area 1 (3.07 AF/AC from the range: 3.07-3.55 AF/AC; ARM 36.12.115), multiplied by the acres claimed. Thus, the volume for irrigation claim was calculated using the following equation: Acres x 3.07 AF/AC = AF.

Review

This document has been reviewed by the Department on March 30, 2026.

References

Department Standard Practice for Determining Physical Availability of Surface Water
Department Standard Practice for Area of Potential Impact Analysis
USGS StreamStats for Montana website at <https://streamstats.usgs.gov/ss/>
USGS (2015) StreamStats, Chapter G, p. 13, for Montana
DNRC Water Calculation Guide
Technical Memorandum: Physical Availability of Surface Water Without Gage Data
DNRC Change Manual, February 2025
DNRC Permit Manual, February 2025

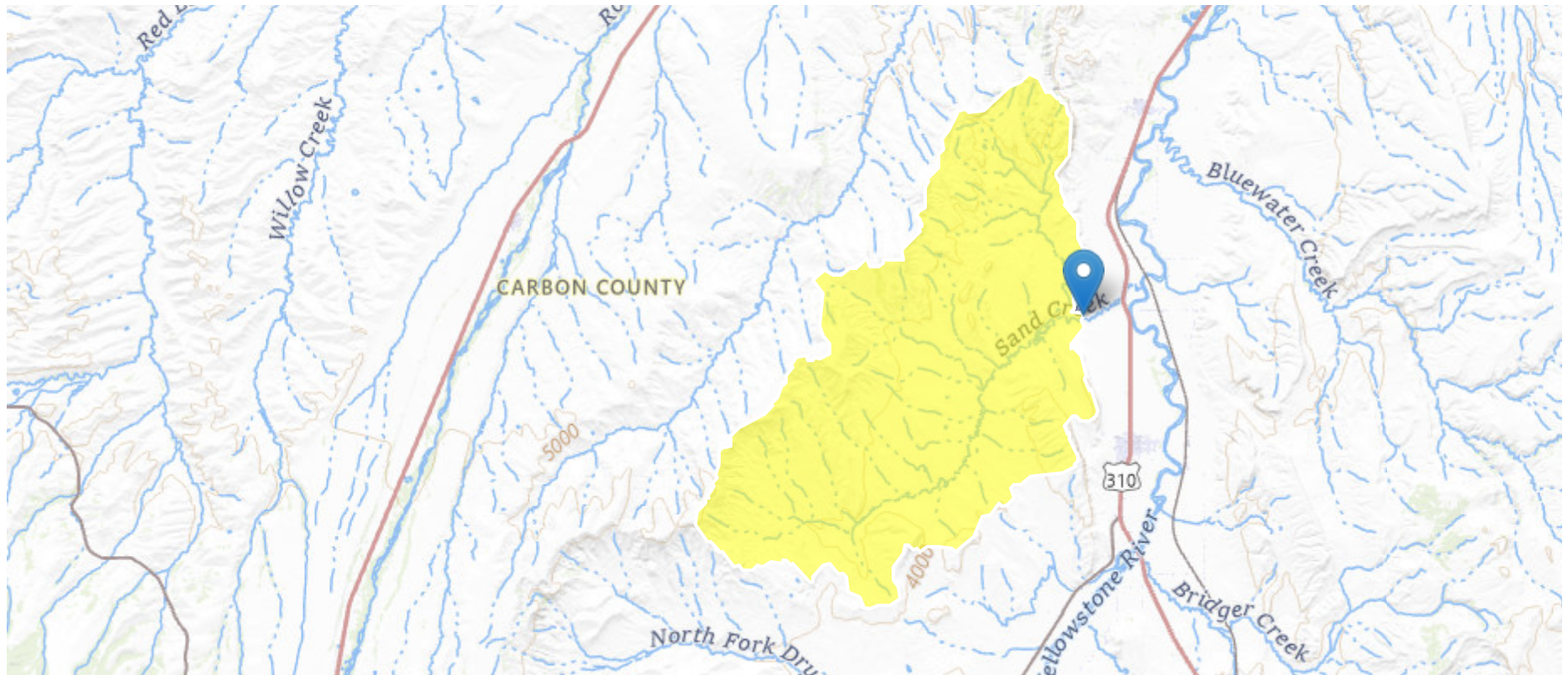
R Bar N - Proposed POD - StreamStats Report

Region ID: MT

Clicked Point (Latitude, Longitude): 45.33169, -108.93383

NHD Stream GNIS Name of Click Point: Sand Creek

Time: 2026-02-09 09:57:02 -0700



StreamStats Update

Starting with version 4.30.0, the StreamStats application uses services that were redeveloped with open-source software components. Users may observe minor variations in computed results when compared to those from previous versions. These differences are expected and do not reflect

errors in the underlying data or analytical methods. Users are advised to consider these potential variations when interpreting or comparing results generated across different versions of StreamStats. Please email streamstats@usgs.gov with any questions or concerns. A full list of changes can be found at <https://www.usgs.gov/streamstats/news/streamstats-data-updates-open-source-code-release> (<https://www.usgs.gov/streamstats/news/streamstats-data-updates-open-source-code-release>) .

 Collapse All

➤ Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
CHANWD_RS	Channel width determined from remotely sensed data sources, including aerial imagery	0	feet
CONTDA	Area that contributes flow to a point on a stream	44.3	square miles
DRNAREA	Area that drains to a point on a stream	44.3	square miles
EL6000	Percent of area above 6000 ft	0	percent
IRRIGAT_MT	Percent of basin that is irrigated based on Montana Final Land Unit (FLU) classification	1	percent
PRECIP	Mean Annual Precipitation	13.811	inches
WACTCH	Width of active channel	0	feet
WBANKFULL	Width of channel at bankfull	0	feet

➤ Monthly Flow Statistics

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

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
CONTDA	Contributing Drainage Area	44.3	square miles	28.1	2620
PRECIP	Mean Annual Precipitation	13.811	inches	16.4	38.9

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

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
CONTDA	Contributing Drainage Area	44.3	square miles	28.1	2620
PRECIP	Mean Annual Precipitation	13.811	inches	16.4	38.9

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

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
CONTDA	Contributing Drainage Area	44.3	square miles	28.1	2620
PRECIP	Mean Annual Precipitation	13.811	inches	16.4	38.9

Monthly Flow Statistics Disclaimers [UpYellow CentMt Region Season3 MeanDur 2015 5019G]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

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

Statistic	Value	Unit
November Mean Flow	1.89	ft ³ /s

Statistic	Value	Unit
December Mean Flow	1.52	ft ³ /s
January Mean Flow	1.83	ft ³ /s
February Mean Flow	3.19	ft ³ /s

Monthly Flow Statistics Disclaimers [UpYellow CentMt Region Season1 MeanDur 2015 5019G]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

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

Statistic	Value	Unit
March Mean Flow	6.5	ft ³ /s
April Mean Flow	7.2	ft ³ /s
May Mean Flow	5.96	ft ³ /s
June Mean Flow	3.98	ft ³ /s

Monthly Flow Statistics Disclaimers [UpYellow CentMt Region Season2 MeanDur 2015 5019G]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

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

Statistic	Value	Unit
July Mean Flow	1.16	ft ³ /s
August Mean Flow	0.819	ft ³ /s
September Mean Flow	1.06	ft ³ /s

Statistic	Value	Unit
October Mean Flow	1.79	ft ³ /s

Monthly Flow Statistics Flow Report [Area-Averaged]

Statistic	Value	Unit
November Mean Flow	1.89	ft ³ /s
December Mean Flow	1.52	ft ³ /s
January Mean Flow	1.83	ft ³ /s
February Mean Flow	3.19	ft ³ /s
March Mean Flow	6.5	ft ³ /s
April Mean Flow	7.2	ft ³ /s
May Mean Flow	5.96	ft ³ /s
June Mean Flow	3.98	ft ³ /s
July Mean Flow	1.16	ft ³ /s
August Mean Flow	0.819	ft ³ /s
September Mean Flow	1.06	ft ³ /s
October Mean Flow	1.79	ft ³ /s

Monthly Flow Statistics Citations

McCarthy, P.M., Sando, Roy, Sando, S.K., and Dutton, D.M.,2016, Methods for estimating streamflow characteristics at ungaged sites in western Montana based on data through water year 2009: U.S. Geological Survey Scientific Investigations Report 2015–5019–G, 19 p. (<https://doi.org/10.3133/sir20155019>)

➤ Peak-Flow Statistics

Peak-Flow Statistics Parameters [UpYellow CentMount Region BasinC 2015 5019F]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
CONTDATA	Contributing Drainage Area	44.3	square miles	0.39	2040
EL6000	Percent above 6000 ft	0	percent	0	100

Peak-Flow Statistics Parameters [UpYllw CentMount Region Act Channel SIR 2020 5142]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
WACTCH	Width Of Active Channel	0	feet	1	150

Peak-Flow Statistics Parameters [UpYllw CentMount Region Bankfull SIR 2020 5142]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
WBANKFULL	Width Of Bankfull Channel	0	feet	2.5	170

Peak-Flow Statistics Parameters [UpYllw CentMount Region Aerial Photo SIR 2020 5142]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
CHANWD_RS	Channel_Width_remotely_sensed	0	feet	2.3	191.9

Peak-Flow Statistics Flow Report [UpYellow CentMount Region BasinC 2015 5019F]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	PIL	PIU	ASEp
66.7-percent AEP flood	62.8	ft^3/s	12.9	305	119

Statistic	Value	Unit	PIL	PIU	ASEp
50-percent AEP flood	98.9	ft^3/s	22.3	438	111
42.9-percent AEP flood	129	ft^3/s	31.5	528	103
20-percent AEP flood	354	ft^3/s	108	1160	82.4
10-percent AEP flood	682	ft^3/s	233	2000	73
4-percent AEP flood	1300	ft^3/s	469	3610	68.4
2-percent AEP flood	1920	ft^3/s	702	5250	67.7
1-percent AEP flood	2630	ft^3/s	947	7310	69
0.5-percent AEP flood	3490	ft^3/s	1220	9990	71.6
0.2-percent AEP flood	4830	ft^3/s	1590	14600	77

Peak-Flow Statistics Disclaimers [UpYllw CentMount Region Act Channel SIR 2020 5142]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Peak-Flow Statistics Flow Report [UpYllw CentMount Region Act Channel SIR 2020 5142]

Statistic	Value	Unit
Active chan width 66.7 percent AEP flood	0	ft^3/s
Active Channel Width 50-percent AEP flood	0	ft^3/s
Active chan width 42.9 percent AEP flood	0	ft^3/s
Active Channel Width 20-percent AEP flood	0	ft^3/s
Active Channel Width 10-percent AEP flood	0	ft^3/s
Active Channel Width 4-percent AEP flood	0	ft^3/s
Active Channel Width 2-percent AEP flood	0	ft^3/s
Active Channel Width 1-percent AEP flood	0	ft^3/s

Statistic	Value	Unit
Active Channel Width 0.5-percent AEP flood	0	ft^3/s
Active Channel Width 0.2-percent AEP flood	0	ft^3/s

Peak-Flow Statistics Disclaimers [UpYllw CentMount Region Bankfull SIR 2020 5142]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Peak-Flow Statistics Flow Report [UpYllw CentMount Region Bankfull SIR 2020 5142]

Statistic	Value	Unit
Bankfull width 66.7 percent AEP flood	0	ft^3/s
Bankfull Width 50-percent AEP flood	0	ft^3/s
Bankfull width 42.9 percent AEP flood	0	ft^3/s
Bankfull Width 20-percent AEP flood	0	ft^3/s
Bankfull Width 10-percent AEP flood	0	ft^3/s
Bankfull Width 4-percent AEP flood	0	ft^3/s
Bankfull Width 2-percent AEP flood	0	ft^3/s
Bankfull Width 1-percent AEP flood	0	ft^3/s
Bankfull Width 0.5-percent AEP flood	0	ft^3/s
Bankfull Width 0.2-percent AEP flood	0	ft^3/s

Peak-Flow Statistics Disclaimers [UpYllw CentMount Region Aerial Photo SIR 2020 5142]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Peak-Flow Statistics Flow Report [UpYllw CentMount Region Aerial Photo SIR 2020 5142]

