FUTURE FISHERIES IMPROVEMENT PROGRAM GRANT APPLICATION

All sections must be addressed, or the application will be considered invalid

I. APPLICANT INFORMATION

A. Applicant Name: Katelin Killoy

Mailing Address: 730 ½ N Montana St.

City: Dillon State: MT Zip: 59725

Telephone: 406-596-1999 E-mail: Katelin.killoy@mt.gov

B. Contact Person (if different than applicant):

Address:

City: State: Zip:

Telephone: E-mail:

C. Landowner and/or Lessee Name (if different than applicant): Jack Hirschy Livestock

Mailing Address: PO Box 834

City: Jackson State: MT Zip: 59736

Telephone: 406-660-3500 E-mail:

II. PROJECT INFORMATION

A. Project Name: Jack Hirschy Livestock Upper Big Hole Stock Water Systems

River, stream, or lake: Big Hole River

Location: Township: 3, 4 South Range: 15, 16 West Section: 17, 31

Latitude: 45.53689 Longitude: -113.61344 *Within project (decimal degrees)*

County: Beaverhead

B. Purpose of Project: *(high level, focus on why the project is important)*

The purpose of this project is to increase healthy riparian habitat along the Big Hole River within the Arctic Grayling Big Hole CCAA. This project will drill one well (Home Place Stock Water System) and install a stock tank system to improve riparian health and instream flows (Highlands 2 Stock Water System).

This project will treat the primary resource concern of aquatic habitat for fish and other organisms through developing watering systems fed by wells, thus reducing stock water right diversions and improving instream flows during base flow conditions in the Big Hole River and associated tributaries. In addition, offsite water developments will reduce livestock degradation along riparian areas.

Secondary resource concerns benefited by installation of the proposed projects include; Soil - Reduced bank erosion along streams or water conveyance channels; Water – Reduced surface water depletion; Plant – Enhanced plant productivity and health; Animal – Adequate livestock water; Entrainment- Reducing withdrawals off of tributaries of the Big Hole River reduces the risk of entrainment.

The Objectives of the project include the following:

1. Improve grazing timing.
2. Improve grazing distribution
3. Improve bank stability.
3. Maintain or improve cover of deep rooting species.
4. Improve water quality and temperature.
5. Improve instream flows

C. Brief Project Description (attach additional information to end of application). Please include the anticipated construction schedule:

The Jack Hirschy Livestock is enrolled in the Candidate Conservation Agreement with Assurances for Arctic Grayling in the upper Big Hole River Program (CCAA). In cooperation with the CCAA program Jack Hirschy Livestock has agreed to manage and improve riparian corridors in compliance with their CCAA site plan. In 2023, the enrolled landowner determined that current water sources are inadequate in upland pastures. Stock water systems will provide the enrolled landowner to graze longer in upland pastures which allows longer rest in riparian pastures. Following the stock tank projects, the enrolled landowners will be able to better manage grazing distribution so riparian areas become resilient to short, intense grazing periods during the fall and winter (streambanks stable) rather than continuous grazing. One well for a stock water system near the North Branch of Big Swamp Creek and one stock water system (tanks, pipeline, pump, and electrical installation) near Moose Creek is planned.

Scope of Work:

- Drill one well
- Install a pump and electrical hookup for a stock tank system
- Install 1 stock water system (pipeline and tanks)

This project builds on a watershed scale restoration effort for Arctic Grayling in the Big Hole River through the Candidate Conservation Agreement with Assurances Program (CCAA). The CCAA works with private landowners to address threats and implement conservation measures that benefit Arctic grayling and other native fish species.

D. What was the cause of habitat degradation and how will the project correct the cause?

Through landowner visits upland pastures were identified without reliable stock water. These pastures have to leave a ditch on to water cattle. The stock water systems will allow the landowners to turn off ditches when they are not needed for irrigation.

E. Length of stream or size of lake that will be treated (project extent): 8 stream miles

Length/size of impact, if larger than project extent (e.g., stream miles opened): N/A

F. Project Budget Summary:

Grant Request (Dollars): $ 24,662.00

Matching Dollars: **$ 21,833.00**

Matching In-Kind Services:* **$ 2,830.00**

**salaries of government employees are not considered matching contributions*

Other Contributions (not used as match) **$**

Total Project Cost: $ 49,325.00

G. Attach itemized (line item) budget – *see budget template*

H. Attach project location map(s) that include:

- ☐ Extent of the project, including context (relation to major landmark or town)
- ☐ Indication of public and private property
- ☐ Riparian buffer locations and widths (if applicable) and grazing locations

I. Attach project plans:

- ☐ Detailed sketches or plan views with the location and proposed restoration
- ☐ Pre-project photographs (GPS location strongly recommended)
- ☐ If water leasing or water salvage is involved, attach a supplemental questionnaire (*https://myfwp.mt.gov/getRepositoryFile?objectID=36110*)

J. Attach support letters or statements of (e.g., landowner consent, community or public support). For FWP statement, attach provided template. List any other project partners:

Biologist statement from Ryan Kreiner

III. MAINTENANCE AND MONITORING (attach additional information to end of application):

A. A 20-year maintenance commitment is required*. Please confirm that you will ensure this protection and describe your approach. Attach any relevant maintenance plans. Yes [x] No [ ]

**If it is a water leasing project, describe the length of the agreement.*

This project is part of each Landowner's Site-Specific Conservation Plan (SSP) through the Big Hole Arctic Grayling CCAA. The SSPs address threats to Arctic Grayling on the landowner's property including riparian health and instream flow. The SSP is a 10-year agreement that has been signed in 2025 by Jack Hirschy Livestock. The landowner has implemented numerous conservation projects for Arctic Grayling in good faith and successfully improved habitat, stream flows and connectivity that have benefited Arctic grayling and other native and sportfish. The landowner has signed both MFWP and USFWS landowner agreements (20 and 10-year agreements, respectively).

