

From: [Fox, Trevor T](#)
To: [Moeder, Linda J](#)
Cc: [Pettibone, Andrew L](#); [Kaczor, Nick](#); [Gilles, Benjamin M](#)
Subject: Fw: Grizzly Ridge Bison Ranch Map
Date: Friday, October 6, 2023 11:36:53 AM
Attachments: [Outlook-fr5kkcee.png](#)
[Outlook-ow313qfw.png](#)
[Outlook-vqzhroic.png](#)
[Outlook-hkafxrka.png](#)
[Outlook-rfzlp2nq.png](#)
[GRBRanch_imagerv1.pdf](#)
[GRBRanch_topo1.pdf](#)
[Outlook-covlqngq.png](#)

Hi Linda,

If possible, could you update the map ASAP. We need it for Matt's call with the Tribe this afternoon. I realize you might not have all the info, so it will be as much as you can do:

- If you have all the data, could you please add the rest of the crossings (there should be 17 total). On the current map, you can only see around 12. Some of the crossings are close together, so we might need another symbol to more clearly see them.
- I'm not sure if there is any data with the crossing data that shows new vs. older crossings (i.e., ones installed before we met with the landowner and Tribe) - if possible, use different colors to differentiate those.

There is more info in the message chain, but these are the main points.

Thank you!

Trevor



Trevor Fox

Deputy Assistant Regional Director

National Wildlife Refuge System

U.S. Fish and Wildlife Service

Mountain-Prairie Region

Cell 303-253-4259

Pronouns: he/him

From: Fox, Trevor T <trevor_fox@fws.gov>

Sent: Friday, October 6, 2023 9:16 AM

To: Pettibone, Andrew L <andrew_pettibone@fws.gov>; Gilles, Benjamin M <benjamin_gilles@fws.gov>

Cc: Kaczor, Nick <Nick_Kaczor@fws.gov>; Holmes, Erin <erin_holmes@fws.gov>; Armitage, Stacy A <stacy_armitage@fws.gov>

Subject: Fw: Grizzly Ridge Bison Ranch Map

Hi Ben and Andrew,

Sorry for another quick-turnaround assignment. Matt has a call with the Tribe today at 3 pm, so trying to get responses and map updates before then. Can you please address the items mentioned below? There are comments from Matt in the email, and Stacy's comments are the bullet points.

Not sure if there is a GIS version with photos at each crossing - if not, I would just focus on updating the map for Matt.

I'm available if you want to talk through anything.

Thanks!

Trevor



Trevor Fox

Deputy Assistant Regional Director

National Wildlife Refuge System

U.S. Fish and Wildlife Service

Mountain-Prairie Region

Cell 303-253-4259

Pronouns: he/him

From: Armitage, Stacy A <stacy_armitage@fws.gov>

Sent: Friday, October 6, 2023 9:01 AM

To: Fox, Trevor T <trevor_fox@fws.gov>

Subject: Fwd: Grizzly Ridge Bison Ranch Map

See below.

Stacy A Armitage

U.S. Fish and Wildlife Service | National Wildlife Refuge System

Assistant Regional Director

Mountain Prairie Region

Cell: (720) 440-4824

Pronouns: She/Her



From: Armitage, Stacy A <stacy_armitage@fws.gov>

Sent: Friday, October 6, 2023 6:13:18 AM

To: Holmes, Erin <erin_holmes@fws.gov>

Subject: Re: Grizzly Ridge Bison Ranch Map

Erin-

I shared the map with Matt. His response/questions are below. My thoughts are in the bullets. If you want to talk through I land in Denver around 10. Thanks!

I am having a hard time finding 17 crossings....by my count there are between 10 to 12, assuming those two crossings in the south are two crossings next to one another. Also, it says 1 of the 17 are off easement but don't see that one on the map.

- I had the same concerns, can you please work with Ben to have all the crossings added? Also, might be better to use a different symbol so those that are close together don't become a big blob

Also, I thought we talked about having photos of each crossing once you clicked on a given crossing.

- Can you verify with Ben that the Gaias version has this?