Statistic	Value	Unit
Rem sens chan width 66.7 percent AEP fld	0	ft^3/s
Rem_sens_chan_width_50_percent_AEP_flood	0	ft^3/s
Rem sens chan width 42.9 percent AEP fld	0	ft^3/s
Rem_sens_chan_width_20_percent_AEP_flood	0	ft^3/s
Rem_sens_chan_width_10_percent_AEP_flood	0	ft^3/s
Rem_sens_chan_width_4_percent_AEP_flood	0	ft^3/s
Rem_sens_chan_width_2_percent_AEP_flood	0	ft^3/s
Rem_sens_chan_width_1_percent_AEP_flood	0	ft^3/s
Rem_sens_chan_width_0_5_pct_AEP_flood	0	ft^3/s
Rem_sens_chan_width_0_2_pct_AEP_flood	0	ft^3/s

Peak-Flow Statistics Flow Report [Area-Averaged]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	PIL	PIU	ASEp
66.7-percent AEP flood	62.8	ft^3/s	12.9	305	119
50-percent AEP flood	98.9	ft^3/s	22.3	438	111
42.9-percent AEP flood	129	ft^3/s	31.5	528	103
20-percent AEP flood	354	ft^3/s	108	1160	82.4
10-percent AEP flood	682	ft^3/s	233	2000	73
4-percent AEP flood	1300	ft^3/s	469	3610	68.4
2-percent AEP flood	1920	ft^3/s	702	5250	67.7

Statistic	Value	Unit	PIL	PIU	ASEp
1-percent AEP flood	2630	ft^3/s	947	7310	69
0.5-percent AEP flood	3490	ft^3/s	1220	9990	71.6
0.2-percent AEP flood	4830	ft^3/s	1590	14600	77
Active chan width 66.7 percent AEP flood	0	ft^3/s			
Active Channel Width 50-percent AEP flood	0	ft^3/s			
Active chan width 42.9 percent AEP flood	0	ft^3/s			
Active Channel Width 20-percent AEP flood	0	ft^3/s			
Active Channel Width 10-percent AEP flood	0	ft^3/s			
Active Channel Width 4-percent AEP flood	0	ft^3/s			
Active Channel Width 2-percent AEP flood	0	ft^3/s			
Active Channel Width 1-percent AEP flood	0	ft^3/s			
Active Channel Width 0.5-percent AEP flood	0	ft^3/s			
Active Channel Width 0.2-percent AEP flood	0	ft^3/s			
Bankfull width 66.7 percent AEP flood	0	ft^3/s			
Bankfull Width 50-percent AEP flood	0	ft^3/s			
Bankfull width 42.9 percent AEP flood	0	ft^3/s			
Bankfull Width 20-percent AEP flood	0	ft^3/s			
Bankfull Width 10-percent AEP flood	0	ft^3/s			
Bankfull Width 4-percent AEP flood	0	ft^3/s			
Bankfull Width 2-percent AEP flood	0	ft^3/s			
Bankfull Width 1-percent AEP flood	0	ft^3/s			
Bankfull Width 0.5-percent AEP flood	0	ft^3/s			

Statistic	Value	Unit	PIL	PIU	ASEp
Bankfull Width 0.2-percent AEP flood	0	ft^3/s			
Rem sens chan width 66.7 percent AEP fld	0	ft^3/s			
Rem_sens_chan_width_50_percent_AEP_flood	0	ft^3/s			
Rem sens chan width 42.9 percent AEP fld	0	ft^3/s			
Rem_sens_chan_width_20_percent_AEP_flood	0	ft^3/s			
Rem_sens_chan_width_10_percent_AEP_flood	0	ft^3/s			
Rem_sens_chan_width_4_percent_AEP_flood	0	ft^3/s			
Rem_sens_chan_width_2_percent_AEP_flood	0	ft^3/s			
Rem_sens_chan_width_1_percent_AEP_flood	0	ft^3/s			
Rem_sens_chan_width_0_5_pct_AEP_flood	0	ft^3/s			
Rem_sens_chan_width_0_2_pct_AEP_flood	0	ft^3/s			

Peak-Flow Statistics Citations

Sando, Roy, Sando, S.K., McCarthy, P.M., and Dutton, D.M.,2016, Methods for estimating peak-flow frequencies at ungaged sites in Montana based on data through water year 2011: U.S. Geological Survey Scientific Investigations Report 2015–5019–F, 30 p. (<https://doi.org/10.3133/sir20155019>)

Chase, K.J., Sando, R., Armstrong, D.W., and McCarthy, P., 2021, Regional regression equations based on channel-width characteristics to estimate peak-flow frequencies at ungaged sites in Montana using peak-flow frequency data through water year 2011 (ver. 1.1, September 2021): U.S. Geological Survey Scientific Investigations Report 2020–5142, 49 p. (<https://doi.org/10.3133/sir20205142>)

➤ Low-Flow Statistics

Low-Flow Statistics Parameters [UpYellow CentMt Region LowFlow GLS 2015 5019G]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
CONTD	Contributing Drainage Area	44.3	square miles	28.1	2620
PRECIP	Mean Annual Precipitation	13.811	inches	16.4	38.9

Low-Flow Statistics Disclaimers [UpYellow CentMt Region LowFlow GLS 2015 5019G]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Low-Flow Statistics Flow Report [UpYellow CentMt Region LowFlow GLS 2015 5019G]

Statistic	Value	Unit
7 Day 10 Year Low Flow	0.0538	ft ³ /s

Low-Flow Statistics Citations

McCarthy, P.M., Sando, Roy, Sando, S.K., and Dutton, D.M.,2016, Methods for estimating streamflow characteristics at ungaged sites in western Montana based on data through water year 2009: U.S. Geological Survey Scientific Investigations Report 2015–5019–G, 19 p. (<https://doi.org/10.3133/sir20155019>)

➤ Maximum Probable Flood Statistics

Maximum Probable Flood Statistics Parameters [36.0 Percent (15.9 square miles) Crippen Bue Region 11]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	44.3	square miles	0.1	10000

Maximum Probable Flood Statistics Parameters [64.0 Percent (28.4 square miles) Crippen Bue Region 13]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	44.3	square miles	0.1	10000

Maximum Probable Flood Statistics Flow Report [36.0 Percent (15.9 square miles) Crippen Bue Region 11]

Statistic	Value	Unit
Maximum Flood Crippen Bue Regional	48100	ft ³ /s

Maximum Probable Flood Statistics Flow Report [64.0 Percent (28.4 square miles) Crippen Bue Region 13]

Statistic	Value	Unit
Maximum Flood Crippen Bue Regional	66000	ft ³ /s

Maximum Probable Flood Statistics Flow Report [Area-Averaged]

Statistic	Value	Unit
Maximum Flood Crippen Bue Regional	59600	ft ³ /s

Maximum Probable Flood Statistics Citations

➤ NHD Features of Delineated Basin

NHD Streams Intersecting Basin Delineation Boundary

This functionality attempts to find the stream name at the delineation point. The name of the nearest intersecting National Hydrography Dataset (NHD) stream is selected by default to appear in the report above. NHD streams do not correspond to the StreamStats stream grid and may not be accurate. If you would like a different stream to appear in the above section, please make a selection below.

GNIS ID	GNIS Name	Distance from Clicked Point (ft)	Feature Type	Selected Stream Name
00776174	Sand Creek	1.36	Intermittent	☒ Sand Creek
00776192	Sand Creek Canal	1,740.63	Canal Ditch	☐ Sand Creek Canal
00776193	Sand Creek Extension Ditch	3,125.96	Canal Ditch	☐ Sand Creek Extension Ditch

Watershed Boundary Dataset (WBD) HUC 8 Intersecting Basin Delineation Boundary

This functionality attempts to find the intersecting HUC 8 of the delineated watershed. HUC boundaries do not correspond to the StreamStats data and may not be accurate.

HUC 8	Name
10070006	Clarks Fork Yellowstone

NHD Hydrologic Features Citations

U.S. Geological Survey, 2022, USGS TNM - National Hydrography Dataset, accessed July 21, 2022 at URL <https://hydro.nationalmap.gov/arcgis/rest/services/nhd/MapServer/6>.

(<https://hydro.nationalmap.gov/arcgis/rest/services/nhd/MapServer/6>) U.S. Geological Survey, 2022, USGS TNM - National Hydrography Dataset, accessed July 21, 2022 at URL <https://hydro.nationalmap.gov/arcgis/rest/services/wbd/MapServer/4>. (<https://hydro.nationalmap.gov/arcgis/rest/services/wbd/MapServer/4>)

➤ Channel-width Methods Weighting

No method weighting results returned.

USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and completeness and approved for release by the U.S. Geological Survey (USGS), no warranty expressed or implied is made regarding the display or utility of the data for other purposes, nor on all computer systems, nor shall the act of distribution constitute any such warranty.

USGS Software Disclaimer: This software has been approved for release by the U.S. Geological Survey (USGS). Although the software has been subjected to rigorous review, the USGS reserves the right to update the software as needed pursuant to further analysis and review. No warranty, expressed or implied, is made by the USGS or the U.S. Government as to the functionality of the software and related material nor shall the fact of release constitute any such warranty. Furthermore, the software is released on condition that neither the USGS nor the U.S. Government shall be held liable for any damages resulting from its authorized or unauthorized use.

USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Application Version: 4.31.0

SSHydro Services Version: 1.1.0

SSDelineate Services Version: 1.0.1

NSS Services Version: 2.2.1

GageStats Services Version: 1.2.1

Pourpoint Services Version: 1.2.0

Batch Processor Version: 1.6.1

Preapplication Materials

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

Preapplication Materials

THE MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

GOVERNOR GREG GIANFORTE



DNRC DIRECTOR AMANDA KASTER

DNRC Water Resources
Billings Regional Office
1371 Rimtop Dr.
Billings, MT 59105-1978

February 17, 2026

R Bar N Ranch, L.L.C.
89 Sand Creek Rd
Bridger, MT 59014

Subject: Complete Preapplication Meeting Form (Form 600P-B) for Beneficial Water Use Permit
Application No. 43D 30171861

Dear Applicant,

The Billings Regional Office of the Department of Natural Resources and Conservation (DNRC or Department) received your Preapplication Meeting Form and preapplication meeting fee on February 9, 2026, and the Department deemed the submitted Preapplication Meeting Form to be successfully completed per ARM 36.12.1302 on February 17, 2026.

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 February 17, 2026.

Please let me know if you have any questions.

Sincerely,

A handwritten signature in blue ink that reads "C. Strebeck". The signature is fluid and cursive.

Cassey Strebeck
Water Resource Specialist
Billings Regional Office, Montana DNRC
Cassey.Strebeck@mt.gov
406-247-4422



DNRC.MT.GOV



**PREAPPLICATION MEETING
FORM: PART B
PERMIT**
§ 85-2-302, MCA
Form No. 600P-B (Revised 02/2025)

For Department Use Only

Application # 43030171861 Basin 43D
Form Received CS2
Fee Rec'd \$ 500.00 Check # 008822
Deposit Receipt # BLS2618227
Payor R Bay N Ranch LLC
Form Returned _____
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)).

RECEIVED

FEB 09 2026

DNRC-WRD-BILLINGS

The Applicant is responsible for providing a "Follow-up Responses" document for all follow-up identified in Preapplication Meeting Form Part A (Form 600P-A). The Applicant may not alter Form 600P-A. 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.

The following guidelines are applicable to both the "Follow-up Responses" and "Amended Responses" documents. Clearly label all question numbers. Answer questions in the same format as Form 600P-A. 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 included with the document.

1. ☒ Y ☐ N Are you submitting this form in response to a determination by the Department that a previously submitted Form 600P-B was inadequately completed?

If yes,

- a. Date form was returned ("Form Returned" date found in "For Department Use Only" box on the previously submitted Form 600P-B): 10/27/2025
- b. If a "Follow-up Responses" or "Amended Responses" document is required by questions 2 or 3, submit complete updated documents with responses that stand-alone. The Department will only use the most recently submitted "Follow-up Responses" and "Amended Responses" documents for departmental technical analyses or scientific credibility review; the Department will not use multiple versions of a document.

2. ☒ Y ☐ N Were any questions identified as requiring follow-up on Form 600P-A?

If yes,

- a. ☒ S Submit "Follow-up Responses" document for all questions requiring follow-up.



FOLLOW-UP AND AMENDED RESPONSES AFFIDAVIT & CERTIFICATION

"I attest that this preapplication meeting form (Form 600P-A and Form 600P-B), follow-up, and amended responses accurately portray the 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, amended responses, or follow-up materials (ARM 36.12.1302(6)(a))."