B. Will grazing be part of or adjacent to the project? If so, describe or attach land management plans, including short term and long term grazing regimes. If the landowner is not the applicant, please describe their involvement in the project. *If you want assistance with grazing plan development, note your need.*

Jack Hirschy Livestock is enrolled in the Arctic Grayling Candidate Conservation Agreement with Assurances program in the Big Hole (CCAA). In cooperation with the CCAA program, the landowner has continually worked with FWP on grazing schedules in compliance with their SSP. The current grazing plan call for a short duration fall grazing in riparian pastures. The stock water systems will allow the landowners better manage their grazing schedules.

C. Will the project be monitored to determine if goals were met? If so, what are the short-term and long-term plans to assess benefits and lessons learned? Were pre-project data collected? Will monitoring information be shared with FWP?

The project will be monitored every five years as a part of the CCAA program using NRCS Riparian Assessment Method (NRCS 2004). Additionally, FWP annually monitors grayling abundance and genetic diversity downstream of the project area (on the other side of the highway from the project area). Ongoing large-scale restoration efforts in the Big Hole River have positively influenced the overall grayling population and provides resilience to drought and other threats identified in the State of Montana's Upper Missouri River Arctic Grayling Conservation Strategy (2022). Lastly, this project is anticipated to maintain or improve adequate stream temperatures. On Jack Hirschy Livestock's enrolled land there is a Tru Track to monitor water temperature and stream stage.

IV. PROJECT BENEFITS (attach additional information to end of application):

A. What species of fish will benefit from this project?

Arctic grayling (*Thymallus arcticus*), a designated Species of Concern by the State of Montana.

B. How will the project protect or enhance wild fish habitat?

Improved riparian health along the Big Hole River enhances grayling habitat by increasing tree cover and reducing sediment inputs into the stream. Additionally, increased tree cover helps to maintain cold water in the Big Hole River.

C. What is the expected improvement to fish populations, both short term and long term? How might the project translate to angler success?

Improved riparian health of the Big Hole River will benefit Arctic grayling by maintaining cold water in important conservation reaches. This provides the public an opportunity to appreciate and catch a unique Montana species.

D. Will the project increase public fishing opportunity for wild fish and, if so, how? Is public fishing allowed onsite? Is it allowed by permission? If not, describe how the public would benefit.

This project will increase public opportunity of a quality fishing experience by improving conditions for Arctic grayling persistence in the Big Hole River.

E. Aside from angling, what local or large-scale public benefits will be realized from this project?

This project is part of an ongoing, large-scale habitat improvement program in the Big Hole River which has positively influenced grayling population levels since its inception. Improved riparian health of Steel creek equates to improved spawning and rearing conditions for grayling that migrate large distances within the Big Hole River, and more opportunity for the public to appreciate and catch a unique Montana species. Additionally, a stable and healthy grayling population eliminates the need to protect Arctic Grayling under the ESA, which would place restrictions on land-use and angling.

F. Will the project interfere with water or property rights of adjacent landowners? (explain):

No. Project will not interfere with any water rights or property rights.

G. Will the project result in the development of commercial recreational use on the site (including paid access)? Explain:

No. The project is located on a working ranch. There will be no development of commercial recreational use.

H. Is this project associated with the reclamation of past mining activity?

No.

Each approved project applicant must enter into a written agreement with Montana Fish, Wildlife & Parks specifying terms and duration of the project. The applicant must obtain all applicable permits prior to project construction. A competitive bid process must be followed when using State funds.

V. AUTHORIZING STATEMENT

I (we) hereby declare that the information and all statements to this application are true, complete, and accurate to the best of my (our) knowledge and that the project or activity complies with rules of the Future Fisheries Improvement Program.

Applicant Signature: Katelin Killoy Date: 5/15/2025

Submittal: **Applications must be signed and received on or before November 15 and May 15 to be considered for the subsequent funding period**. Late or incomplete applications will be rejected.

Mail to:	FWP Future Fisheries Fish Habitat Bureau PO Box 200701 Helena, MT 59620-0701	Email:	Future Fisheries Coordinator FWPFFIP@mt.gov (electronic submissions must be signed) For files over 10MB, use https://transfer.mt.gov and send to mmcgree@mt.gov

BUDGET TEMPLATE SHEET FOR FUTURE FISHERIES PROGRAM APPLICATIONS

Both tables MUST be completed appropriately or the application will be invalid. Please see the example budget sheet for clarification.

PROJECT COSTS					GRANT REQUEST AND FUNDING			
Work Items (Itemize by Category)	**Number of Units**	**Unit Description***	**Cost/Unit**	**Total Cost**	**FUTURE FISHERIES REQUEST**	**Matching Contributions (Cash or In-Kind)*** **	**Other Contributions (Funds not used as match)**	**Total Funding**
**Units = feet, hours, cubic yards, etc. Do not use lump sum unless necessary.*								
Personnel								
Survey				$ -				$ -
Design				$ -				$ -
Engineering				$ -				$ -
Permitting	1	cultural	$2,830.00	$ 2,830.00		2,830.00		$ 2,830.00
Oversight				$ -				$ -
Maintenance**				$ -				$ -
			Sub-Total	$ 2,830.00	$ -	$ 2,830.00	$ -	$ 2,830.00
Travel								
Mileage				$ -				$ -
Per diem				$ -				$ -
			Sub-Total	$ -		$ -	$ -	$ -
Construction Materials								
Stock tanks	2	tanks	$1,000.00	$ 2,000.00	1,000.00	1,000.00		$ 2,000.00
Pipeline	406	feet	$10.00	$ 4,060.00	2,030.00	2,030.00		$ 4,060.00
Drill Homeplace Well	240	feet	$85.00	$ 20,400.00	10,200.00	10,200.00		$ 20,400.00
Pump	1	pump	$4,625.00	$ 4,625.00	2,312.00	2,313.00		$ 4,625.00
				$ -				$ -
				$ -				$ -
				$ -				$ -
				$ -				$ -
			Sub-Total	$ 31,085.00	$ 15,542.00	$ 15,543.00	$ -	$ 31,085.00
Equipment, Labor, and Mobilization								
				$ -				$ -
Stock Tank labor and mobilization	1	system	$15,410.00	$15,410.00	9,120.00	6,290.00		$ 15,410.00
				$ -				$ -
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BUDGET TEMPLATE SHEET FOR FUTURE FISHERIES PROGRAM APPLICATIONS

				$ -				$ -
			Sub-Total	$ 15,410.00	$ 9,120.00	$ 6,290.00	$ -	$ 15,410.00
			OVERALL TOTALS	$ 49,325.00	$ 24,662.00	$ 24,663.00	$ -	$ 49,325.00

OTHER REQUIREMENTS:

**For projects that include a maintenance request, it cannot exceed 10% of the total project cost.

***Match can include in-kind materials or labor. Justification for in-kind labor (e.g. hourly rates used) can be noted below. Do not use government salaries as match.