Finally, is there a way to delineate crossings that were discussed last year the meeting vs. ones that were added beyond that?

- Maybe make them different colors?

And, while not our issue per se, has the ranch reached out to the Tribe to discuss where additional crossings could go.

- I believe the ranch has reached out multiple times with no response. Can you please respond?

Most of the crossings appear to be on only one side of the fence in the distinct areas with the high fence. For example, the northern most unit has two on the south side of the area but how do animals that come in from that crossing get out the other side. Same for the crossings on the units to the south, where all the

crossings appear to be on the west side.

- Please ask Ben to draft a response to this.

Stacy A Armitage
U.S. Fish and Wildlife Service | National Wildlife Refuge System
Assistant Regional Director
Mountain Prairie Region
Cell: (720) 440-4824
Pronouns: She/Her



From: Armitage, Stacy A <stacy_armitage@fws.gov>
Sent: Thursday, October 5, 2023 6:49:00 PM
To: Holmes, Erin <erin_holmes@fws.gov>
Subject: Re: Grizzly Ridge Bison Ranch Map

Let's talk tomorrow first. Thanks.

Stacy A Armitage
U.S. Fish and Wildlife Service | National Wildlife Refuge System
Assistant Regional Director
Mountain Prairie Region
Cell: (720) 440-4824
Pronouns: She/Her



From: Holmes, Erin <erin_holmes@fws.gov>
Sent: Thursday, October 5, 2023 5:48:44 PM
To: Armitage, Stacy A <stacy_armitage@fws.gov>
Subject: Re: Grizzly Ridge Bison Ranch Map

I haven't heard anything. I'll see what I can do. I'm off tomorrow but will send something out tonight.

I'm unsure if this is a conservation easement being purchased or a special use permit?

Get [Outlook for iOS](#)

From: Armitage, Stacy A <stacy_armitage@fws.gov>
Sent: Thursday, October 5, 2023 4:41:25 PM
To: Holmes, Erin <erin_holmes@fws.gov>
Subject: Re: Grizzly Ridge Bison Ranch Map

Trevor was going to reach out, but
Not sure he has had the time yet. I get we are waiting on future crossing until we hear from the tribe, although the direction I gave was if additional need to be installed on our easement Ben and Andrew should ask for those now. Also I don't think the map accurately reflects how many crossing have been installed to date. Andrew says there have been 17 installed but the map doesn't show 17.

Stacy A Armitage
U.S. Fish and Wildlife Service | National Wildlife Refuge System
Assistant Regional Director
Mountain Prairie Region
Cell: (720) 440-4824
Pronouns: She/Her



From: Holmes, Erin <erin_holmes@fws.gov>
Sent: Wednesday, September 27, 2023 12:45:53 PM
To: Armitage, Stacy A <stacy_armitage@fws.gov>
Subject: Fw: Grizzly Ridge Bison Ranch Map

Hi Stacy,

Circling back to this - Do you need anything else for this to give to Matt on Friday? Seems future crossings are up in the air until the Tribes request them so we can't add them to the map.

Erin



Erin Holmes
Acting Refuge Supervisor
Mountain Zone (CO, MT, UT, & WY)

From: Pettibone, Andrew L <andrew_pettibone@fws.gov>

Sent: Tuesday, September 26, 2023 3:54 PM

To: Armitage, Stacy A <stacy_armitage@fws.gov>; Kaczor, Nick <Nick_Kaczor@fws.gov>; Fox, Trevor T <trevor_fox@fws.gov>

Cc: Gilles, Benjamin M <benjamin_gilles@fws.gov>; Holmes, Erin <erin_holmes@fws.gov>

Subject: Re: Grizzly Ridge Bison Ranch Map

Stacy,

To answer your two questions, the most current topo map displays 13 crossings. There are 17 crossings installed as of August 31st, 16 of those on easement. We removed the crossing that was not on easement to make the map clear and straightforward. We also removed three "existing" crossings in the northern most cluster to address an earlier concern of displaying a cluster of crossings in a non-bison area. We left the two modified fence crossings in the display and removed the existing low fence crossings that the ranch incorporated in the original building of their bison fence. The purpose of the inset in one of the original versions was to more easily display the "cluster" of crossings. This was useful in the large printed format used with the ranch. This cluster is the result of a road intersection and neighboring driveway creating a handful of 90's in the fence.