[Signature] *R-N Ranch LLC* *2-5-26*
Applicant Signature Date

Nancy E. Clark *R Bar N Ranch LLC* *2-5-26*
Applicant Signature Date

"We confirm that the preapplication form (Form 600P-A and Form 600P-B), amended responses, 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 required element of technical analysis based on the proposed project and the Department is able to proceed with the scientific credibility review (ARM 36.12.1303(8))."

C. Stietbeck *2-17-26*
Department Signature Date

Department Signature Date



FOLLOW-UP

The tables below will identify all questions marked for follow-up. Applicant follow-up will be submitted with the completed Preapplication Meeting Form: Part B (Form 600P-B). Applicant will provide all responses to questions marked for follow-up on a separate document entitled "Follow-up Responses." At the preapplication meeting, the Department may offer to provide the Applicant with information pertinent to identified follow-up. In this case, record in the notes column what information the Department will provide and the date by which the Department will email this information to the Applicant. This information will supplement but not replace Applicant follow-up. It is the responsibility of the Applicant to provide all follow-up, including questions supplemented by Department information, in the "Follow-up Responses" document.

The "Follow-up Responses" document must conform to the following standards. Label all responses with the question number. Answer questions in the same format as the form. For responses in the form of checkboxes, write "Y", "N", "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: Part A (Form 600P-A) signed at the Preapplication Meeting. Instead, the Applicant must use the Amended Responses procedure defined in Form 600P-B. Do not include additional information for questions that were not marked for follow-up on this table; instead include any additional information pursuant to the process for amending responses defined in Form 600P-B.

[illegible]

FOLLOW-UP RESPONSES

MT DNRC FORM 600P-B

BENEFICIAL WATER USE PERMIT APPLICATION No. 43D 30171861

R BAR N RANCH, LLC

RICK & NANCY CLINE

Question 2: S – Aerial “Section Corners” map, and proposed project map.

Question 3: Revised flow rate – applicant requests 1.0 CFS (448.8 GPM).

NOTE: Question 3 referenced in letter of 10/27/2025 under “Not a deficiency, but a point of concern for the Department: Pump Curve:”

Question 5: Volume = 17.09 AF (Based on reduced acreage of 6.85 acres and an average of 2.5 AF per acre for sprinkler irrigation in climatic area II.)

Question 9: S – 6.85 total acres proposed POU per “POU Acreage Map,” all contained within NW1/4NE1/4, Sec. 8, T6S, R23E, Carbon County, MT.

NOTE: The applicant has reduced the number of irrigated acres applied for from 16.73 acres to a total of 6.85 acres per the attached “POU Acreage Map” – a reduction of 9.88 acres. (A previously submitted (Agri Industries) map indicted a POU acreage totaling 15.6 acres.)

Question 11: Approximately 15.88 AF (Only 6.35 acres under overlapping water right 43D 199996-00 have access to Sand Creek Canal shares water, **only** to be used if water permitted under this application is unavailable.)

Question 20: 17.09 AF will be diverted from a single point of diversion (POD 1).

THE MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

GOVERNOR GREG GIANFORTE



DNRC DIRECTOR AMANDA KASTER

DNRC Water Resources
Billings Regional Office
1371 Rimtop Dr.
Billings, MT 59105-1978

October 27, 2025

R Bar N Ranch, L.L.C.
89 Sand Creek Rd
Bridger, MT 59014

Subject: Incomplete Preapplication Meeting Form (Form 600P-B) for Beneficial Water Use Permit
Application No. 43D 30171861

Dear Applicant,

The Billings Regional Office of the Department of Natural Resources and Conservation (DNRC or Department) received your Preapplication Meeting Form and preapplication fee on October 20, 2025. The Department deemed the submitted Preapplication Meeting Form to be **incomplete** because it lacks the following information:

☐ Question 2:

- Provide a map created on an aerial photograph or topographic map that shows the following: section corners, township and range, scale bar, north arrow, all proposed points of diversion labeled with a unique POD ID number (include GWIC ID, if available, for wells), all proposed places of use, all proposed conveyance structures (including ditches and pipelines), all proposed places of storage, and places of use for all overlapping water rights. More than one map may be submitted if necessary to clearly convey all required information.
- The map provided with Form 600P-B does not reflect the conversations we had through emails and at the preapplication meeting. Internal mapping indicates that the number of acres shown on the map provided with form 600P-B are inconsistent with the acreage numbers labeled on the map. Please provide a map that shows an accurate outline of the proposed place of use. If the map has acreage numbers labeled, please make sure the acreage numbers are accurate.

☐ Question 5:

- Provide the Volume (acres-feet; AF) requested.
- This was a follow-up due to the uncertainty of the acres. If the map we created through email correspondence was correct, then you also have the number of acres needed to calculate the volume.
- Per ARM 36.12.115, volume is determined by irrigation method, acreage, and the climatic area. Your place of use is in climatic areas I and II, but predominantly in climatic area II. As such, we will be using the greater consumptive use for sprinkler irrigation, in climatic area II, with the following AF per acre range: 2.30 – 2.69 AF per acre.



DNRC.MT.GOV

☐ Question 9:

- Provide the legal description for the proposed place of use, including acres.
- You may use the map to help answer this question. The map and the answer to this question should be the same.

☐ Question 11:

- Provide the Volume (AF) from the supplemental/overlapping water right 43D 199996-00 that will be used with this application.
- How much water is proposed to be used from 43D 199996-00, if any, on the same acres?

☐ Question 20:

- Provide the Volume (AF) that will be diverted at each point of diversion (POD).
- This will be the result of the number of acres multiplied by the proposed AF per acre volume and should match the answer to Question 5.

Not a deficiency, but a point of concern for the Department:

☐ Pump Curve:

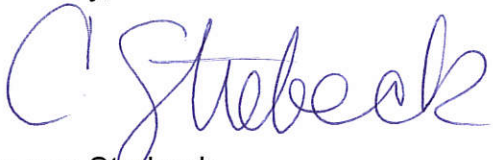
- The pump curve you provided from Cornell states that the flow rate capacity of the pump is 425 GPM. The map provided with it states that the design requires 1100 GPM. You requested a flow rate of 2.45 CFS (1,100 GPM) on Form 600P-A.
- Before submitting Form 600P-B, please ensure your pump and infrastructure have the capacity to provide the requested flow rate. If you need to amend your requested flow rate, please ensure you include an amended response on Form 600P-B (Question 3).

The 180-day deadline for the original preapplication meeting is March 21, 2026. You have 145 remaining days to complete the Preapplication Meeting Form successfully. If you do not submit the successfully completed Preapplication Meeting Form to the Billings Regional Office by March 21, 2026, you will need to request a new preapplication meeting.

We have voided the \$500 check sent with the Preapplication Meeting Form received on October 20, 2025, and have returned the voided check with this letter. When you submit the follow-up information, you will need to resubmit your \$500 payment.

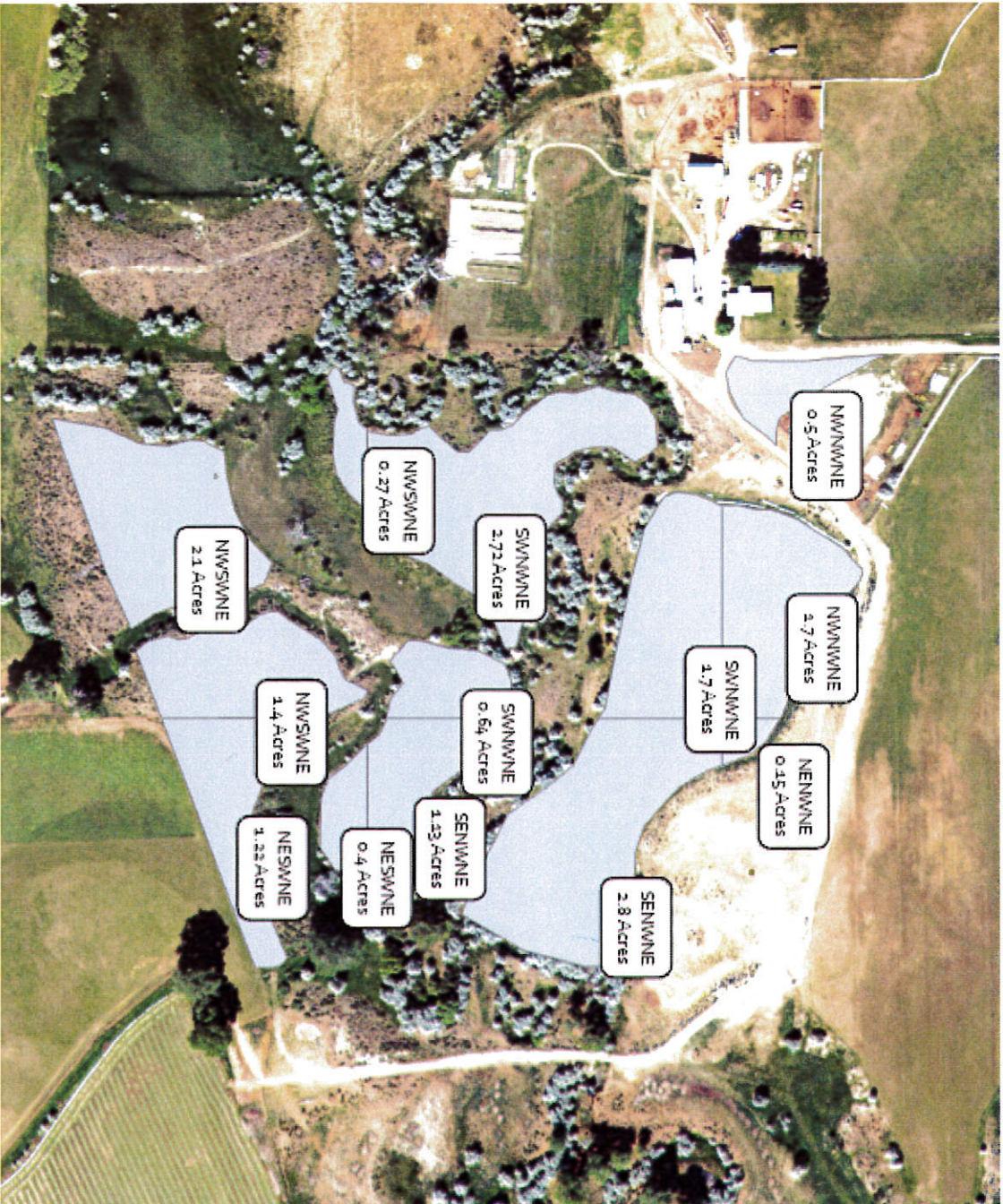
Please let me know if you have any questions.

Sincerely,



Cassey Strebeck
Water Resource Specialist
Billings Regional Office, Montana DNRC
Cassey.Strebeck@mt.gov
406-247-4422







**PREAPPLICATION MEETING
FORM: PART B
PERMIT**

§ 85-2-302, MCA

Form No. 600P-B (Revised 02/2025)

For Department Use Only

Application # _____ Basin _____
Form Received HLW
Fee Rec'd \$ 500.00 Check # 008762
Deposit Receipt # BLS260
Payor _____
Form Returned _____
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)).

RECEIVED

OCT 20 2025

DNRC-WRD-BILLINGS

The Applicant is responsible for providing a "Follow-up Responses" document for all follow-up identified in Preapplication Meeting Form Part A (Form 600P-A). The Applicant may not alter Form 600P-A. 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.

The following guidelines are applicable to both the "Follow-up Responses" and "Amended Responses" documents. Clearly label all question numbers. Answer questions in the same format as Form 600P-A. 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 included with the document.

1. ☐ Y ☒ N Are you submitting this form in response to a determination by the Department that a previously submitted Form 600P-B was inadequately completed?

If yes,

- Date form was returned ("Form Returned" date found in "For Department Use Only" box on the previously submitted Form 600P-B): _____
- If a "Follow-up Responses" or "Amended Responses" document is required by questions 2 or 3, submit complete updated documents with responses that stand-alone. The Department will only use the most recently submitted "Follow-up Responses" and "Amended Responses" documents for departmental technical analyses or scientific credibility review; the Department will not use multiple versions of a document.

2. ☒ Y ☐ N Were any questions identified as requiring follow-up on Form 600P-A?

If yes,

- ☒ S Submit "Follow-up Responses" document for all questions requiring follow-up.



3. ☐ Y ☒ N Are you submitting amended responses to any questions from Form 600P-A?