Additional budget detail:

APPLICATION MATCHING CONTRIBUTIONS

Total should equal match listed above; do not include requested funds

CONTRIBUTOR	IN-KIND	CASH	TOTAL	Secured? (Y/N)
FWS Cultural	$ 2,830.00	$ -	$ 2,830.00	Y
State Wildlife Grant	$ -	$ 16,833.00	$ 16,833.00	Y
GGTU	$ -	$ 5,000.00	$ 5,000.00	N. Voting on it the day after this is due
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
TOTALS	$ 2,830.00	$ 21,833.00	$ 24,663.00	

OTHER CONTRIBUTIONS

Total should equal other contributions listed above; these are funds not specically matched to the Future Fisheries application

CONTRIBUTOR	IN-KIND	CASH	TOTAL	Secured? (Y/N)
Partners Program funding from USFWS for cultural surveys	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
	$ -	$ -	$ -	
TOTALS	$ -	$ -	$ -	

MONTANA FISH, WILDLIFE & PARKS

Future Fisheries Improvement Program

Appendix: FWP Statement

Project Title: Jack Hirschy Livestock Upper Big Hole Stock Water System

Please describe the potential impact of the project, including the priorities of the Fisheries Division and the importance to Montana's anglers.

The installation of off-channel stock tanks in the Upper Big Hole River has proven to be an incredibly effective way to restore riparian habitat and maintain adequate streamflow in the river and its tributaries. This project will directly benefit grayling by reducing irrigation withdrawal in the Big Hole River and a tributary. It will also concentrate grazing in off-channel areas which will allow continued recovery off deep-rooted riparian vegetation, thereby improving bank stability. Reduced withdrawals from other area tributaries will also benefit flows in this highly utilized area of the Big Hole River near Wisdom, MT.

The upper Big Hole River CCAA program has been highly successful at improving the grayling population by addressing four primary threats: 1) Reduced Streamflows, 2) Degrading and non-functioning habitat types, 3) Barriers to grayling movement, and 4) The potential for grayling entrainment in irrigation ditches. It has been so successful that the US Fish and Wildlife Service specifically called out the program as a primary reason in their 2020 finding that Upper Missouri River Arctic grayling were not warranted for protections under the Endangered Species Act. Specifically, they state that *Conservation actions associated with the Big Hole CCAA and Strategic Habitat Conservation Plan have reduced water temperatures in tributaries, increased instream flows in tributaries and the mainstem Big Hole River, decreased the duration of stressful or lethal water temperatures for Arctic grayling, connected almost all core habitat so Arctic grayling can access thermal refugia if water temperatures become too warm in parts of the Big Hole River system, and improved riparian health.* Further, they conclude that *It is now apparent that these threats are being effectively mitigated on private land (Big Hole River) by conservation actions under the Big Hole CCAA and do not appear to be present or acting at a level to warrant concern on most of the other populations.*

Name of FWP Biologist Ryan Kreiner Date: 5/11/2025

Please attach to the FFIP application and materials and submit according to listed deadlines.

APPENDIX E. Riparian Management Plan

Proposed Action:

This riparian management plan is intended to provide an adaptive approach for improving riparian habitat conditions identified as being "At Risk" on the Participating Landowner's ranch within the 15-year timeline for sustainability. The agencies and the Participating Landowner met during Fall of 2024 to discuss management alternatives for this riparian management plan. As identified in the conservation actions for Riparian Zone Conservation and Restoration of site-specific plan, the following "At Risk" riparian reaches require riparian management development to improve toward "Sustainable" conditions:

Big Hole River

Reach A of the Big Hole River rated "At Risk" in 2021 with a score of 67% due to lateral erosion on the outside banks of the upper section of the reach, poor width to depth ratio, high cover of introduced pasture grasses, and heavy browsing on available second year and older stems of willows. Where cattle trails on along the bank were present, the cover of introduced species was high. The Agencies recommend grazing in this pasture to be deferred to September 1st or as late as possible. The Agencies recommend short duration grazing with at least 45-day rest following each grazing event with utilization not to exceed (50%).

Reach B of the Big Hole River rated "At Risk" in 2023 with a score of 78% due to later erosion on the outside bank on the downstream end of the reach, high cover of introduced pasture grasses, and moderate browsing on available second year and older stems of willows (40% of available stems). After the bridge the banks are slumping into the stream. The Agencies suggest streambank restoration by sloping the bank to the appropriate dimension and planting mature *Salix* and native *Carex* sod mats to improve channel function, bank stability, and reduce sediment loss. Additionally, the Agencies recommend treatment against noxious species.

North Fork of Big Swamp Creek

Reach C rated "At Risk" in the 2023 riparian assessment with a score of 68% due to lateral erosion on outside banks, poor width to depth ratio in portions of the reach, high cover of introduced pasture grasses, and moderate browsing on available second year and older stems of willows. This reach showed improvement since the 2018 riparian assessment. Grazing pressure was still high in 2023. The Agencies recommend increasing the rest period to allow sedge recruitment. Additionally, select areas along these reaches will likely benefit from willow plantings to improve bank stability and cover. This will be identified by the Agencies and agreed upon in selected areas with the landowner.