2. Our most recent meeting with the ranch was August 31st. Yes, we discussed locations for future crossings. The ranch has a stockpile of crossings (about 15-25) they will install as issues/requests from the tribe come up for the crossings. Going back to September 2022, the ranch and tribe had agreed that the ranch would allow the tribe to collar elk during the following winter with the idea that the collar data would help show where additional fence crossings were needed. Fast forward one year, that didn't happen, and now the ranch has decided that rather than installing the crossings, they are choosing to hold onto them until the tribe has a request to install additional crossings in locations of the tribes' choosing.

Andrew Pettibone
U.S. Fish and Wildlife Service
Wetland District Manager
Benton Lake Wetland Management District
Cell: (406) 690-9202

From: Armitage, Stacy A <stacy_armitage@fws.gov>

Sent: Tuesday, September 26, 2023 9:19 AM

To: Kaczor, Nick <Nick_Kaczor@fws.gov>; Fox, Trevor T <trevor_fox@fws.gov>

Cc: Pettibone, Andrew L <andrew_pettibone@fws.gov>; Gilles, Benjamin M <benjamin_gilles@fws.gov>; Holmes, Erin <erin_holmes@fws.gov>

Subject: Re: Grizzly Ridge Bison Ranch Map

Thanks. I like the topo one too.

Couple questions:

1. How many crossing have been installed? Map shows 15.
2. Can we mark on the map where the plan to install future crossing? Did you discuss future crossing w/ them at your last meeting?

Stacy A Armitage

U.S. Fish and Wildlife Service | National Wildlife Refuge System
Assistant Regional Director
Mountain Prairie Region
Cell: (720) 440-4824
Pronouns: She/Her



From: Kaczor, Nick <Nick_Kaczor@fws.gov>

Sent: Monday, September 25, 2023 11:07 AM

To: Fox, Trevor T <trevor_fox@fws.gov>; Armitage, Stacy A <stacy_armitage@fws.gov>

Cc: Pettibone, Andrew L <andrew_pettibone@fws.gov>; Gilles, Benjamin M <benjamin_gilles@fws.gov>; Holmes, Erin <erin_holmes@fws.gov>

Subject: Re: Grizzly Ridge Bison Ranch Map

Stacy,

Andrew reworked the maps for us (thank you Andrew!). I like the topo one a little better, but not sure what Matt was wanting. Please let us know if you would like any further changes.

-Nick

Nick Kaczor

Acting Refuge Supervisor
Mountain Zone (CO, MT, UT, & WY)

U.S. Fish and Wildlife Service
Mountain-Prairie Region
134 Union Blvd., Suite 300
Lakewood, CO 80228
303-345-4299
nick_kaczor@fws.gov



From: Pettibone, Andrew L <andrew_pettibone@fws.gov>
Sent: Tuesday, September 12, 2023 10:07 AM
To: Fox, Trevor T <trevor_fox@fws.gov>; Armitage, Stacy A <stacy_armitage@fws.gov>; Gilles, Benjamin M <benjamin_gilles@fws.gov>; Kaczor, Nick <Nick_Kaczor@fws.gov>
Subject: Re: Grizzly Ridge Bison Ranch Map

Morning all,

1. The sentinel imagery was goofing up. I changed the aerial imagery background and included one with a topo background.
2. Fence crossings have been enlarged and color changed.
3. Red cross hatching displays where the bison pastures are located. Only those portions of the ranch are managed for bison and have bison fencing.
4. The white arrow is an inset displaying a cluster of fence crossings. The map was designed for a printed use and this inset is helpful when there are so many crossings so close together.
5. We're zoomed in too far to see the Canadian boundary. The previous version had some text that was not dynamic to the map and has been deleted.