If yes,

- a. ☐ **S** Submit “Amended Responses” document and record in the table below each question number with an amended response. The amended response will entirely replace the previous response; the amended response cannot build off the previous response.

[illegible]

FOLLOW-UP AND AMENDED RESPONSES AFFIDAVIT & CERTIFICATION

"I attest that this preapplication meeting form (Form 600P-A and Form 600P-B), follow-up, and amended responses accurately portray the 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, amended responses, or follow-up materials (ARM 36.12.1302(6)(a))."

Alcho Rhaer Panch LLC 10-16-25
Applicant Signature Date

Nancy Clive R Burt N Bernd LLC 10-18-25
Applicant Signature Date

"We confirm that the preapplication form (Form 600P-A and Form 600P-B), amended responses, 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 required element of technical analysis based on the proposed project and the Department is able to proceed with the scientific credibility review (ARM 36.12.1303(8))."

Department Signature Date

Department Signature Date





Company: Agri Industries

Name:

Date: 10/10/2025

Pump:

Size: 3RB

Type: Clear Liquids

Synch speed: 1800 rpm

Curve: 3RB18

Specific Speeds:

Dimensions:

Speed: 1775 rpm

Dia: 11.5 in

Impeller:

Ns: 918

Nss: ---

Suction: 5 in

Discharge: 3 in

Search Criteria:

Flow: 425 US gpm

Head: 132 ft

Fluid:

Water

Density: 62.32 lb/ft³

Viscosity: 0.9946 cP

NPSHa: ---

Temperature: 68 °F

Vapor pressure: 0.3391 psi a

Atm pressure: 14.7 psi a

Motor:

Standard: NEMA

Enclosure: TEFC

Size: 25 hp

Speed: 1800

Frame: 284T

Sizing criteria: Max Power on Design Curve

Pump Limits:

Temperature: 250 °F

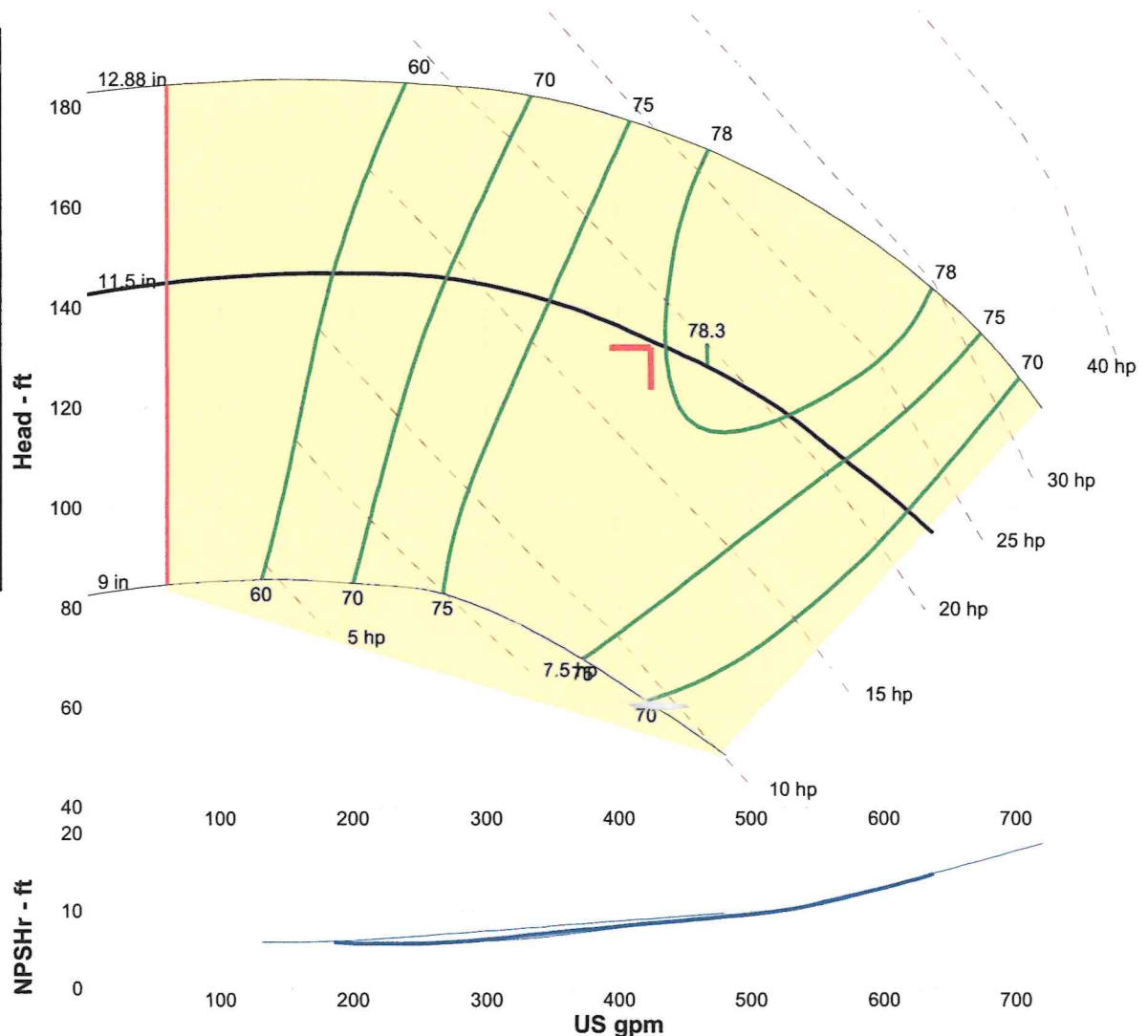
Pressure: 175 psi g

Sphere size: 0.5 in

Power: ---

Eye area: ---

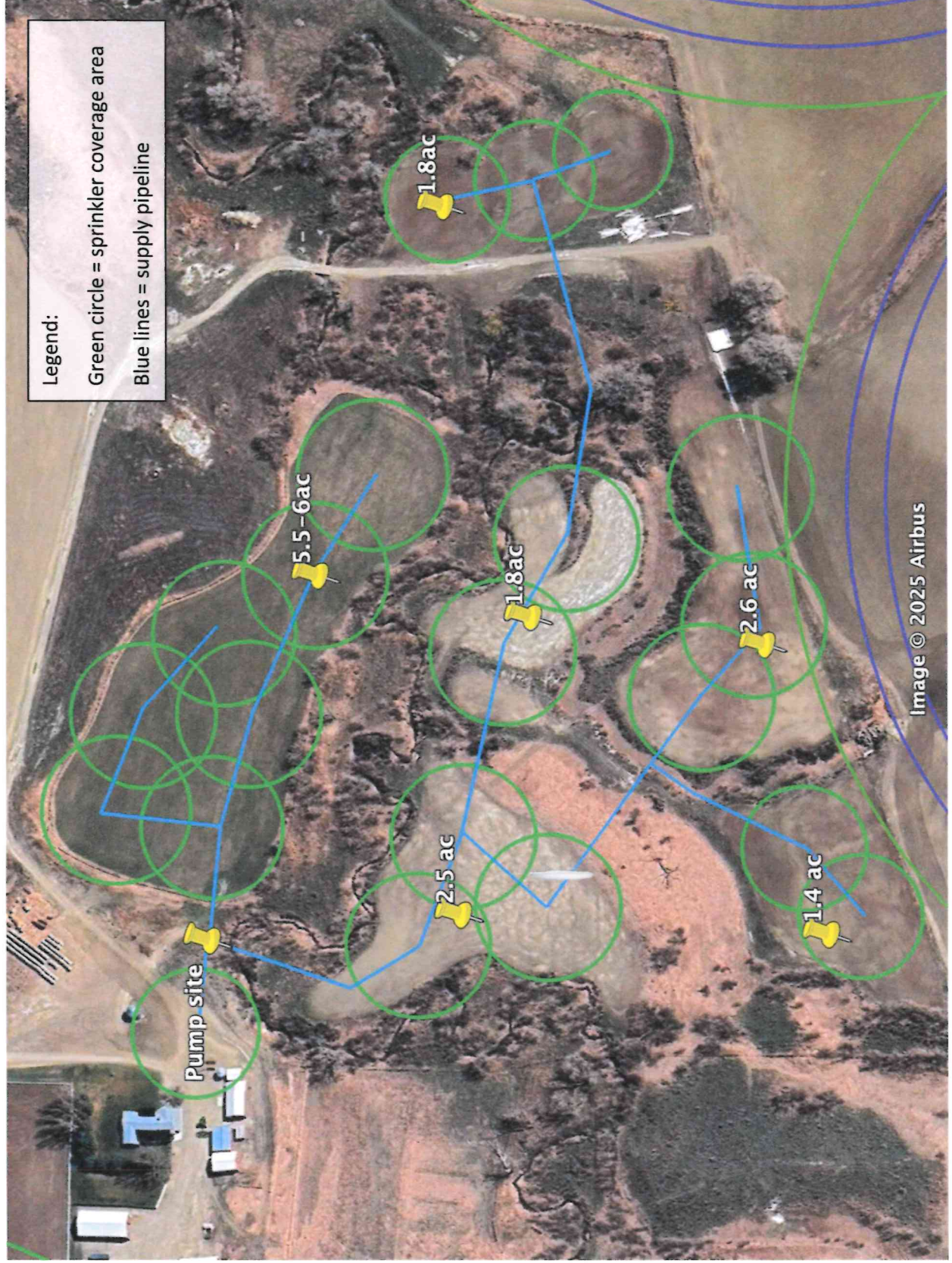
--- Data Point ---	
Flow:	425 US gpm
Head:	133 ft
Eff:	78%
Power:	18.4 hp
NPSHr:	8.45 ft
--- Design Curve ---	
Shutoff head:	143 ft
Shutoff dP:	61.8 psi
Min flow:	60 US gpm
BEP:	78% @ 468 US gpm
NOL power:	22.8 hp @ 638 US gpm
-- Max Curve --	
Max power:	32.9 hp @ 720 US gpm

**Performance Evaluation:**

Flow US gpm	Speed rpm	Head ft	Efficiency %	Power hp	NPSHr ft
510	1775	121	78	20	9.92
425	1775	133	78	18.4	8.45
340	1775	142	75	16.3	7.1
255	1775	146	68	13.7	6
170	1775	147	58	11	6

R Bar N Ranch Big Gun Irrigation Design approx. 16 irrigated acres

Design Flow rate = 1100 gpm



Excel File Placeholder

The “R Bar N – Float Measurement Calculator” spreadsheet is available outside of the application file.

*For **pending applications**:*

- *Excel files associated with aquifer tests are located in the “Aquifer Tests” link of the application page.*
- *Other excel files are available upon request from the regional office.*

Please contact the Billings Regional Office for more information.

406-247-4415

Schweigert, Christine

From: Landers, Jack
Sent: Tuesday, September 23, 2025 1:57 PM
To: Schweigert, Christine
Cc: Brickl, Melissa
Subject: RE: Please check for acceptability

Hi Chris,

I took a look at the float area measurements you sent. They both look acceptable to me. As you noted, the R Bar N measurements didn't meet the recommended reach length of 3x the channel width. This doesn't seem to be an issue though since the reach length is relatively close to the cutoff and all measurements are consistent on each date. Also, the measurements on 8/19 and 9/4 have similar channel conditions and produced very similar discharge measurements, increasing confidence that the measurement methods were repeatable. I also did not see any issues with the Griswold measurements.

Thanks!

Jack



Jack Landers | Groundwater Hydrologist
Water Sciences Bureau, Groundwater Studies, Water Resources Division
Montana Department of Natural Resources and Conservation
1424 9th Ave, Helena, MT 59601
DESK: 406-444-7020 **EMAIL:** jack.landern@mt.gov
[Website](#) | [Facebook](#) | [X \(Twitter\)](#) | [Instagram](#)
How did we do? Let us know here: [Feedback Survey](#)

From: Brickl, Melissa <Melissa.Brickl@mt.gov>
Sent: Friday, September 19, 2025 2:59 PM
To: Landers, Jack <Jack.Landers@mt.gov>
Subject: FW: Please check for acceptability

Jack,

Can you review this? Came in on Friday, we have till next Friday. Let me know if you can...if you can't I will delegate to someone else.