Swamp Creek

Reach F rated “At Risk” in the 2024 riparian assessment with a score of 72% due to lateral erosion on both banks in the upstream section of the reach, high cover of introduced pasture grasses, and low cover of desirable deep-rooting riparian vegetation. This reach had large increase in score since the 2018 riparian assessment (increase by 21%). The Agencies recommend grazing in this pasture to be deferred to September 1st or as late as possible. The Agencies recommend short duration grazing with at least 45-day rest following each grazing event with utilization not to exceed (50%).

Moose Creek

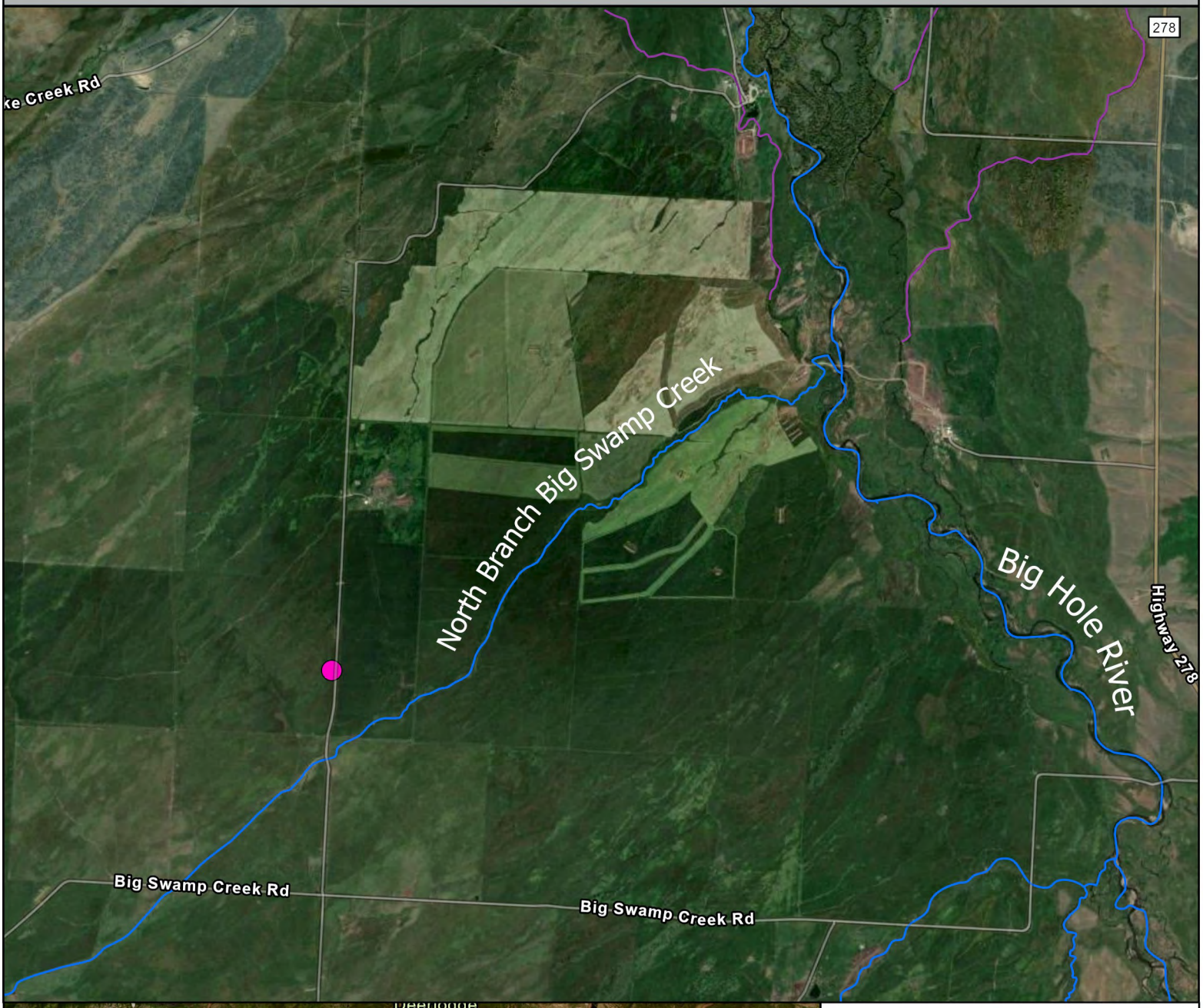
The riparian assessment for Reach G has gone missing. A riparian assessment is scheduled for 2025. The riparian management plan will be updated to reflect the result of that riparian assessment.