Andrew Pettibone
U.S. Fish and Wildlife Service
Wetland District Manager
Benton Lake Wetland Management District
Cell: (406) 690-9202

From: Fox, Trevor T <trevor_fox@fws.gov>
Sent: Tuesday, September 12, 2023 8:24 AM
To: Pettibone, Andrew L <andrew_pettibone@fws.gov>; Armitage, Stacy A <stacy_armitage@fws.gov>; Gilles, Benjamin M <benjamin_gilles@fws.gov>; Kaczor, Nick <Nick_Kaczor@fws.gov>
Subject: Re: Grizzly Ridge Bison Ranch Map

Good morning, Andrew:

Thanks for turning this around quickly. Could you (and/or Linda) make a few adjustments to the map to make it a little easier to read and get the point across?

- The aerial photos are great, but the different shades of the coverage are a little distracting. Could you do a version with this aerial phot background and one with a different background layer (e.g., topo or hybrid map layer... whatever looks best)?
- The icons for the map crossings are a little difficult to pick out, could you adjust the size and potential color to better highlight?

- It is not clear what the red cross-hatching mean in the legend. I assume that is for bison pasture, but it isn't clear.
- It's not clear what the white arrow is from easement to the parcel with the dotted boundary is. Also, not sure what the dotted boundary line means.
- Mark the Canada boundary

Thanks for all the great work on this issue!

Trevor



Trevor Fox

Deputy Assistant Regional Director

National Wildlife Refuge System

U.S. Fish and Wildlife Service

Mountain-Prairie Region

Cell 303-253-4259

Pronouns: he/him

From: Pettibone, Andrew L <andrew_pettibone@fws.gov>

Sent: Monday, September 11, 2023 11:31 AM

To: Armitage, Stacy A <stacy_armitage@fws.gov>; Fox, Trevor T <trevor_fox@fws.gov>; Gilles, Benjamin M <benjamin_gilles@fws.gov>

Subject: Grizzly Ridge Bison Ranch Map

Morning all,

Attached is a zoomed in version of the Grizzly Ridge Bison Ranch (GRBR) map that we received from Realty a couple weeks ago. Linda Moeder in realty shared the project file with me and I am now able to make tweaks to the map as needed. I've zoomed in as much as possible and still display the N/S reaches of the eased portion of the ranch. I'm not a cartographer and this map is very busy and difficult to display everything we are trying to communicate with this product. One must read the legend to begin to decipher this darn thing. If we or Matt need much beyond what's attached, I suggest we go back to Linda Moeder and ask for her assistance.

Also attached is a photo of the ranch's fence crossings that they use in Canada. This Canadian portion of the GRBR is under easement by TNC and TNC has approved the following fence crossing. Photo is attached as "TNC Canada Crossing GRBR". The crossing is 18" bottom and 48" top.

Hope this helps.

Thank you,

Andrew Pettibone
U.S. Fish and Wildlife Service
Wetland District Manager
Benton Lake Wetland Management District
Cell: (406) 690-9202