Melissa Brickl | Groundwater Section Supervisor
Water Sciences Bureau, Groundwater Studies, Water Resources Division
Montana Department of Natural Resources and Conservation
1424 9th Ave, Helena, MT 59601
MOBILE: 406-437-4025 **EMAIL:** melissa.brickl@mt.gov
[Website](#) | [Facebook](#) | [X \(Twitter\)](#) | [Instagram](#)
How did we do? Let us know here: [Feedback Survey](#)

From: Schweigert, Christine <CSchweigert@mt.gov>

Sent: Friday, September 19, 2025 2:40 PM

To: Brickl, Melissa <Melissa.Brickl@mt.gov>

Subject: Please check for acceptability

Hi Melissa,

Can you please have someone check these for acceptability? The only question I had was whether we would accept the 16 ft. float distance on the R Bar N measurements since the float distance is less than 3 times the channel width.

If possible, could you have these reviewed within a week?

Thanks,

Chris

Christine Schweigert | Hydrologist
Billings Regional Office / Water Resources Division
Montana Department of Natural Resources and Conservation
1371 Rimtop Drive, Billings, MT 59105
PHONE: 406-247-4419 **EMAIL:** CSchweigert@mt.gov
[Website](#) | [Facebook](#) | [X \(Twitter\)](#) | [Instagram](#)
How did we do? Let us know here: [Feedback Survey](#)

[illegible]



**PREAPPLICATION MEETING
FORM: PART A
PERMIT**
§ 85-2-302, MCA
Form No. 600P-A (Revised 03/2025)

PREAPPLICATION MEETING FEE

\$ 500

FILING FEE REDUCTION & EXPEDITED TIMELINE

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

For Department Use Only

Application # 30171861 Basin # 43D
Meeting Date 9/22/2025 Time 12:30p
Variance Request Deadline _____
Completed Form Deadline 3/21/2026

The Department will fill out Permit Preapplication Meeting Form Part A (Form 600P-A) and will identify items for follow-up during the preapplication meeting. The Department and Applicant will sign the Preapplication Meeting Affidavit and Certification within 10 business days. Within 180 days of the preapplication meeting, the Applicant will complete Preapplication Meeting Form Part B (Form 600P-B), including identified follow-up, any amended responses, and Follow-up and Amended Responses Affidavit & Certification. Variance requests must be submitted on Form 653 to the Department on or before the Variance Request Deadline, which is day 138 of the 180 day-deadline for a completed preapplication meeting form. Form 653 may be submitted earlier than the Variance Request Deadline. The Department has 30 business days to process the Form 653.

Applicant Information: Add more as necessary.

Applicant Name R Bar N Ranch LLC (285046)
Mailing Address 89 Sand Creek Rd City Bridger State MT Zip 59014
Phone Numbers: Home 406-560-3018 Work _____ Cell _____
Email Address rbarnranch2@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: ☒ 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 (ARM 36.12.122(2)). If a contact person is identified as a consultant, employee, or lessee, the applicant will receive all correspondences, and a copy may be sent to the contact person (ARM 36.12.122(3)).

Meeting Attendees: Add more as necessary.

Name	Role	Name	Role
Rick Cline	Applicant		
Chris Schweigert	DNRC		
Veronica Corbett	DNRC		
Cassey Strebeck	DNRC		



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APPLICATION DETAILS

The following questions are mandatory and must be filled out before the Preapplication Meeting Form is determined to be complete. Narrative responses that are larger than the space provided can be answered in an attachment. If an attachment is used, mark the see attachment ("A") checkbox on this form and label the attachment with the question number. Constrain narrative responses to the specific question as is asked on the form; do not respond to multiple questions in one narrative. Responses in the form of a table may be entered into the table provided on this form or in an attachment. If an attachment is used, the table must have the exact headings found on this form, and the see attachment ("A") checkbox must be marked. Label units in narrative responses and tables. 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".

S = Submitted. Use when required item is included with form.

A = See attachment. Use when additional space is needed to answer a question.

F = Follow-up. Use when follow-up is necessary.

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, scale bar, north arrow, all proposed points of diversion labeled with a unique POD ID number (include GWIC ID, if available, for wells), all proposed places of use, all proposed conveyance structures (including ditches and pipelines), all proposed places of storage, and places of use for all overlapping water rights. More than one map may be submitted, if necessary to clearly convey all required information.	☐ S	☒ F
3. Is the project located in a Controlled Groundwater Area or Basin Closure Area? If yes, immediately go to Mandatory Project-Specific questions 54 to 56 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)
Irrigation	05/01-09/30	05/01-09/30	2.45	☐	☒	
				☐	☐	
				☐	☐	
				☐	☐	
				☐	☐	
Total			2.45	☐	☐	

6. Does the proposed use include one or more of the following purposes: domestic, multiple domestic, stock, or irrigation? If yes, fill out the following table, where applicable.	☒ Y ☐ N	☐ F
--	--	----------------------------

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

7. 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 # used for the project map (question 2).	☐ A	☐ F
--	----------------------------	----------------------------

POD #	1/4	1/4	1/4	Sec	Twp	Rge	County	Lot	Block	Tract	Subdivision	Gov Lot	SW or GW	Source Name	Means
1	SW	NW	NE	8	6S	23E	Carbon						SW	Sand Creek	Pump



11. 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	Avg. Period of Use	Flow Rate			Volume Contributed
	<i>MM/DD-MM/DD</i>	<i>MM/DD-MM/DD</i>	<i>Flow Rate</i>	<i>GPM</i>	<i>CFS</i>	<i>AF</i>
43D 199996-00	04/01-10/15	04/01-10/15	225	☐	☒	
				☐	☐	
				☐	☐	
				☐	☐	
				☐	☐	

12. Will this application supplement contract water from a Federal Project, ditch company, or other source?	☒ Y ☐ N	☐ F
a. If yes, explain. <u>Sand Creek Canal Ditch Shares - (43D 199996) - not reliable or always available; will continue to use ditch shares when available, use permit when not</u> _____ _____	☐ A	☐ F
13. Does the project involve one or more places of storage? This does not include reservoirs, pits, pit-dams, or ponds with a capacity less than 0.1 AF; water tanks; or cisterns (ARM 36.12.113(6)). If yes, answer the following questions once for each place of storage. Use an "Additional Place of Storage (600P)" sheet if more than one. Additionally, you may choose to answer non-mandatory questions 76 to 80 for place of storage.	☐ Y ☒ N	☐ F
a. Is this application to enlarge an existing reservoir? If yes, list the water right numbers for the existing reservoir. _____	☐ Y ☐ N	☐ F
b. Is the place of storage located on-stream?	☐ Y ☐ N	☐ F
c. 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: $\text{Surface Acres} \times \text{Maximum Depth (FT)} \times 0.5 = \text{Capacity (AF)}$ _____	☐ A	☐ F



d. What is the surface area of the place of storage? _____ _____	☐ A	☐ F
14. Will your system be designed to discharge water from the project?	☐ Y ☒ N	☐ F
a. If yes, explain the wastewater disposal method. A discharge permit may be required to comply with §§ 75-5-410 and 85-2-364, MCA. _____ _____ _____	☐ A	☐ F
15. 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 AF (Form 600-B) with application submittal. The criteria are found in §85-2-311(3), MCA.	☐ Y ☒ N	☐ F
16. Will you be transporting water for use outside of Montana? If yes, you must submit an Out-of-State Use Addendum (Form 600/606-OSA) with the application. The out-of-state use criteria are outlined in §85-2-402(6), MCA.	☐ Y ☒ N	☐ F
17. Does the project include the water marketing purpose? If yes, you may choose to answer non-mandatory questions 81 to 85 for water marketing. A Water Marketing Purpose Addendum (Form 600/606-WMA) will be required with application submittal.	☐ Y ☒ N	☐ F
18. Are you proposing a point of diversion and/or place of use on State of Montana Trust Land? If yes, documentation of consent from the DNRC Trust Lands Management Division will be required at application submittal.	☐ Y ☒ N	☐ F
19. Is the project located in designated sage grouse habitat? If yes, a review letter from the Montana Sage Grouse Habitat Conservation Program will be required at application submittal.	☒ Y ☐ N	☐ F



SURFACE WATER

☒ **Applicable**, move on to question 20. ☐ **Not Applicable**, skip to question 30.

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 Analysis

Questions, Narrative Responses, and Tables							Check-boxes	Follow-up
20. 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			Volume	Period Start	Period End		
	Flow Rate	GPM	CFS	AF	MM/DD	MM/DD		
1	2.45	☐	☒		05/01	9/30		
		☐	☐					
		☐	☐					
		☐	☐					
		☐	☐					

21. Is the source type of the diversion perennial or intermittent, ephemeral, lake, or other? Intermittent (Perennial during period of diversion)							☐ A	☐ F
Perennial or intermittent	Answer questions 22 to 25	Ephemeral	Answer question 26	Lake	Answer question 27	Other	Answer questions 28 to 29	

Surface Water Analysis: Perennial or Intermittent

☒ **Applicable** ☐ **Not Applicable**

22. Are stream gage data available?	☐ Y ☒ N	☐ F
a. If yes, answer question 23.		
b. If no, answer question 24.		



23. Stream gage data are available.		
a. Is one stream gage located above the most upstream POD and one stream gage located below the most upstream POD?	☐ Y ☐ N	☐ F
i. If no, is only one stream gage located near the most upstream POD?	☐ Y ☐ N	☐ F
1. If yes, is the stream gage located upstream or downstream? _____		☐ F
b. List the gage name(s). Write "N/A" for Gage 2 if one gage is available. Gage 1: _____ Gage 2: _____		☐ F
c. What is the distance between the gage(s) and the most upstream POD? Write "N/A" for Gage 2 if one gage is available. Gage 1: _____ Gage 2: _____		☐ F
d. Is there a limiting or controlling factor on the source between the stream gage(s) and the most upstream POD? This includes dams that control the flow and streams with large gaining and/or losing reaches. If you have questions about this, the Regional Office may provide assistance.	☐ Y ☐ N	☐ F
i. If yes, explain. _____ _____ _____	☐ A	☐ F
e. How long is the period of record? Write "N/A" for Gage 2 if one gage is available. Gage 1: _____ Gage 2: _____		☐ F
f. Who operates and maintains the gage(s)? Write "N/A" for Gage 2 if one gage is available. Gage 1: _____ Gage 2: _____		☐ F



g. Is each available stream gage operated and maintained by USGS or DNRC?	☐ Y ☐ N	☐ F
i. If yes, skip to question 23.h.		
ii. If no, answer the following questions for each gage not operated and maintained by USGS or DNRC.		
1. How frequently are stage data recorded? Write "N/A" for Gage 2 if only one gage is not operated or maintained by USGS. Gage 1: _____ Gage 2: _____		☐ F
2. If data gaps were to occur, are they identified and left unfilled or estimated using interpolation, ice correction, or indirect discharge measurements methods?		
a. Gage 1. _____	☐ Y ☐ N	☐ F
b. Gage 2. Write "N/A" on the line instead of answering yes or no, if only one gage is not operated or maintained by USGS or DNRC. _____	☐ Y ☐ N	☐ F
3. Was the rating curve established and maintained throughout the duration of the period of record using measurements taken near the reference gage and stage recorder according to USGS protocols?		
a. Gage 1. _____	☐ Y ☐ N	☐ F
b. Gage 2. Write "N/A" on the line instead of answering yes or no, if only one gage is not operated or maintained by USGS or DNRC. _____	☐ Y ☐ N	☐ F
4. Were requirements established and followed for maintaining a permanent gage datum and meeting specified accuracy limits?		
a. Gage 1. _____	☐ Y ☐ N	☐ F
b. Gage 2. Write "N/A" on the line instead of answering yes or no, if only one gage is not operated or maintained by USGS or DNRC. _____	☐ Y ☐ N	☐ F



h. Do the data for one or more available stream gages meet the Department's standard to be sufficient to calculate the median of the mean monthly flow rate and volume during the proposed months of diversion?	☐ Y ☐ N	☐ F
i. If yes, record how many meet the standard, then skip to question 54 because this section is complete. _____		☐ F
ii. If no, answer question 24.		
24. If no gage data are available or if available gage data do not meet the Department's standard to be sufficient to calculate the median of the mean monthly flow rate and volume during the proposed months of diversion, is the source otherwise measured?	☐ Y ☒ N	☐ F
a. If no, measurements may be necessary. The Department cannot deem the preapplication meeting form adequately completed until the Department receives gage data and/or measurements that meet the requirements of ARM 36.12.1702 or, in combination with an approved variance request, are sufficient to complete any necessary technical analyses or scientific credibility reviews and to evaluate the applicable criteria. Skip to question 25.		
b. If yes,		
i. Submit available measurements to the Department.	☐ S	☐ F
ii. Who collected the measurements? _____	☐ A	☐ F
iii. With what method were the data collected? _____ _____	☐ A	☐ F
iv. What is the period of record? _____		☐ F
v. What is the frequency of measurement? _____		☐ F
vi. Are there gaps in the data?	☐ Y ☐ N	☐ F