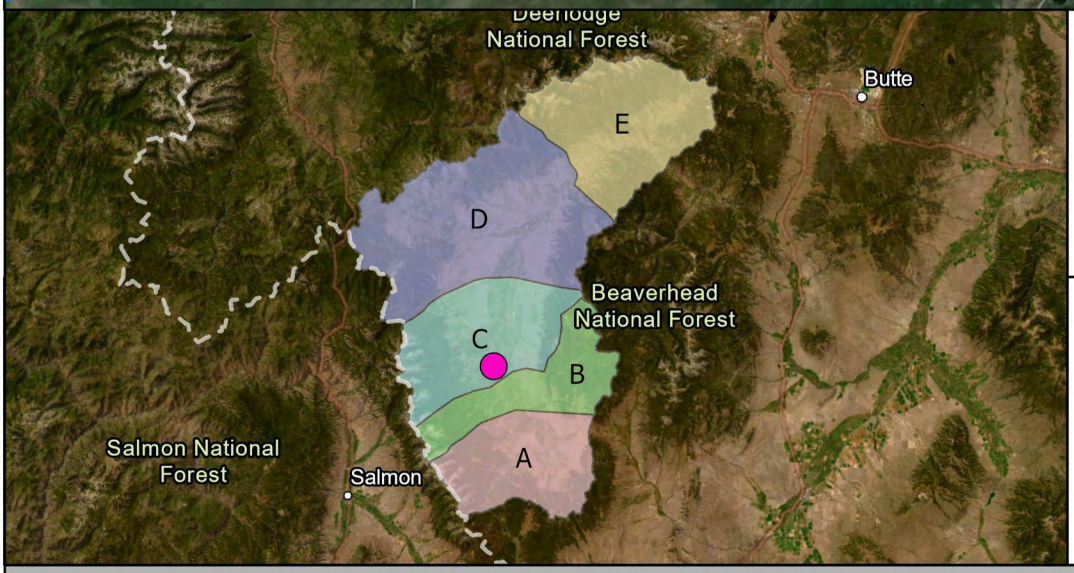
Sustainable Reaches

This riparian management plan is intended to provide an adaptive approach for improving riparian habitat conditions identified as being “At Risk” on the Participating Landowner’s property within the 15-year timeline for sustainability. Due to the current riparian conditions on Reaches D, E1, E2, and H the Participating Landowner is not required to make changes to the existing grazing strategy for those riparian areas. For all of the riparian habitat that rates “Sustainable” for the Participating Landowner, they are asked, but not required, to consult with the Agencies should any significant changes to the existing grazing strategy be required for the operation. The Participating Landowner will continue to operate and manage livestock in all riparian areas that maintains “Sustainable” conditions. If riparian areas degrade below “Sustainable” conditions this riparian management plan will be