Wood Bison News

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Alaska Department of Fish and Game, Division of Wildlife Conservation

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Contents

Welcome

The purpose of this newsletter is to share updated information about past, current, and future efforts to restore wood bison across the interior of Alaska. Currently, there is one wild experimental wood bison herd established in the state, and the Alaska Department of Fish and Game (ADF&G) is in the process of planning for the release of additional bison in the future. In this newsletter, you will find information about the availability of more bison to be released in Alaska, updates on the Lower Innoko and Yukon wild herd, the effects of bison on people and ecosystems, common questions about wood bison, potential areas for future wood bison reintroductions, the planning process, and links to finding more resources about ADF&G wood bison restoration efforts.

Restoring wood bison in Interior Alaska

The goal of the Wood Bison Project is to restore viable, free-ranging wood bison populations to portions of their former range in Alaska, which can contribute to the ecological, cultural, economic, and social well-being of people and communities across the state. Suitable habitat and strong public support are required for the successful restoration of wood bison. Through the public planning process, interest groups participate in planning teams – which are specific to an area where bison may be released – to work together and provide recommendations to ADF&G, the Alaska Board of Game, and the Federal Subsistence Board. These recommendations are designed to provide location-specific guidance on the implementation and management of wild wood bison herds in Alaska.

Wood bison at the Alaska Wildlife Conservation Center (AWCC) in winter. Photo by Doug Lindstrand.

More wood bison available

Currently, ADF&G has enough captive wood bison located at the Alaska Wildlife Conservation Center near Anchorage and the University of Alaska Fairbanks (UAF) Large Animal Research Station (LARS) in Fairbanks to establish one or two new wild herds. These captive bison are healthy, disease-free, and potentially available for release in suitable habitat within the interior of Alaska.

All the wood bison in Alaska have come from Elk Island National Park in Canada, which is the source population of all newly established wood bison herds in the last 50 years - see the map of bison herds on pg. 5. ADF&G has an agreement with Parks Canada to obtain surplus wood bison through at least 2028. This means that additional bison will be coming to the state, which will provide more opportunities to establish new herds or supplement the existing wild herd.

Rev. David Salmon

ADF&G is working extensively with communities and interest groups to determine where wood bison restoration efforts will focus next. See pages 6-7 for maps and more about the planning process.

History of wood bison in Alaska

Wood bison are descendants of the large-horned bison of the Pleistocene epoch. Skeletal remains and historical accounts show that wood bison were once widely distributed in the interior of Alaska, and likely lived here for most of the last 10,000 years. Excerpts from oral history accounts given by elders in interior Alaska can be found on the next page. ▶

Oral history of wood bison in Alaska

The existence of archeaological and historical accounts of wood bison inhabiting interior Alaska is foundational to wood bison restoration efforts in the state. A study in 2001 published excerpts from oral histories about wood bison given by Athabascan elders between 1991 and 2000 in the villages of Fort Yukon, Birch Creek, Beaver, Chalkyitsik, Venetie, Arctic Village, Minto, Nenana, and Tanana for an archeology journal article published in 2001. A few examples are included below.

Rev. David Salmon from Chalkyitsik, Alaska.

For more wood bison history, scan this QR code to find the article "Wood Bison in Late Holocene Alaska and Adjacent Canada" by Robert Stephenson, et. al, 2001 on the ADF&G website. ▶