N A T I O N A L
W I L D L I F E
R E F U G E S Y S T E M



NATIONAL
WILDLIFE
REFUGE SYSTEM



N A T I O N A L
W I L D L I F E
R E F U G E S Y S T E M



NATIONAL
WILDLIFE
REFUGE SYSTEM



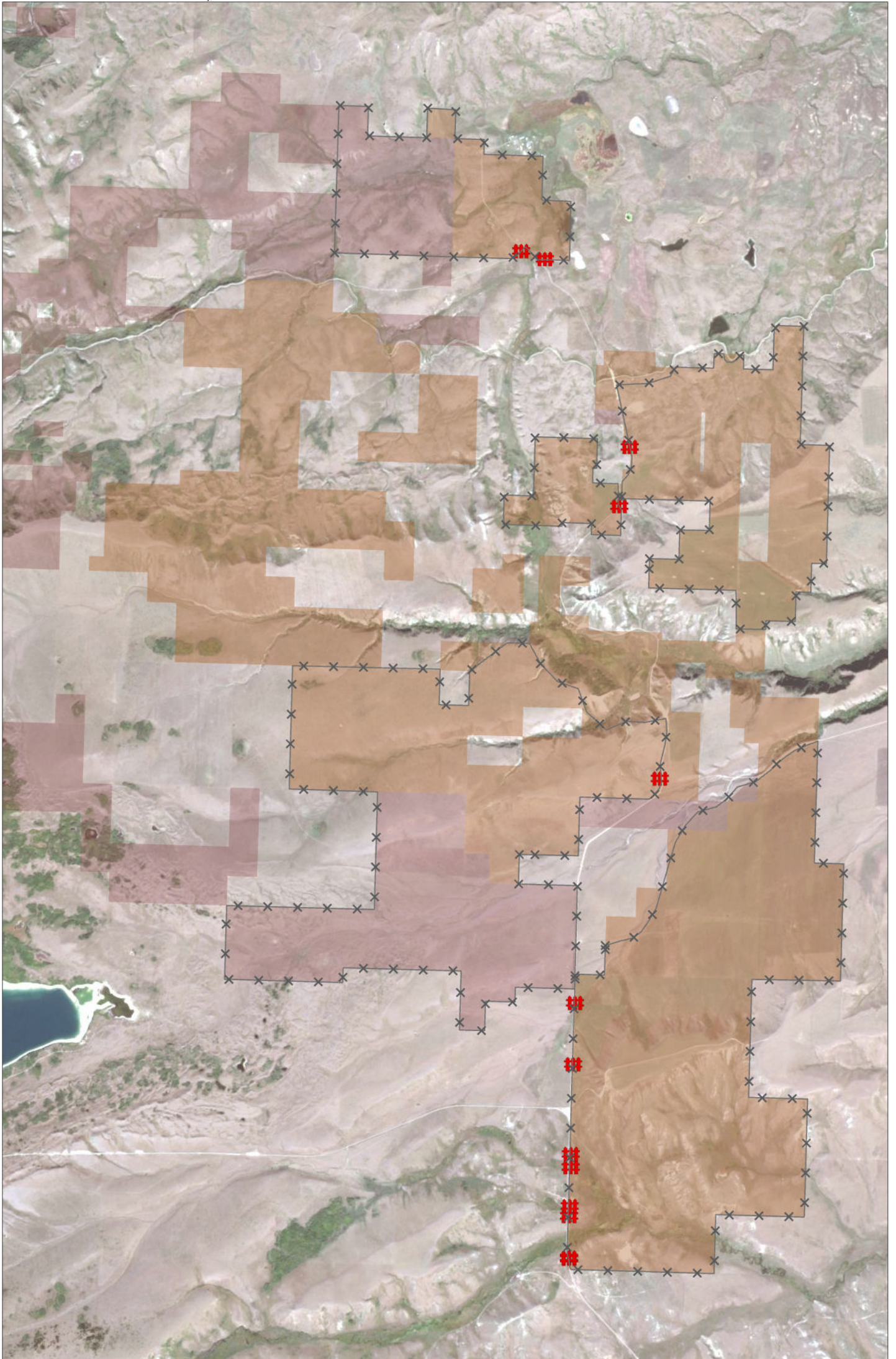
N A T I O N A L
W I L D L I F E
R E F U G E S Y S T E M



U.S. Fish & Wildlife Service

Grizzly Ridge Bison Ranch Easement

Glacier county, Montana



Produced in the Division of Realty
Lakewood, CO
Land Status Current To: 8/12/2023
Map Date: 9/20/2023
Projection: UTM Zone 12 - NAD 1983
Production Software: ArcGIS Pro v3.1.2