amended to improve management actions in the riparian habitat. At any time, the Participating Landowner asks for future guidance or riparian management recommendations, the Agencies will assist in drafting and submitting an amendment to this Site-Specific Plan as agreed upon with the Participating Landowner

Jack Hirschy Cattle Inc. Home Place Well

MONTANA FWP





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Streams

Jack Hirschy Cattle Inc. Well

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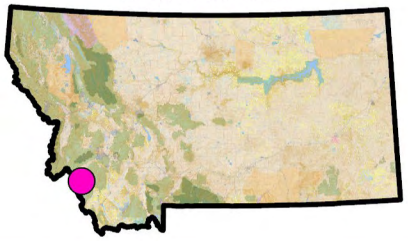
Area of Interest



Author: Katelin Killoy; Sources: FWP, FWS, ESRI Date 8/7/2023

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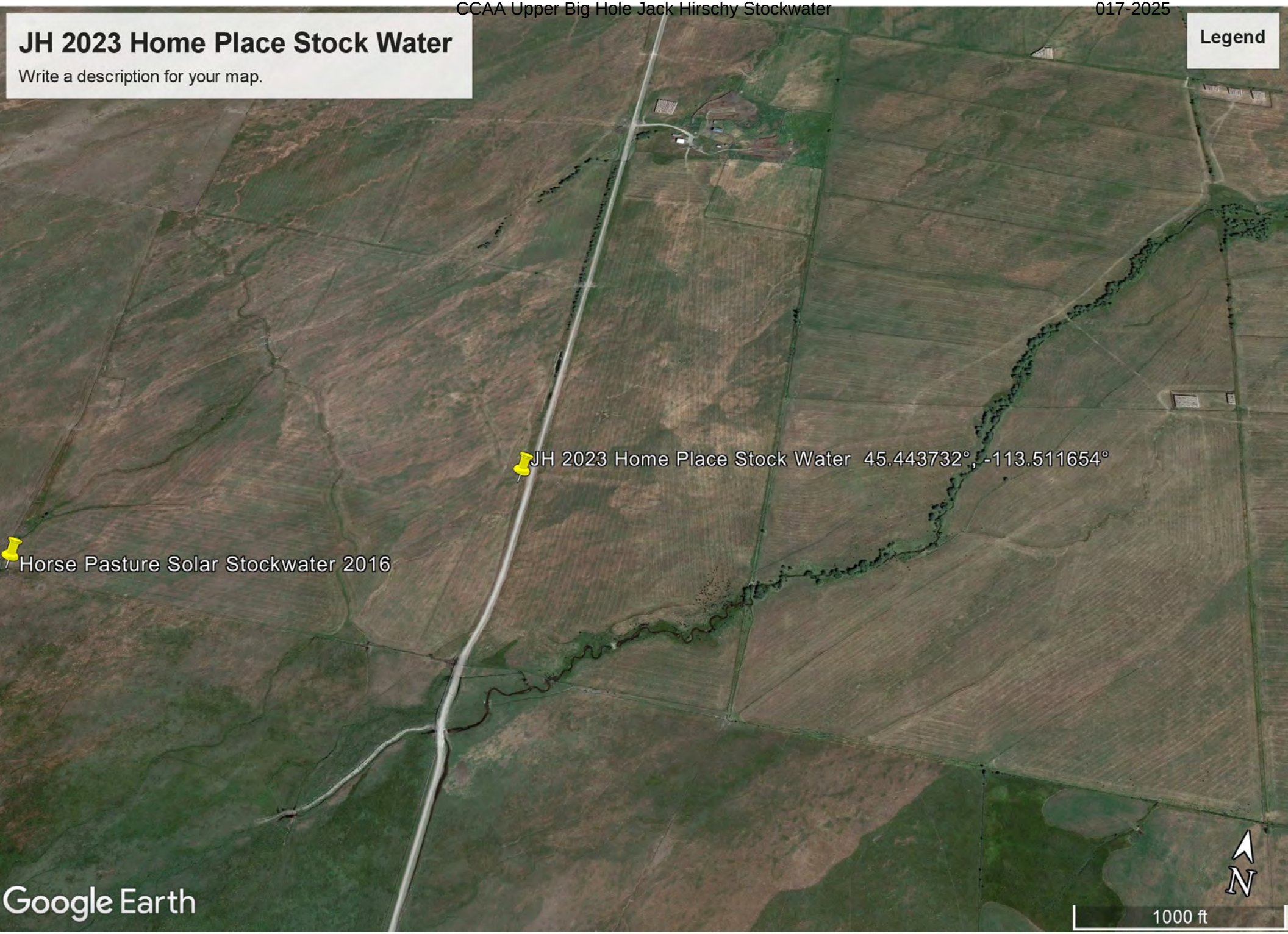
JH 2023 Home Place Stock Water
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Horse Pasture Solar Stockwater 2016
Google Earth
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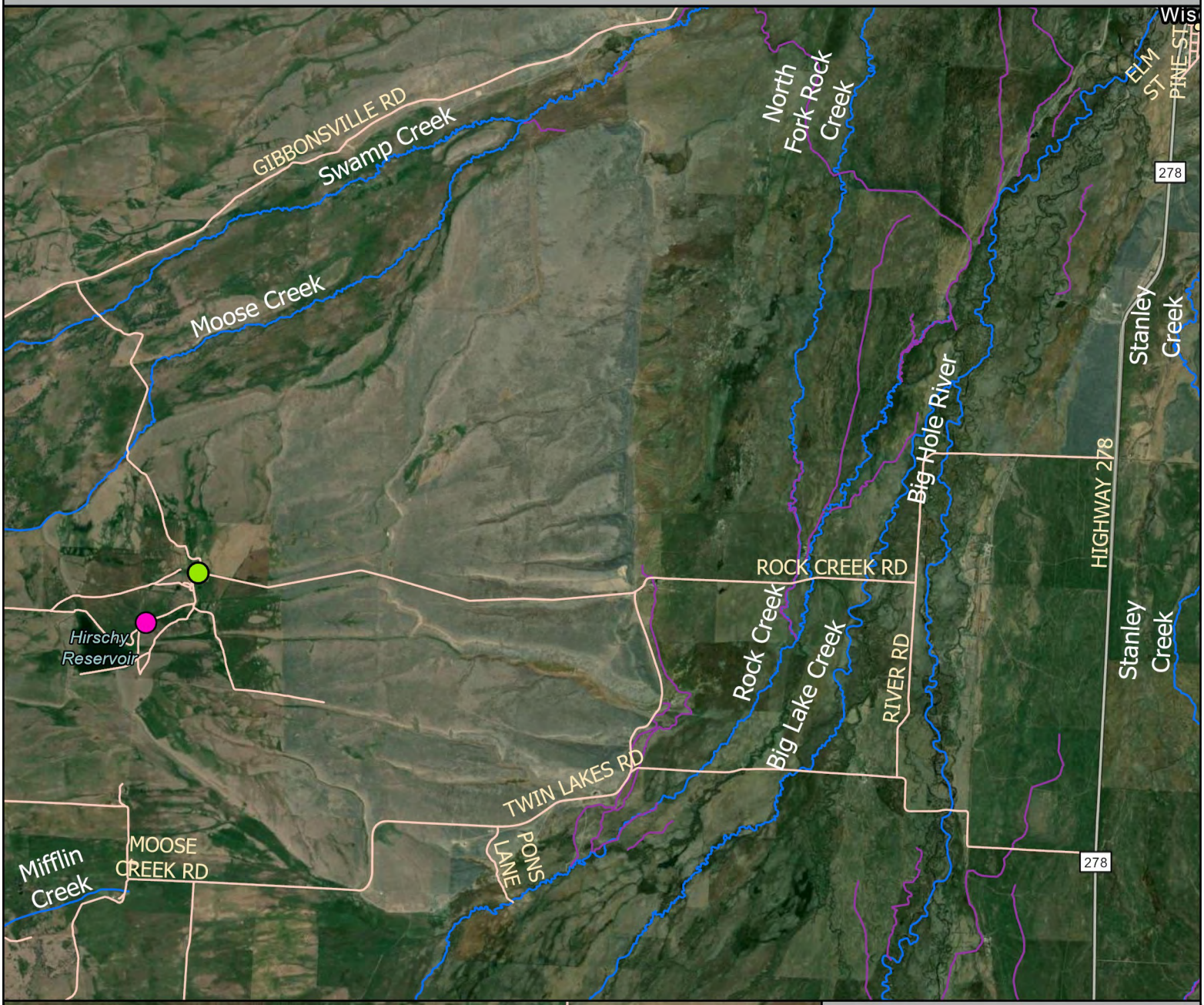
1000 ft