Yukon Flats

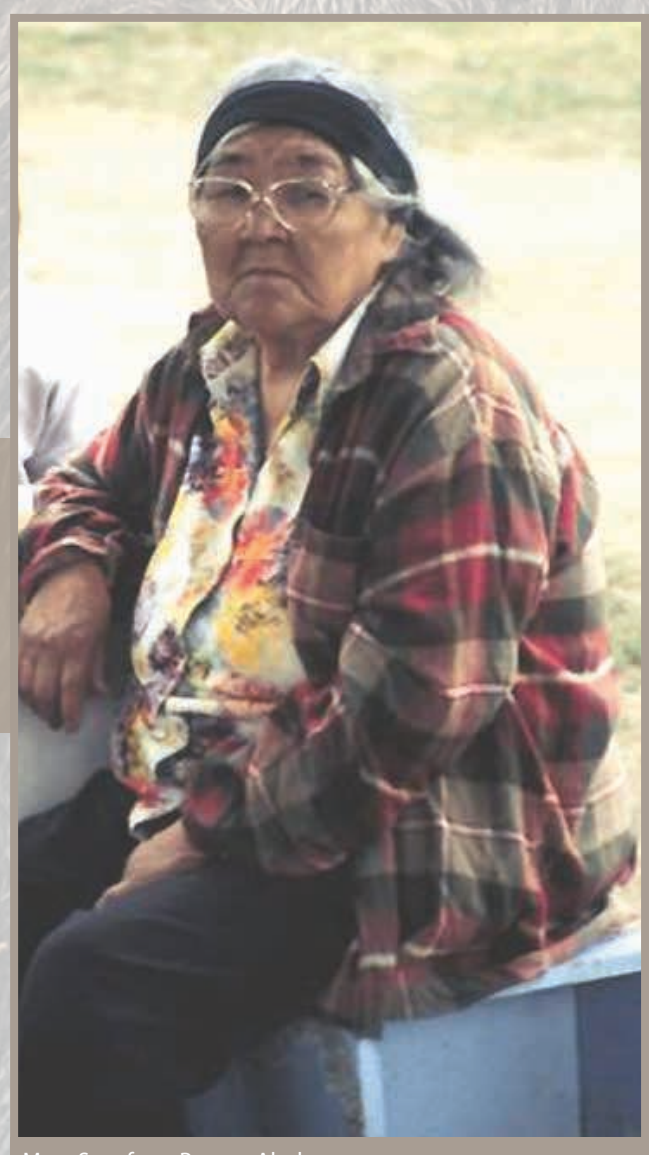
"Rev. David Salmon of Chalkyitsik is acknowledged for his extensive and detailed knowledge of Gwich'in Athabascan history and traditions...[he said] prior to their disappearance, bison were an important source of food and...'they lived on it,' especially before moose became more common, adding that mosquitos did not bother bison because of their long hair. Bison were said to be a 'good animal,' providing valuable food and material for people."

"Mr. Moses Cruikshank of Beaver said there were many Gwich'in stories describing how bison inhabited the Yukon Flats in the old days when 'big herds' of these animals occurred in the area."

"Mr. Elliot Johnson, age 96, of Fort Yukon, also states bison once lived on the Yukon Flats and were hunted in the early days…in addition to being an important source of food, bison provided raw materials, with hides making good blankets and pillows and the hair being used to make thread for sewing."

"According to Mr. (Elliot) Johnson, the decline of bison populations was followed by a period of food scarcity… people referred to this period with the phrase 'no buffalo, no power.'"

"She (the late Julia Tritt of Venetie) said bison were 'good eating' and provided high quality food for people."


Mary Sam from Beaver, Alaska.

"She (Mrs. Mary Sam of Beaver) also described how on one occasion her grandparents pointed to another young girl, saying, '…when this young girl grows up, and her children grow up, then the bison will come back.'"

Tanana River drainage

"Mr. Peter John of Minto recognized an illustration of bison and noted that the animal had once lived in the Minto area. He stated that long ago 'we used to hunt that animal,' and described a place on the Chatanika River, near Minto, where old bones are often found."

"Virginia Titus (of Tanana) recalls that her father, Robert Albert, described how he and his adopted father, Pretty Albert, encountered a bison near Tanana, probably in the winter of 1918… His father shot the animal with a lever-action rifle… After butchering the animal, they stored the meat in an underground cellar insulated with grass. The hide was given to their Chief, which he used in their 'talking house' as a place to sit. The carcass provided food for their dogs for a long time. Mrs. Titus said this was the last known occurrence of bison in the Tanana area."

"According to Mrs. (Virginia) Titus, bison were second only to moose as a source of food and were an important source of material for clothing and shelter."

The Lower Innoko and Yukon herd

"I've enjoyed watching wood bison become a part of our culture through education and outreach. I look forward to the celebrations that will come from the eventual future harvest of this animal."