0 0.5 1 Mile



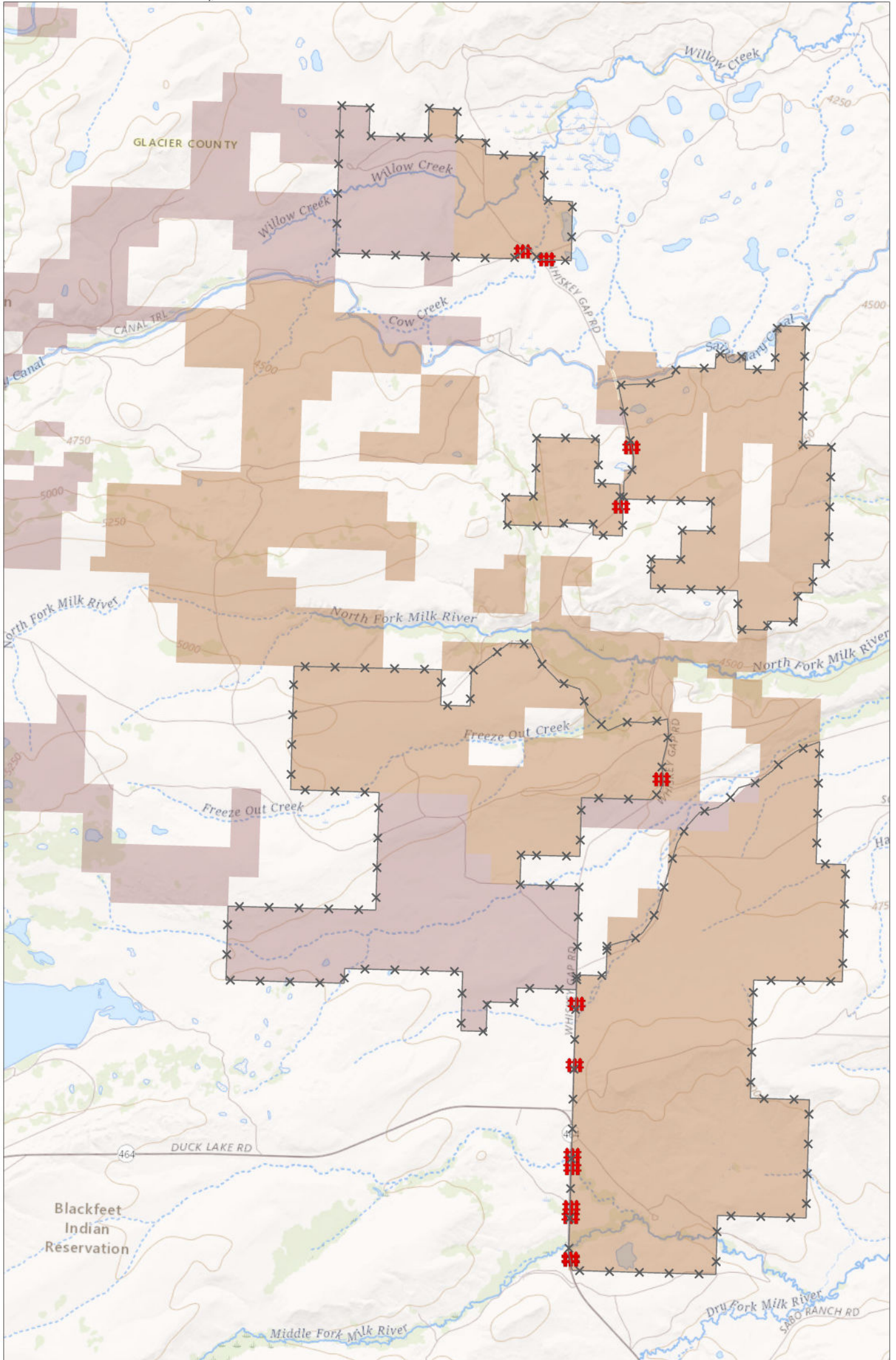
- ## Fence crossings - modified
- ✕ Bison pasture areas - fenced
- Grizzly Ridge Bison Ranch - FWS easement
- Grizzly Ridge Bison Ranch - No easement



U.S. Fish & Wildlife Service

Grizzly Ridge Bison Ranch Easement

Glacier county, Montana



Produced in the Division of Realty
Lakewood, CO
Land Status Current To: 8/12/2023
Map Date: 9/20/2023
Projection: UTM Zone 12 - NAD 1983
Production Software: ArcGIS Pro v3.1.2

- Fence crossings - modified
- Bison pasture areas - fenced
- Grizzly Ridge Bison Ranch - FWS easement
- Grizzly Ridge Bison Ranch - No easement

0 0.5 1 Mile





N A T I O N A L
W I L D L I F E
R E F U G E S Y S T E M