1. If yes, what is the nature of the gaps and how are gaps handled to ensure data quality? 	☐ A	☐ F
vii. Is there a process for maintaining the data and meeting specified accuracy limits?	☐ Y ☐ N	☐ F
1. If yes, explain. 	☐ A	☐ F
viii. Do available measurement data meet the Department's standard to be sufficient to calculate the median of the mean monthly flow rate and volume during the proposed months of diversion?	☐ Y ☐ N	☐ F
1. If yes, this section is complete. Skip to question 54.		
2. If no, answer question 25.		
25. Do the available measurement data, gage and/or otherwise measured, meet the Department's standard of including a minimum of high, moderate, and low flows to be sufficient to use for validation of a Department-accepted estimation technique?	☐ Y ☒ N	☐ F
a. If yes,		
i. Describe how the measurements are representative of high, moderate, and low flows. 	☐ A	☐ F
ii. Describe the estimation technique. 	☐ A	☐ F
b. If no, but a Department-accepted estimation technique will be appropriate for the source:		



i. Will measurements be collected prior to submission of Form 600P-B 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, do you plan on requesting a variance from measurement requirements pursuant to ARM 36.12.1702(1)(b)? If you plan to request a variance, you must submit Form 653 on or before the Variance Request Deadline. The Department cannot deem the preapplication meeting form adequately completed until the Department receives measurements that meet the requirements of ARM 36.12.1702(1)(b) or, in combination with an approved variance request, are sufficient to complete any necessary technical analyses or scientific credibility reviews and to evaluate the applicable criteria.	☐ Y ☐ N	☐ F
c. If no, because no Department-accepted estimation technique will be appropriate for the source:		
i. Describe why no Department-accepted estimation technique is appropriate for the source characteristics. Sand Creek only flows due to Sand Creek Canal overflow - does not follow a natural hydrograph _____ _____	☐ A	☐ F
ii. Do the available measurement data, gage and/or otherwise measured, meet the Department's standard for monthly measurements throughout the proposed period of diversion pursuant to ARM 36.12.1702(4)?	☒ Y ☐ N	☐ F



1. If no, will measurements be collected prior to submission of a completed Form 600P that meet the Department's standard of monthly measurements throughout the proposed period of diversion?	☐ Y ☐ N	☐ F
a. If yes, with what method will the data be collected? _____ _____	☐ A	☐ F
b. If no, do you plan on requesting a variance from measurement requirements pursuant to ARM 36.12.1702(4)? If you plan to request a variance, you must submit Form 653 on or before the Variance Request Deadline. The Department cannot deem the preapplication meeting form adequately completed until the Department receives measurements that meet the requirements of ARM 36.12.1702(4) or, in combination with an approved variance request, are sufficient to complete any necessary technical analyses or scientific credibility reviews and to evaluate the applicable criteria.	☐ Y ☐ N	☐ F

Surface Water Analysis: Ephemeral

☐ Applicable ☒ Not Applicable

26. Did you elect for the Department to conduct the Technical Analyses?	☐ Y ☐ N	☐ F
a. If yes, do you have climate or drainage area data you would like the Department to consider during Technical Analyses?	☐ Y ☐ N	☐ F
i. If yes, submit this information to the Department.	☐ S	☐ F
b. If no,		
i. Describe the estimation technique you propose to use to estimate physical availability at the point of diversion. _____ _____ _____	☐ A	☐ F
ii. What is the net annual precipitation? Include the source of this information. _____ _____	☐ A	☐ F



iii. What is the drainage area upstream of the point of diversion and how was this figure calculated? _____ _____ _____	☐ A	☐ F
--	----------------------------	----------------------------

Surface Water Analysis: Lakes

☐ Applicable ☒ Not Applicable

27. Has the lake volume been quantified by a qualified entity based on bathymetric data?	☐ Y ☐ N	☐ F
a. If yes, provide this information to DNRC.	☐ S	☐ F
b. If no, answer the following questions,		
i. When do you plan to collect this information? _____		☐ F
ii. What data collection method will you use? _____ _____	☐ A	☐ F

Surface Water Analysis: Other

☐ Applicable ☒ Not Applicable

28. Explain why the source type is "other". _____ _____	☐ A	☐ F
29. Have you measured the source?	☐ Y ☐ N	☐ F
a. If yes, answer the following questions,		
i. With what method was the measurement data collected? _____ _____	☐ A	☐ F



ii. What is the measurement interval? _____		☐ F
1. Does the interval meet the Department's standard for monthly measurements throughout the proposed period of diversion pursuant to ARM 36.12.1702(4)?	☐ Y ☐ N	☐ F
a. If no, do you plan on requesting a variance from measurement requirements pursuant to ARM 36.12.1702(4)? If you plan to request a variance, you must submit Form 653 on or before the Variance Request Deadline.	☐ Y ☐ N	☐ F
b. If no,		
i. When do you plan to measure? _____		☐ F
ii. What data collection method will be used? _____ _____ _____	☐ A	☐ F
iii. Do you plan on requesting a variance from measurement requirements pursuant to ARM 36.12.1702(4)? If you plan to request a variance, you must submit Form 653 on or before the Variance Request Deadline. The Department cannot deem the preapplication meeting form adequately completed until the Department receives measurements that meet the requirements of ARM 36.12.1702(4) or, in combination with an approved variance request, are sufficient to complete any necessary technical analyses or scientific credibility reviews and to evaluate the applicable criteria.	☐ Y ☐ N	☐ F

Area of Potential Impact Analysis

No additional information needed for Technical Analyses.



GROUNDWATER

☐ **Applicable**, move on to question 30. ☒ **Not Applicable**, skip to question 54.

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

Groundwater Analysis for Permits

Questions, Narrative Responses, and Tables					Check-boxes	Follow-up
30. What is the type of groundwater diversion? _____					☐ A	☐ F
Well/Pumping Pit	Answer questions 31 to 35	Developed Spring	Answer question 36	Pond	Answer questions 37 to 39	

Groundwater Analysis for Permits: Well/Pumping Pit

☐ Applicable ☐ Not Applicable

31. Per ARM 36.12.121 a 24- or 72-hour aquifer test is required; do you propose not to conduct the test? An 8-hour test will be required, if no aquifer test is completed.	☐ Y ☐ N	☐ F
a. If yes, explain. The Department will let you know if the request is reasonable and identify additional data needs. _____ _____ _____ _____ _____	☐ A	☐ F



32. Submit Aquifer Test Data Form (Form 633). If a variance is requested, Form 633 must be submitted on or before the Variance Request Deadline. If no variance is requested, Form 633 is due by the time the preapplication meeting form is complete but may be submitted earlier. However, if the Department determines a variance is needed and the Variance Request Deadline has passed, to submit the Form 653 you must reschedule the preapplication meeting or submit the application without expedited fees and timelines (ARM 36.12.1302(6)).	☐ S	☐ F
33. Submit the Aquifer Testing Addendum (Form 600/606-ATA) and associated materials (e.g., well logs). If you request a variance, Form 600/606-ATA must be submitted on or before the Variance Request Deadline. If no variance is requested, Form 600/606-ATA is due by the time the preapplication meeting form is complete but may be submitted earlier. However, if the Department determines a variance is needed and the Variance Request Deadline has passed, to submit the Form 653 you must reschedule the preapplication meeting or submit the application without expedited fees and timelines (ARM 36.12.1302(6)).	☐ S	☐ F
34. Are you requesting a variance from ARM 36.12.121? If you are unsure if a variance request will be needed, mark follow-up and answer this question once Form 600/606-ATA and Form 633 are complete. A variance must be requested by the Variance Request Deadline.	☐ Y ☐ N	☐ F
a. If yes, submit Form 653, Form 600/606-ATA, and Form 633 together on or before the Variance Request Deadline.	☐ S	☐ F
b. If no, you may choose to submit Form 600/606-ATA and Form 633 before the Variance Request Deadline, and the Department will review these two forms. However, if the Department determines a variance is needed after the Variance Request Deadline, to submit the Form 653 you must reschedule the preapplication meeting or submit the application without expedited fees and timelines (ARM 36.12.1302(6)).		
35. Have all proposed wells/pumping pits been constructed?	☐ Y ☐ N	☐ F
a. If no, answer the following questions:		
i. Submit a list of the POD IDs for all wells/pumping pits and mark whether they have or have not been constructed.	☐ S	☐ F
ii. When will all proposed wells/pumping pits be constructed? _____		☐ F
iii. Is the requested volume for each proposed well/pumping pit known?	☐ Y ☐ N	☐ F
1. If yes, list the flow rate and volume requested for each proposed well/pumping pit. Label with POD ID. _____ _____ _____	☐ A	☐ F

2. If no, what is the total requested volume (AF) and the number of proposed PODs? _____		☐ F
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Groundwater Analysis for Permits: Developed Spring

☐ Applicable ☐ Not Applicable

36. Have you measured the source?	☐ Y ☐ N	☐ F
a. If yes, submit the measurements and answer the following questions,	☐ S	☐ F
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), answer the following questions. The Department cannot deem the preapplication meeting form adequately completed until the Department receives measurements that meet the requirements of ARM 36.12.1703(1). Variances from ARM 36.12.1703(1) are not allowed.		
i. When do you plan to measure? _____		☐ F
ii. With what method and at what interval will measurements be collected? _____ _____	☐ A	☐ F



Groundwater Analysis for Permits: Pond

☐ Applicable ☐ Not Applicable

37. Submit Form 653 to apply for a variance from ARM 36.12.121 for the Aquifer Test on or before the Variance Request Deadline.	☐ S	☐ F
38. Submit pond bathymetry data, survey, or engineering plans to the Department.	☐ S	☐ F
39. Is the pond fed or drained by surface water?	☐ Y ☐ N	☐ F
a. If yes,		
i. Explain.	☐ A	☐ F

ii. Submit measurements of the connected surface water source. These may include inflow and outflow measurements.	☐ S	☐ F

Surface Water Depletion Analysis

40. Is the type of groundwater diversion for your proposed project a developed spring? If yes, skip to question 45 because this section is complete. If no, move onto question 41.	☐ Y ☐ N	☐ F
41. Is the type of groundwater diversion for your proposed project a pond? If yes, answer question 41.a, then skip to question 45 because this section is complete. If no, move onto question 42.	☐ Y ☐ N	☐ F
a. Will any of the ponds have diversions for out-of-pond use that differ from, if year-round use, an allocation of diverted volume by the number of days in the month, or, if irrigation/lawn and garden use, the 80% dry year net irrigation requirement (IWR, NRCS 2003)?	☐ Y ☐ N	☐ F
i. If yes, provide a schedule of the diversions for out-of-pond use in the table below. Use the same POD # as the project map (question 2). Attach any additional schedules with POD # labeled.	☐ A	☐ F

POD #			
Month	Diversions for Out-of-Pond Use Volume (AF)	Month	Diversions for Out-of-Pond Use Volume (AF)
January		July	
February		August	
March		September	
April		October	
May		November	
June		December	



42. What is the flow rate (GPM or CFS), volume (AF), and period of diversion required (MM/DD-MM/DD) at each well/pumping pit? What is the well/pumping pit depth (FT), if available, or estimated well/pumping pit depth (FT). Please use the same POD # as the project map (question 2) to match this information with the location information.	☐ A	☐ F
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POD #	Flow Rate			Volume	Period of Diversion	Depth	Measured or Estimated
	Flow Rate	GPM	CFS	AF	MM/DD-MM/DD	FT	
		☐	☐				
		☐	☐				
		☐	☐				
		☐	☐				
		☐	☐				

43. Will any of the <i>new</i> wells/pumping pits have a monthly pumping schedule that differs from, if year-round use, an allocation of diverted volume by the number of days in the month, or, if irrigation/lawn and garden use, the 80% dry year net irrigation requirement (IWR, NRCS 2003)?	☐ Y ☐ N	☐ F
a. If yes, provide the alternative pumping schedule(s) in the table below. Use the same POD # as the project map (question 2). Attach any additional pumping schedules with POD # labeled.	☐ A	☐ F

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



44. Will one or more <i>existing</i> wells/pumping pits be used for the proposed project?	☐ Y ☐ N	☐ F
a. If yes, will any of the <i>existing</i> wells/pumping pits have a monthly pumping schedule, before or after the proposed project, that differs from an allocation of diverted volume by the number of days in the month (if year-round use) or the 80% dry year net irrigation requirement (if irrigation/lawn and garden use) (IWR, NRCS 2003)?	☐ Y ☐ N	☐ F
i. If yes, provide the pumping schedules before and after the proposed project in the table below. Use the same POD # as the project map (question 2). Attach any additional pumping schedules with POD # and before/after proposed project labeled.	☐ A	☐ F

Before proposed project: POD #				After proposed project: POD #			
Month	Volume (AF)	Month	Volume (AF)	Month	Volume (AF)	Month	Volume (AF)
January		July		January		July	
February		August		February		August	
March		September		March		September	
April		October		April		October	
May		November		May		November	
June		December		June		December	

Surface Water Analysis of Depleted Surface Water

45. Based on the preliminary net depletion data provided by the Department at this preapplication meeting, what are the hydraulically connected surface water source(s)? <i>*Net depletion data provided by the Department at the preapplication meeting is preliminary and is subject to change during Technical Analyses. If the source or location of net depletion data changes during Technical Analyses, then surface water analysis of depleted surface water source(s) will reflect the Technical Analyses; this will not constitute a change of any element to the proposed application pursuant to ARM 36.12.1302(6)(a).</i> If the type of groundwater diversion for your proposed project is a developed spring, write "NA" and skip to question 51 because this section is complete. _____	☐ A	☐ F
46. Answer the questions in this section one time for each hydraulically connected source. Use the "Additional Hydraulically Connected Source (600P)" sheet, as necessary. For which hydraulically connected source are you answering questions 47 to 50? _____		☐ F
47. Are stream gage data available?	☐ Y ☐ N	☐ F
a. If yes, answer question 48.		
b. If no, answer question 49.		