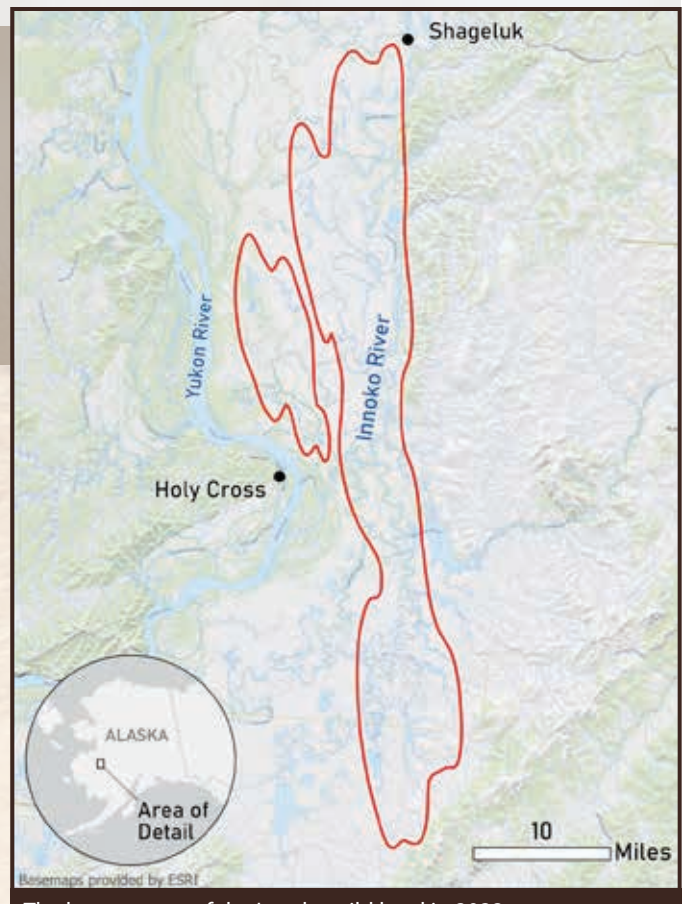
– Ken Chase, Anvik

A team from Shageluk and Holy Cross that constructed a soft release pen for yearling bison in July of 2022.

Students from Holy Cross viewing yearling bison in pen.

Wild bull interacting with yearlings in the soft-release pen.

More bison added, followed by a tough winter for the herd



The home range of the Innoko wild herd in 2022.

In 2015, the first wild wood bison population in the U.S. in over 100 years was released in the Lower Innoko-Yukon Rivers area of Alaska. This release was made possible by the support of many groups including the communities of Grayling, Anvik, Shageluk, and Holy Cross (GASH) - see the full list of groups included in the planning team below.

Most recently in the summer of 2022, another 28 yearling wood bison were added to the Lower Innoko and Yukon Rivers herd. 15 community members from Holy Cross and Shageluk worked with ADF&G staff to prepare a soft-release pen, a low-stress method of releasing bison after a long barge trip. Due to difficult winter conditions, the released yearlings experienced significant mortality in the late winter of 2023. Overall, the Lower Yukon and Innoko herd has had ups and downs. Three of eight winters since the initial release of wood bison in 2015 were severe.

Winters in the western interior tend to be wetter and snowier than the eastern side of the state, and the resulting snowpack can develop ice layers that prevent bison from accessing food in winter. This is especially tough for wood bison when coupled with late springs, delayed snow melt, flooding, and a later green-up. We will know more and provide a detailed update on our web and Facebook pages after the 2023 population survey occurs later this year.

In the winter of 2022-2023, ADF&G staff traveled to the GASH villages, visited schools, and shared the news of the most recent release during community gatherings. ADF&G is committed to continued communication and collaboration with the local GASH communities and organizations involved with this herd. In fall of 2022, the Lower Innoko and Yukon Wood Bison Planning Team met and drafted an updated management plan for the next 5 years (2023-2028). Biologists have intensively monitored the Lower Innoko and Yukon herd over the past 8 years and will continue to do so. GASH community members often assist in monitoring efforts by reporting observations.

Lower Innoko and Yukon Wood Bison Planning Team

Advisory Committees:
Shageluk
Holy Cross
Grayling
Anvik
Central Kuskokwim
Fairbanks
Anchorage
Matanuska-Susitna

Tribal Councils:
Shageluk Tribal Council
Anvik Tribal Council
Grayling Tribal Council
Holy Cross Tribal Council

Regional Advisory Councils:
Western Interior
Yukon-Delta

Corporations:
Zho-Tse, Inc.
Deloy Ges, Inc.
Deloycheet, Inc.
Calista Corporation
Doyon Ltd.
Hee-Yea Lingde Corporation
The Kuskokwim Corporation

Other partner organizations:
Innoko National Wildlife Refuge
Alaska Outdoor Council
Big Game Commercial Services Board
Bureau of Land Management Alaska Office
Alaska Department of Natural Resources
Alaska Board of Game
Defenders of Wildlife
Alaska Department of Natural Resources
Federal Subsistence Board
Office of Subsistence Management, USFWS
Safari Club International (Alaska, Kenai chapters)
Wild Sheep Foundation
U.S. Fish and Wildlife Service

The Lower Innoko and Yukon wood bison planning team meeting in October of 2022.