Big Hole Grazing Association Wells

MONTANA FWP

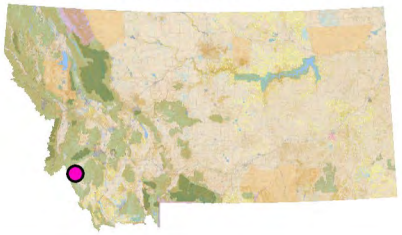


Legend

- Streams
- Jack Hirschy Cattle Inc. Well
- Roads
- Meeting Location

N

Area of Interest



Author: Katelin Killoy; Sources: FWP, FWS, ESRI Date 9/11/2023

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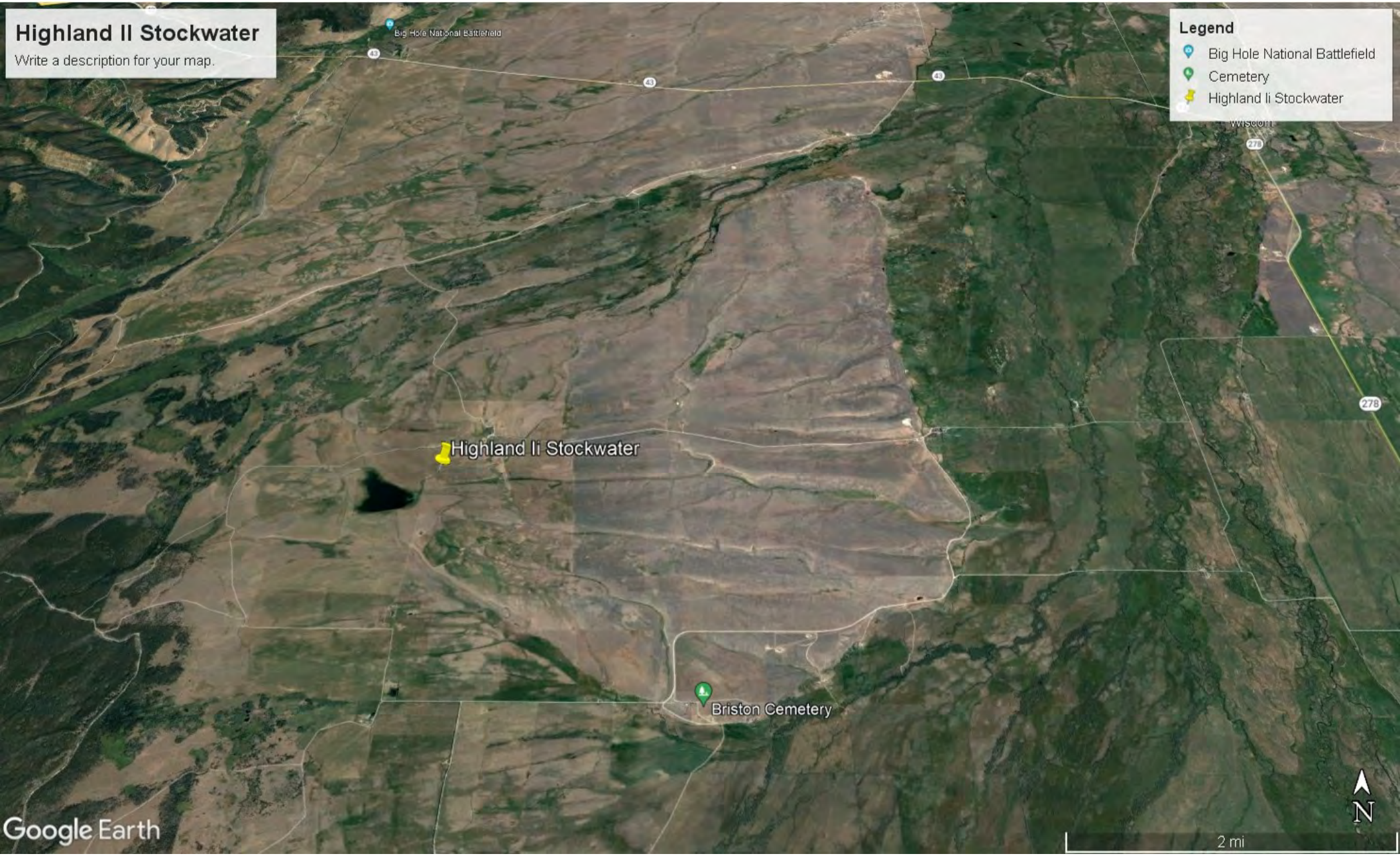
Highland II Stockwater
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Legend
Big Hole National Battlefield
Cemetery
Highland Ii Stockwater
Big Hole National Battlefield
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Briston Cemetery
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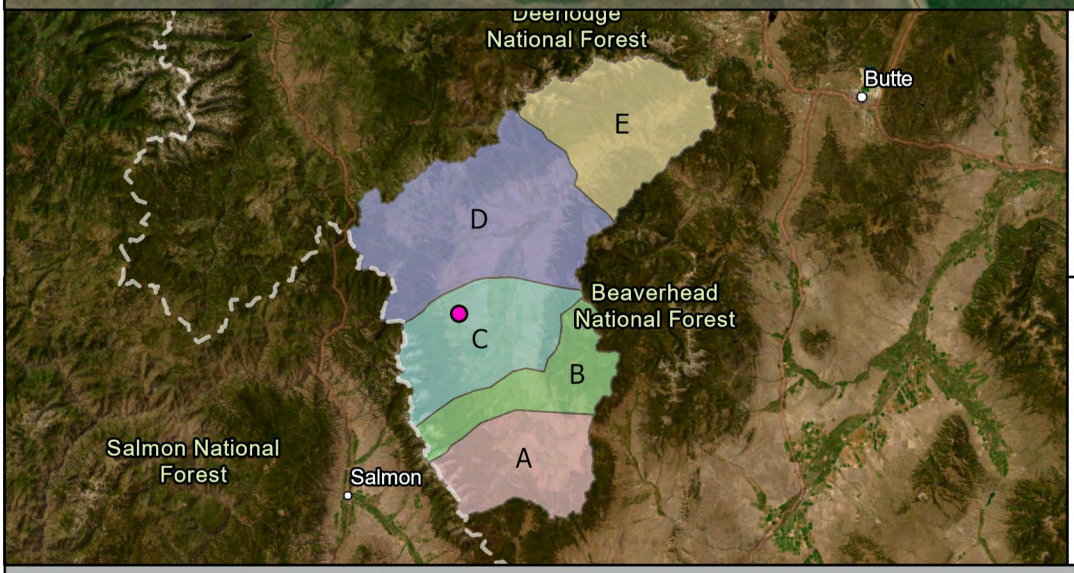
Jack Hirschy Cattle Inc. Highlands II Well

MONTANA FWP



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Streams

Jack Hirschy Cattle Inc. Wells

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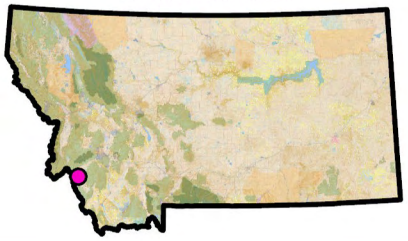
Area of Interest