48. Stream gage data are available		
a. Is one stream gage located above and one stream gage located below the start of the depleted reach?	☐ Y ☐ N	☐ F
i. If no, is only one stream gage located near the start of the depleted reach?	☐ Y ☐ N	☐ F
1. If yes, is the stream gage upstream or downstream? _____		☐ F
b. List the gage name(s). Write "N/A" for Gage 2 if one gage available. Gage 1: _____ Gage 2: _____		☐ F
c. What is the distance between the gage(s) and the start of the depleted reach? Write "N/A" for Gage 2 if one gage available. Gage 1: _____ Gage 2: _____		☐ F
d. Is there a limiting or controlling factor on the source between the stream gage(s) and the start of the depleted reach? This includes dams that control the flow and streams with large gaining and/or losing reaches. If you have questions about this, the Regional Office may provide assistance.	☐ Y ☐ N	☐ F
i. If yes, explain. _____ _____ _____	☐ A	☐ F
e. How long is the period of record? Write "N/A" for Gage 2 if one gage is available. Gage 1: _____ Gage 2: _____		☐ F
f. Who operates and maintains the gage(s)? Write "N/A" for Gage 2 if one gage is available. Gage 1: _____ Gage 2: _____		☐ F
g. Is each available stream gage operated and maintained by USGS or DNRC?	☐ Y ☐ N	☐ F
i. If yes, skip to question 48.h.		
ii. If no, answer the following questions for each gage not operated and maintained by USGS or DNRC.		



1. How frequently is stage data recorded? Write "N/A" for Gage 2 if only one gage is not operated or maintained by USGS. Gage 1: _____ Gage 2: _____		☐ F
2. 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
a. Gage 1. _____	☐ Y ☐ N	☐ F
b. Gage 2. Write "N/A" on the line instead of answering yes or no, if only one gage is not operated or maintained by USGS or DNRC. _____	☐ Y ☐ N	☐ F
3. Was the rating curve established and maintained throughout the duration of the period of record using measurements taken near the reference gage and stage recorder according to USGS protocols?	☐ Y ☐ N	☐ F
a. Gage 1. _____	☐ Y ☐ N	☐ F
b. Gage 2. Write "N/A" on the line instead of answering yes or no, if only one gage is not operated or maintained by USGS or DNRC. _____	☐ Y ☐ N	☐ F
4. Were there requirements for maintaining a permanent gage datum and meeting specified accuracy limits?	☐ Y ☐ N	☐ F
a. Gage 1. _____	☐ Y ☐ N	☐ F
b. Gage 2. Write "N/A" on the line instead of answering yes or no, if only one gage is not operated or maintained by USGS or DNRC. _____	☐ Y ☐ N	☐ F
h. Do the data for one or more available stream gages meet the Department's standard to be sufficient to calculate the median of the mean monthly flow rate and volume during the months with net depletions?	☐ Y ☐ N	☐ F
i. If yes, record how many meet the standard, then skip to question 54 because this section is complete. _____		
ii. If no, answer question 49.		
49. If no gage data are available or if available gage data do not meet the Department's standard to be sufficient to calculate the median of the mean monthly flow rate and volume during the months with net depletions, is the source otherwise measured?	☐ Y ☐ N	☐ F

a. If no, measurements may be necessary. The Department cannot deem the preapplication meeting form adequately completed until the Department receives gage data and/or measurements that meet the Department's measurement standards or, in combination with an approved request to deviate from the Department's standards, are sufficient to complete any necessary technical analyses or scientific credibility reviews and to evaluate the applicable criteria. Skip to question 50.		
b. If yes,		
i. Submit measurements to the Department.	☐ S	☐ F
ii. Who collected the measurements? _____	☐ A	☐ F
iii. With what method was the data collected? _____ _____	☐ A	☐ F
iv. What is the period of record? _____		☐ F
v. What is the frequency of measurement? _____		☐ F
vi. Are there gaps in the data?	☐ Y ☐ N	☐ F
1. If yes, what is the nature of the gaps and how are gaps handled to ensure data quality? _____ _____ _____	☐ A	☐ F
vii. Is there a process for maintaining the data and meeting specified accuracy limits?	☐ Y ☐ N	☐ F
1. If yes, explain. _____ _____ _____	☐ A	☐ F
viii. Do available measurement data meet the Department's standard to be sufficient to calculate the median of the mean monthly flow rate and volume during the months with net depletions?	☐ Y ☐ N	☐ F
1. If yes, this section is complete. Skip to question 54.		
2. If no, answer question 50.		



50. Do the available measurement data, gage and/or otherwise measured, meet the Department's standard of including a minimum of high, moderate, and low flows to be sufficient to use for calibration of a Department-accepted estimation technique?	☐ Y ☐ N	☐ F
a. If yes,		
i. Describe how the measurements are representative of high, moderate, and low flows. _____ _____ _____ _____	☐ A	☐ F
ii. Describe the estimation technique. _____ _____ _____ _____ _____ _____	☐ A	☐ F
b. If no, but a Department-accepted estimation technique will be appropriate for the hydraulically connected surface water source:		
i. Will measurements be collected prior to submission of a completed Form 600P-B 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, do you plan on requesting to deviate from 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? The Department's technical analyses or scientific credibility review of your technical analyses cannot commence until the Department receives measurements that meet Department measurement standards, or in combination with a request to deviate, are sufficient to complete any necessary technical analyses or scientific credibility reviews and to evaluate the applicable criteria.	☐ Y ☐ N	☐ F
c. If no, because no Department-accepted estimation technique will be appropriate for the hydraulically connected surface water source:		
i. Describe why no Department-accepted estimation technique is appropriate for the source characteristics. _____ _____ _____	☐ A	☐ F
ii. Do the available measurement data, gage and/or otherwise measured, meet the Department's standard for monthly measurements throughout the months with net depletions?	☐ Y ☐ N	☐ F
1. If no, will measurements be collected prior to submission of a completed Form 600P that meet the Department's standard of monthly measurements throughout the months with net depletions?	☐ Y ☐ N	☐ F
a. If yes, with what method will the data be collected? _____ _____	☐ A	☐ F



b. If no, do you plan on requesting to deviate from the Department's standard for monthly measurements throughout the months with net depletions? The Department's technical analyses or scientific credibility review of your technical analyses cannot commence until the Department receives measurements that meet Department measurement standards, or in combination with a request to deviate, are sufficient to complete any necessary technical analyses or scientific credibility reviews and to evaluate the applicable criteria.	☐ Y ☐ N	☐ F
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Area of Potential Impact Analysis of Depleted Surface Water

All information for area of potential impact of depleted surface water was collected in previous questions.

Hydrogeologic Report

51. Does your project include one or more wells, pumping pits, or ponds that are in a basin closure area? If yes, fill out questions 52 to 53. Your project must have a Hydrogeologic Report that conforms with § 85-2-361 to comply with the requirements of § 85-2-360, MCA. A Hydrogeologic Report Addendum (Form 600-HRA) or Department Technical Analyses may be used to meet these requirements.	☐ Y ☐ N	☐ F
52. Did you elect in question 1 for the Department to conduct the Technical Analyses?	☐ Y ☐ N	☐ F
a. If yes, the Basin Closure Area Addendum (Form 600-BCA), Form 600-HRA, and Hydrogeologic Report are not required at this time. The Department's Technical Analyses will meet requirements of §85-2-360, MCA for a Hydrogeologic Report and Form 600-HRA. Form 600-BCA will be required with application submittal.		
b. If no, submit the Basin Closure Area Addendum (Form 600-BCA) and Hydrogeologic Report Addendum (600-HRA) with your Technical Analyses.	☐ S	☐ F
53. If the Hydrogeologic Report indicates that the proposed groundwater use will impact a surface water source, identify and explain which of the following three options best describes your plan to mitigate depletions of hydraulically connected surface water and respond to the relevant questions below. ☐ Application to Change a Water Right to mitigate the adverse effects created ☐ Alternative mitigation plan ☐ Documentation to show a mitigation plan is not required		
a. Application to Change a Water Right to mitigate the adverse effects created: Submit a summary of your initial proposal. <i>A separate Preapplication Meeting will be required for each Application to Change a Water right to a mitigation or aquifer recharge purpose to qualify for expedited timelines and reduced filing fees for the project per ARM 36.12.1302(7)(a).</i>	☐ S	☐ F
b. Alternative mitigation plan: Submit a summary of your initial proposal.	☐ S	☐ F



i. Do you propose to use water with a marketing for mitigation/aquifer recharge purpose?	☐ Y ☐ N	☐ F
1. If yes,		
a. List the change authorization number(s) for all water rights proposed for use. _____	☐ A	☐ F
b. What is the area defined for marketing for all water rights proposed for use? _____	☐ A	☐ F
c. If Marketing for aquifer recharge, submit the analysis of the monthly accretions to hydraulically connected surface water(s); otherwise write "NA". _____	☐ S	☐ F
c. Documentation to show a mitigation plan is not required: Submit all documentation.	☐ S	☐ F



MANDATORY 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.

Project-Specific Questions: Controlled Groundwater Areas and Basin Closures

Questions, Narrative Responses, and Tables	Check-boxes	Follow-up
54. Does the project include one or more groundwater points of diversion located in the East Valley Controlled Groundwater Area (EVCGWA)?	☐ Y ☒ N	☐ F
a. If yes, is the use over 35 GPM or 10 AF/YR?	☐ Y ☐ N	☐ F
i. If no, this is the incorrect form. Use instead Form 600-EVCGWA: East Valley Controlled Groundwater Area Permit Application.		
ii. If yes, how does this project meet the specific requirements of the East Valley Controlled Groundwater Area? Include any relevant documentation. _____ _____ _____ _____	☐ A	☐ F
b. If no, skip to question 55.		
55. Does the project include one or more groundwater points of diversion located in the Yellowstone Controlled Groundwater Area?	☐ Y ☒ N	☐ F
a. If yes, is the proposed flow rate and volume over 35 GPM or 10 AF/YR?	☐ Y ☐ N	☐ F
i. If no, this is the incorrect form. Use instead Form 600-YCGA: Yellowstone Controlled Groundwater Area Permit Application.		
ii. If yes, answer the remaining parts of question 55 and submit <i>Form 600 YCGA: A Yellowstone Controlled Groundwater Area Addendum Over 35 gallons per minute</i> with the application.		
1. Does the proposed use require a point of diversion with water temperature of 60 degrees Fahrenheit or more?	☐ Y ☐ N	☐ F
2. If an application is in a basin tributary to a category 3 or 4 stream (generally in or upstream of Yellowstone National Park), submit with the application a report prepared by a qualified professional verifying that the appropriation is not hydrologically connected to surface flow that is tributary to the reserved portion of category 3 or 4 streams.		
b. If no, skip to question 56.		