The effects of wood bison

Ecology

In North America, bison are considered a "keystone species," meaning that they shape the ecosystems they live in. When bison herds roam an area, they graze on grasses and sedges, which promotes plants to grow - like mowing the lawn causes grasses to grow back. Bison wallow by rolling on the ground, which increases the diversity of plant species, and creates habitat for insects and frogs when the wallows fill with rainwater. Bison feces and carcasses create nutrient-rich microhabitats and fertilize plant growth. Bison hair is used by birds and small mammals to insulate nests. Restoring wood bison populations may augment these ecological processes and enhance diversity across areas where bison range.

Wild wood bison outside of Shageluk. Photo by Johan Jenelle.

Harvest

A primary goal of restoring wood bison in Alaska is to provide the opportunity for harvest. Successful wood bison populations such as the Aishihik herd in the Yukon territory in Canada, and the Delta Junction plains bison herd in Alaska are highly productive and continue to grow even with high harvest rates. A single wood bison can provide more than 500 lbs. of meat. Hides and other non-meat parts of a harvested bison can have many cultural and artistic uses, some of which are referenced in the oral history of wood bison in Alaska. Any addition of a renewable resource is a positive for communities and the economy in Alaska, especially given the high costs of shipping and importing food and supplies to rural communities.

Construction of a soft-release pen in July of 2022.

Bison hair in the wild near Shageluk. Photo by Johan Jenelle.

Economics

Restoring wood bison can also provide economic benefits in areas around the range of a wild bison herd. During restoration efforts, residents in the area may be hired by ADF&G to help build fences for holding pens, prepare the release site, haul hay, haze bison, and monitor the herd. Wood bison can also create local opportunities for ecotourism, land access permit fees, or guided hunting, if desired.

Bison conservation

Restoring wood bison in Interior Alaska is important to global bison conservation. Releasing additional wild herds will help improve the long-term security of wood bison worldwide. Alaska herds are free-ranging (no fences) and disease-free when released. For long-term viability, herds should be larger than 400 animals. Large, healthy, individual herds may eventually grow enough to intermix with each other. Growing the number of animals within herds and the number of herds within the state will help to maximize the genetic diversity across the statewide wood bison population. It will also allow natural selection to favor strong, healthy, animals that are well adapted to conditions in Alaska for generations to come.

Common questions about wood bison

Wood bison tracks in snow. Photo by Johan Jenelle.

Why did wood bison disappear from Alaska?

We don't know for sure why bison disappeared from Alaska. The ecosystem changed from a primarily steppe grassland to primarily boreal forest over the past few thousand years. This likely reduced the habitat available to bison from continuous across the interior to much smaller and more isolated patches over time. Unregulated human hunting likely contributed to the disappearance of wood bison.

How do we know that wood bison will do well in Alaska? We don't know for sure how wood bison herds will do, however, plains bison have been in Alaska for the last 95 years. The Delta Junction herd produces an average harvest of 15% of its population per year, which is more than most other populations of big game in Alaska. Three other plains bison herds have been established in the Chitina and Copper River Drainages as well as Farewell Lake, and all support annual harvest opportunities, though at a lower harvest rate than the Delta herd.

How will wood bison affect local resources like moose, blueberries, and salmon?

Bison eat sedges and grasses, which are not normally found in berry picking areas. There is no way of predicting exactly where they will go, but blueberry and cranberry areas tend to hold very little bison food. You are much more likely to encounter a bear in a berry patch than a bison.

The existing plains bison in Alaska provide some evidence. Plains bison have been in Alaska for 95 years. The areas of Alaska with the largest plains bison herds (Delta Junction and Farewell) are also areas where moose have remained very abundant over the long term. The Delta River is an important area for the Delta Junction Plains bison population. They have used the sand bars of the river since they were originally released. The Delta River is also a productive spawning area for chum salmon in Interior Alaska. Evidence from Alaska and Canada generally indicates that bison, moose, berries, and salmon all coexist, given the chance.