Author: Katelin Killoy; Sources: FWP, FWS, ESRI Date 8/7/2023

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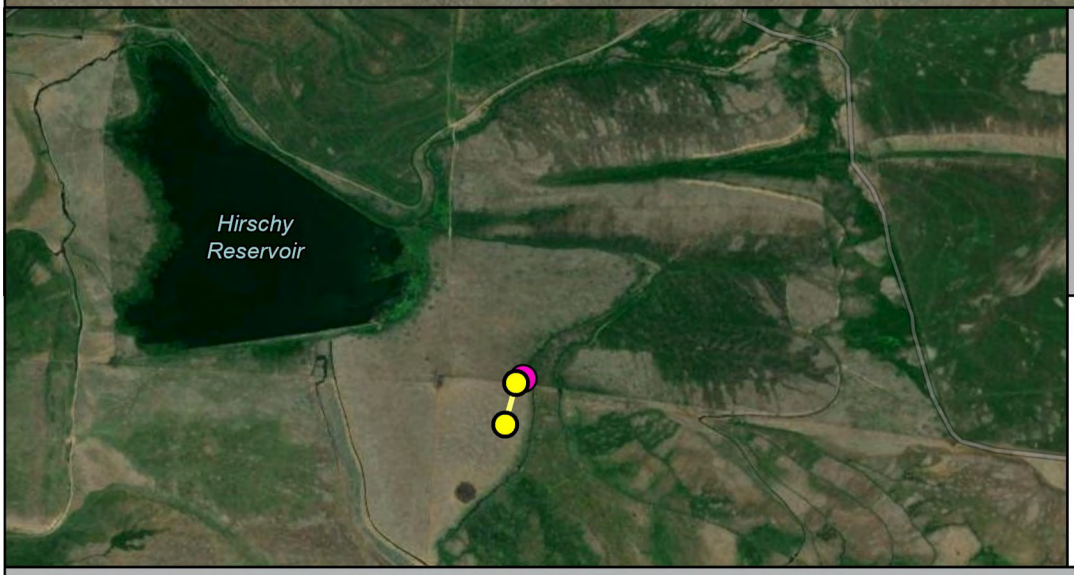
Miles

USGS Highland Ranch MT
T3S, R16W Sec. 29 & 32

Document Path: C:\Users\eott61\OneDrive\Desktop\Butte 2024\Ajax\Highland II Stockwater\Highlands II APE_Topo.mxd

Stock Tanks and Pipeline for Highlands 2 for Fred Hirschy

MONTANA FWP



Legend

- Fred Hirschy highlands2
- Tanks (1 splitting fence and 1 in a field)
- Pipeline ~406 ft

N

Area of Interest

Author: Katelin Killoy; Sources: FWP, FWS, ESRI Date 1/31/2024

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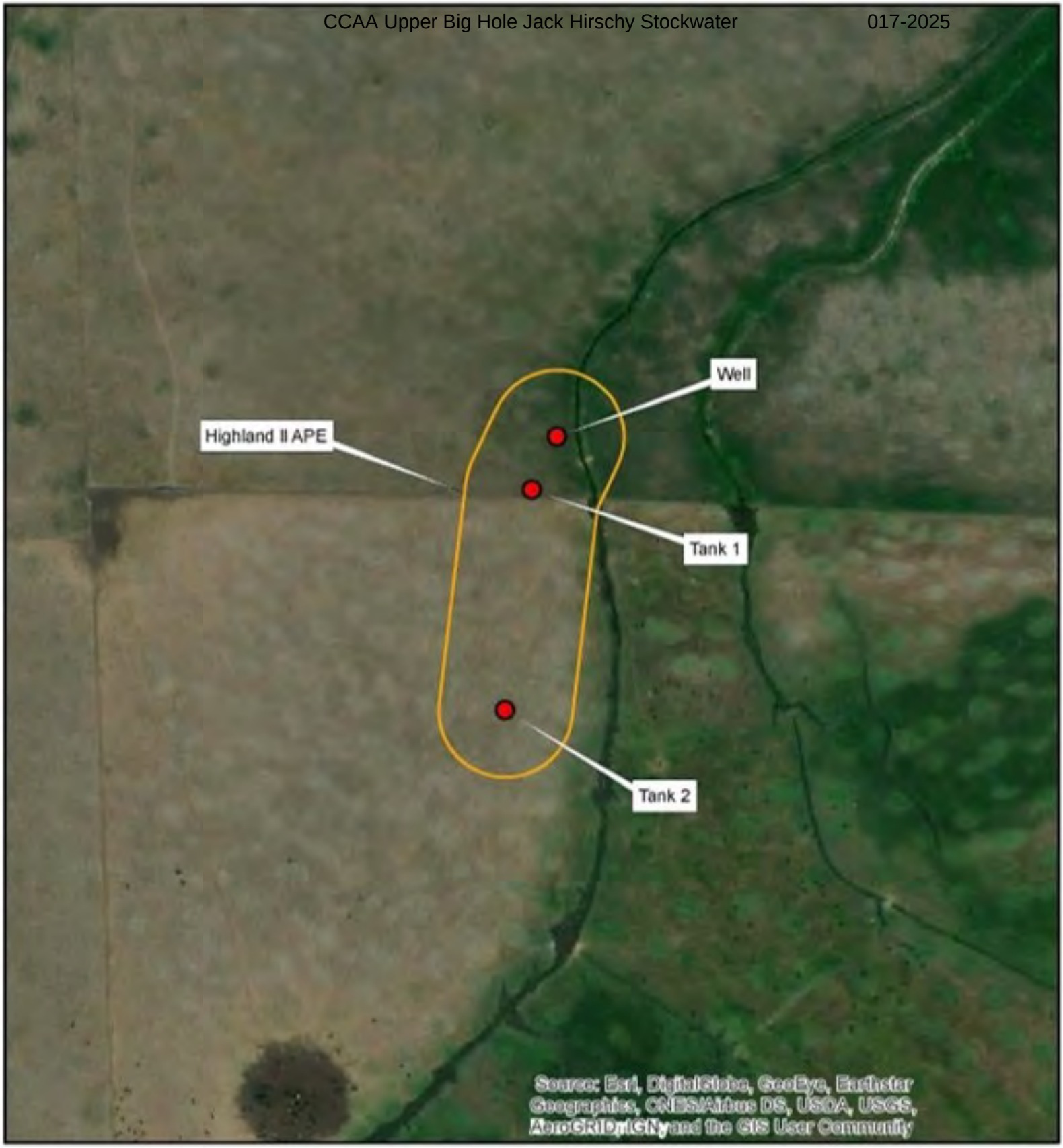
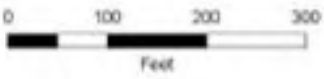
Miles

CCAA Upper Big Hole Jack Hirschy Stockwater 017-2025



USGS Highland Ranch MT
T3S, R16W Sec. 29 & 32



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