56. Is the project for surface water or groundwater and subject to one or more of the Controlled Groundwater Areas; administrative, Department ordered, or legislative basin closures; or compact closures listed on the Department's website (https://dnrc.mt.gov/Water-Resources/Water-Rights/Basin-Closures-Stream-Depletion-Controlled-Ground-Water-Areas) not covered in questions 54 to 55?	☐ Y ☐ N	☐ F
a. If yes, identify each area and describe how the proposed project meets its requirements. An application must meet the specific requirements of the Controlled Groundwater Area or closure to be accepted by the Department. _____ _____ _____ _____ _____ _____ _____ _____ _____	☐ A	☐ 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
57. Describe your plan to ensure that existing water rights will be satisfied during times of water shortage. Applicant can cease diversion if valid call is made 	☐ A
58. Explain how you can control your diversion in response to call being made. Pump can be shut off if valid call is made 	☐ A
59. Are you aware of any calls that have been made on the source of supply or depleted surface water source? a. If yes, explain. 	☐ Y ☒ N ☐ A
60. Does a water commissioner distribute water or oversee water distribution on your proposed source or depleted surface water source?	☐ Y ☒ N



61. Will the point of diversion or conveyance infrastructure be shared with one or more existing water rights?	☐ Y ☒ N
a. If yes, explain how capacity of the shared point of diversion and/or conveyance infrastructure is sufficient for all water rights. 	☐ A

Adequate Diversion Means and Operation

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



64. Describe the size, materials, capacity, and configuration of infrastructure to convey water from point of diversion to place of use. This may include but is not limited to, pipelines and ditches. Include a description of any losses related to the proposed conveyance. Ditch conveyance losses may be estimated numerous ways, which include a ditch loss rate or Department standard methods. You may work with the Department to estimate ditch conveyance losses but will need to provide sufficient baseline information; which includes ditch slope, dimensions, length, lining material, soil type, and location. _____ _____ _____ _____ _____ _____	☐ A
65. Describe how the proposed diversion and conveyance infrastructure can provide the required flow and volume, for the purposes plus any conveyance losses and storage, throughout the proposed period of diversion. _____ _____ _____ _____ _____ _____	☐ A
66. Provide a plan of operations, which includes specific information about how water is delivered within the place of use. This may include, where applicable, the range of flow rates needed for a pivot. _____ _____ _____ _____ _____	☐ A



67. Does the proposed conveyance require easements?	☐ Y ☒ N
a. If yes, explain. _____ _____ _____	☐ A
68. Do you own the land where all proposed points of diversion are located?	☒ Y ☐ N
a. If no, documentation to show you have the right to use all points of diversion located on each property you do not own will be required upon application submittal. This may include, but is not limited to, a well agreement, an easement, or permission of the party that owns the property where the proposed point(s) of diversion are located.	
69. Describe any places of storage, including whether drainage devices will be installed, and provide preliminary designs, if available. Preliminary designs will be required at application submittal. _____ _____ _____ _____	☐ A
70. Do you have any plans to measure your diversion and use?	☐ Y ☒ N
a. If yes, describe the plan and the type of measurements you will take. _____ _____ _____	☐ A

Beneficial Use

71. Does the Department have a standard for any of the purposes for which water is used? Department standards can be found in ARM 36.12.112 and ARM 36.12.115.	☒ Y ☐ N
a. If yes, list the purposes for which the Department has a standard and note whether the proposed use falls within or outside the standard. Irrigation - within (we assume) _____ _____	



72. If no Departmental standard exists for any proposed purpose, or if any proposed purpose falls outside of Department standards, explain how the use is reasonable for that purpose. 	☐ A
73. 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
74. 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

75. 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.	☐ Y ☒ N
a. If yes, explain. 	☐ A



b. If no,	
i. Do you own all proposed places of use?	☐ Y ☐ N
1. If no,	
a. Explain. Documentation that shows you either have possessory interest or written permission of the parties with possessory interest of the place of use will be required at application submittal. 	☐ A
b. Would you like the water right to be appurtenant to the land? Please note that if your water right is not appurtenant to land it will not transfer by default with the conveyance of the property, pursuant to § 85-2-403.	☐ Y ☐ N
i. If no, explain. 	☐ A

Non-Mandatory Project Specific Questions

Place of Storage

76. Does the proposal include at least one place of storage? If yes, answer questions 77 to 80 for each individual place of storage (use "Additional Place of Storage (600P)" sheet for additional places of storage). A Permit Storage Addendum (Form 600-SA) will be required at application submittal. If no, this section is complete, and you can skip to question 81.	☐ Y ☒ N
77. Are preliminary designs available? Preliminary designs will be required at application submittal.	☐ S
a. If yes, submit preliminary designs.	☐ Y ☐ N
78. Will the place of storage be lined?	☐ Y ☐ N
79. What is the annual net evaporation of water from the place of storage, based on the Department's gridded net evaporation layer? If you propose a different method, attach an explanation and justification of the method. 	☐ A



80. Is the place of storage capacity calculated to be greater than 50 AF?	☐ Y ☐ N
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? This will be required by application submittal.	☐ Y ☐ N

Project-Specific Questions: Water Marketing

81. Does the proposal include water marketing? If yes, please answer the questions in this section (questions 82 to 85). A Water Marketing Addendum Purpose Addendum (600/606-WMA) will be required at application submittal. If no, this section is complete.	☐ Y ☒ N
82. For what purpose(s) will the marketed water be used? _____ _____ _____	☐ A
83. How will you control or limit access to the water? _____ _____ _____	☐ A
84. Do you have contracts for the entire volume and flow rate sought?	☐ Y ☐ N
85. Provide a service area map. Create map on an aerial photograph or topographic map and show the following: general service area boundary, section corners, township and range, scale bar, and north arrow.	☐ S



FOLLOW-UP

The tables below will identify all questions marked for follow-up. Applicant follow-up will be submitted with the completed Preapplication Meeting Form: Part B (Form 600P-B). Applicant will provide all responses to questions marked for follow-up on a separate document entitled "Follow-up Responses." At the preapplication meeting, the Department may offer to provide the Applicant with information pertinent to identified follow-up. In this case, record in the notes column what information the Department will provide and the date by which the Department will email this information to the Applicant. This information will supplement but not replace Applicant follow-up. It is the responsibility of the Applicant to provide all follow-up, including questions supplemented by Department information, in the "Follow-up Responses" document.

The "Follow-up Responses" document must conform to the following standards. Label all responses with the question number. Answer questions in the same format as the form. For responses in the form of checkboxes, write "Y", "N", "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: Part A (Form 600P-A) signed at the Preapplication Meeting. Instead, the Applicant must use the Amended Responses procedure defined in Form 600P-B. Do not include additional information for questions that were not marked for follow-up on this table; instead include any additional information pursuant to the process for amending responses defined in Form 600P-B.

QUESTION #	NOTES
2	Map meeting all requirements
5	Volume (based on total acres)
9	Total acres per legal description
11	Volume contributed by supplemental right (based on acres)
20	Volume needed at POD



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 meeting 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 five business days 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.

Applicant Signature

Date

Applicant Signature

Date

Department Signature

Date





REQUEST FOR PREAPPLICATION MEETING

ARM 36.12.1302(2)
(Revised 02/2025)

9/22/2025 @ 11AM

For Department Use Only

RECEIVED

AUG 21 2025

DNRC-WRD-BILLINGS

Instructions

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

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

Date Received

8/21/2021

Received By

00

Scheduled Meeting Date

9/22/2025 @ 11AM

1. Applicant Name R BARN RANCH L.L.C

Mailing Address 89 SANDCREEK RD

City BRIDGER

State MT

Zip 59014

Home Phone 406-560-3018

Other Phone _____

Email: RBARN RANCH 2 @ G-mail. 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. Describe your project:

USE WASTE WATER TO IRRIGATE LAWN & GARDEN

Rick Cline - Per/PC
8/21/25

50 GPM

Volume = 10 AF



9/22/2025 @ 11AM



REQUEST FOR PREAPPLICATION MEETING

ARM 36.12.1302(2)
(Revised 02/2025)

For Department Use Only

Instructions

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

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Scheduled Meeting Date

9/22/2025 @ 11AM

1. Applicant Name R BARN RANCH L.L.C

Mailing Address 89 SANDCREEK RD

City BRIDGER

State MT

Zip 59014

Home Phone 406-560-3018

Other Phone _____

Email: RBARNRANCH2@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. Describe your project:

USE WASTE WATER TO IRRIGATE LAWN & GARDEN



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

a) The flow rate and volume of water required:

Flow Rate 50 ☐ GPM ☐ CFS Volume _____ Acre-Feet

b) The point of diversion:

Point of Diversion #1 SW 1/4 NW 1/4 NE 1/4 Section 8, Township 6 ☐ N ☒ S, Range 23 ☒ E ☐ W
County CARBON

Lot/Tract _____ Block _____ Subdivision Name _____

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

Lot/Tract _____ Block _____ Subdivision Name _____

c) The place of use:

4 Acres _____ Lot _____ Block NW 1/4 NW 1/4 NE 1/4 Sec 8, Twp 6 ☐ N ☒ S, Rge 23 ☒ 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: SAND CROOK

e) The proposed purpose: LAWK'S GARDEN IRRIGATION

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 # _____

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

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

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 _____ ☐ 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 well or wells, the well depth(s) and location. If more than two wells, attach a separate sheet to this request:

Well #1 ☐ New Well ☐ Existing Well

For existing well, if available, Water Right # _____ GWIC ID _____

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

County _____

Lot/Tract _____ Block _____ Subdivision Name _____

Estimated Well Depth _____ Feet

Well #2 ☐ New Well ☐ Existing Well

For existing well, if available, Water Right # _____ GWIC ID _____

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

County _____

Lot/Tract _____ Block _____ Subdivision Name _____

Estimated Well Depth _____ Feet



Existing Rights

- Abstracts of supplemental, associated, or otherwise related water rights

Existing Rights

STATE OF MONTANA
DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION
1424 9TH AVENUE P.O. BOX 201601 HELENA, MONTANA 59620-1601

GENERAL ABSTRACT

Water Right Number: 43D 199996-00 STATEMENT OF CLAIM

Version: 3 -- REEXAMINED

Version Status: ACTIVE

Owners: SAND CREEK CANAL CO
% DORIS DONOHOE
PO BOX 2241
RED LODGE, MT 59068

Priority Date: JULY 21, 1898

Enforceable Priority Date: JULY 21, 1898

Type of Historical Right: FILED

Purpose (Use): IRRIGATION

Irrigation Type: SPRINKLER/FLOOD

Maximum Flow Rate: 225.00 CFS

THE MAXIMUM COMBINED FLOW RATE FOR CLAIMS 43D 199994-00, 43D 199995-00, 43D 199996-00, 43D 199997-00, 43D 199998-00, AND 43D 199999-00 SHALL NOT EXCEED 225 CFS.

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

Climatic Area: 1 - HIGH

Maximum Acres: 190.00

Source Name: CLARKS FORK YELLOWSTONE RIVER

Source Type: SURFACE WATER

Point of Diversion and Means of Diversion:

<u>ID</u>	<u>Govt Lot</u>	<u>Qtr Sec</u>	<u>Sec</u>	<u>Twp</u>	<u>Rge</u>	<u>County</u>
1		NESENW	8	7S	23E	CARBON

Period of Diversion: APRIL 1 TO OCTOBER 15

Diversion Means: HEADGATE

Ditch Name: SAND CREEK CANAL

Period of Use: APRIL 1 to OCTOBER 15

Place of Use:

<u>ID</u>	<u>Acres</u>	<u>Govt Lot</u>	<u>Qtr Sec</u>	<u>Sec</u>	<u>Twp</u>	<u>Rge</u>	<u>County</u>
1	92.00		NW	8	6S	23E	CARBON
2	96.00		NE	8	6S	23E	CARBON
3	2.00		SE	15	5S	23E	CARBON

Total: 190.00

Geocodes/Valid: -- NO VALID GEOCODES --

Remarks:

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

199994-00

199995-00

199996-00

199997-00

199998-00

199999-00

AUTHORIZATION TO CHANGE PLACE OF USE COMPLETED 03/16/1990. FILE REFLECTS RIGHT AS IT EXISTED PRIOR TO JULY 1973. APPROVED CHANGES WILL BE RECORDED AFTER FINAL DECREE. SEE 43D-199995.

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