Moose cow and calf in Interior Alaska in summer.

Wood bison harvest in Canada. Personal photo of R. 0. Stephenson.

When can wood bison be hunted?

Recommendations for wood bison harvest management are made through the public planning process, and require approval from the Alaska Board of Game and the Federal Subsistence Board. From a biological perspective, establishing a population of 400–500 animals would give wild herds a better chance for long-term survival. This could take several decades; however, a growing herd approaching this objective may have surplus bulls that could be harvested before the population reaches 400-500.

Are bison aggressive or dangerous to people?

Encounters with wild wood bison that result in injury to a human are extremely rare. Injuries to humans have occurred in captive settings where wood bison are being intensively pressured to move through pens and chutes. Wood bison are generally considered to be less dangerous than moose. Like moose, bison want to avoid people, but if they are cornered or feel threatened, may try to defend themselves.

Elk Island National Park in Canada has had very few reported injuries related to bison, despite 1,000 bison sharing space with 500,000 visitors a year, including more than 50 miles of hiking trails. Plains bison have been in Alaska for 95 years, and there have been no reported injuries to humans during that time. Wood bison have lived in the GASH area for the last 8 years, and passed through these communities at times without any reports of aggressive behavior towards people.

Bison collisions with vehicles do occur in Canada and Alaska where bison herds live in proximity to roads. In Alaska, wood bison herd placement, hazing of animals away from roads, and other management strategies are intended to help minimize bison (and other wildlife) vehicle collison rates.

Wood bison bull. Photo by Doug Lindstrand.

What is next for wood bison in Alaska?

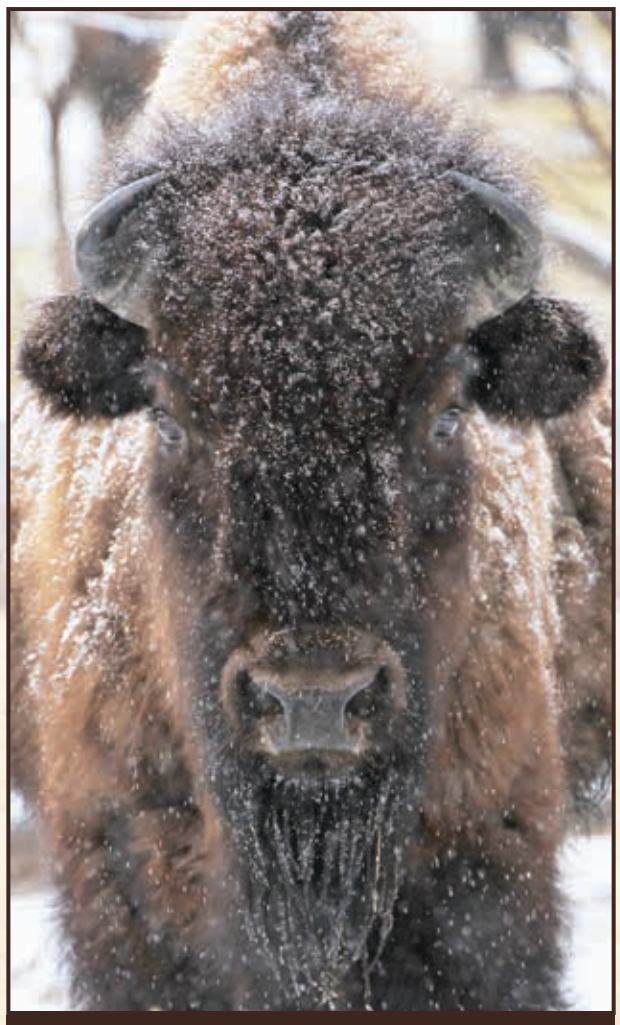
Planning for the next herd

"**ADF&G will use public planning processes to develop implementation and management plans for wood bison restoration. Planning groups will include representatives from local communities, regional population centers, landowners, Alaska Native interests, wildlife conservation interests, industry, and State and Federal agencies, as appropriate for each area**." – Final Non-essential, experimental population rule for wood bison in Alaska (Federal Register Vol. 79, No. 88)

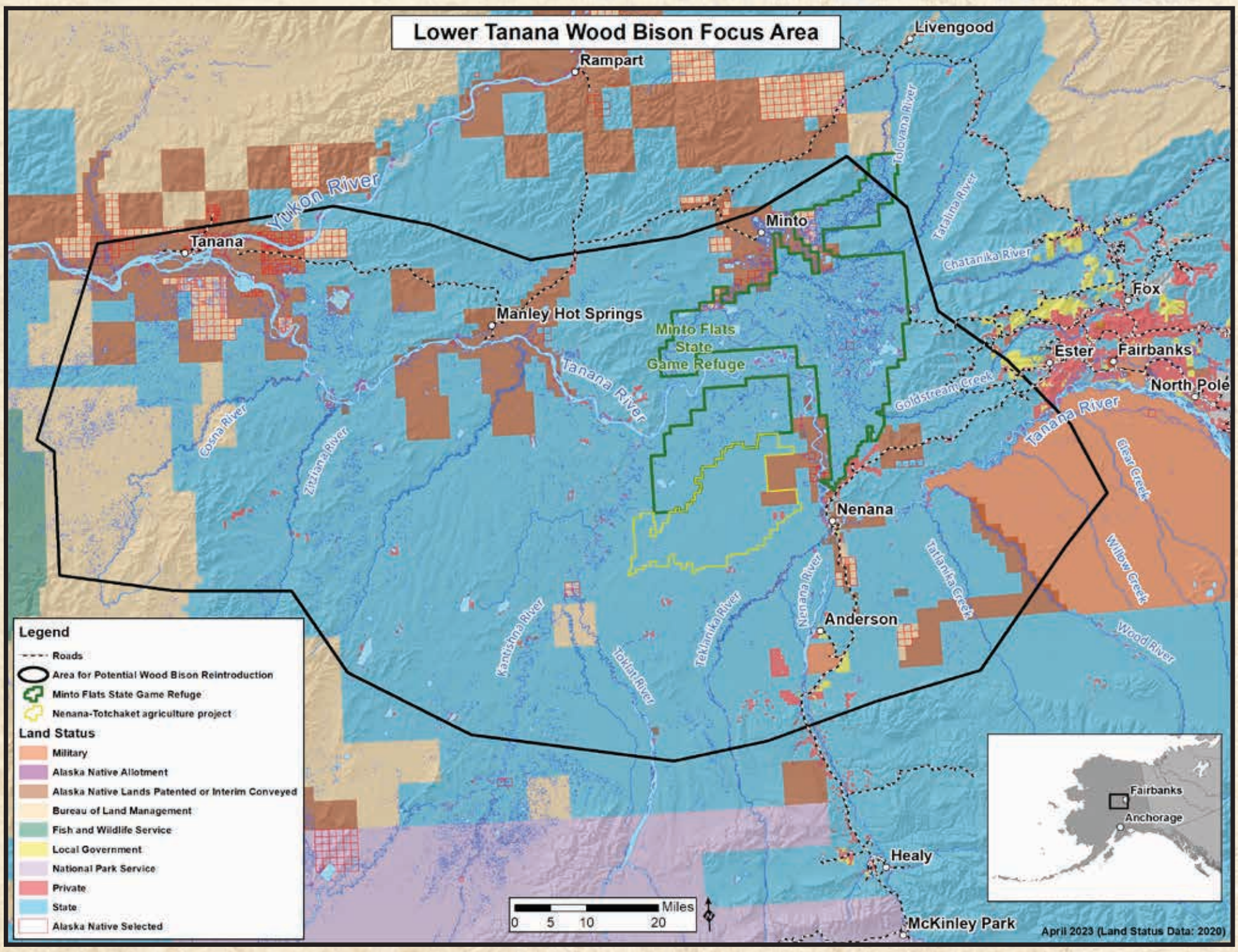
Bison populations in Alaska and Canada have shown that herds occupying areas with drier and less snowy winter conditions, like the eastern interior of Alaska, have historically supported and maintained higher reproductive rates. ADF&G has also received written and verbal communications asking for wood bison restoration efforts to occur in the eastern interior. In response, ADF&G hosted three large introductory public scoping meetings from January to March of 2023 that included the Lower Tanana River drainage, the Upper Tanana River drainage, and the Yukon Flats.

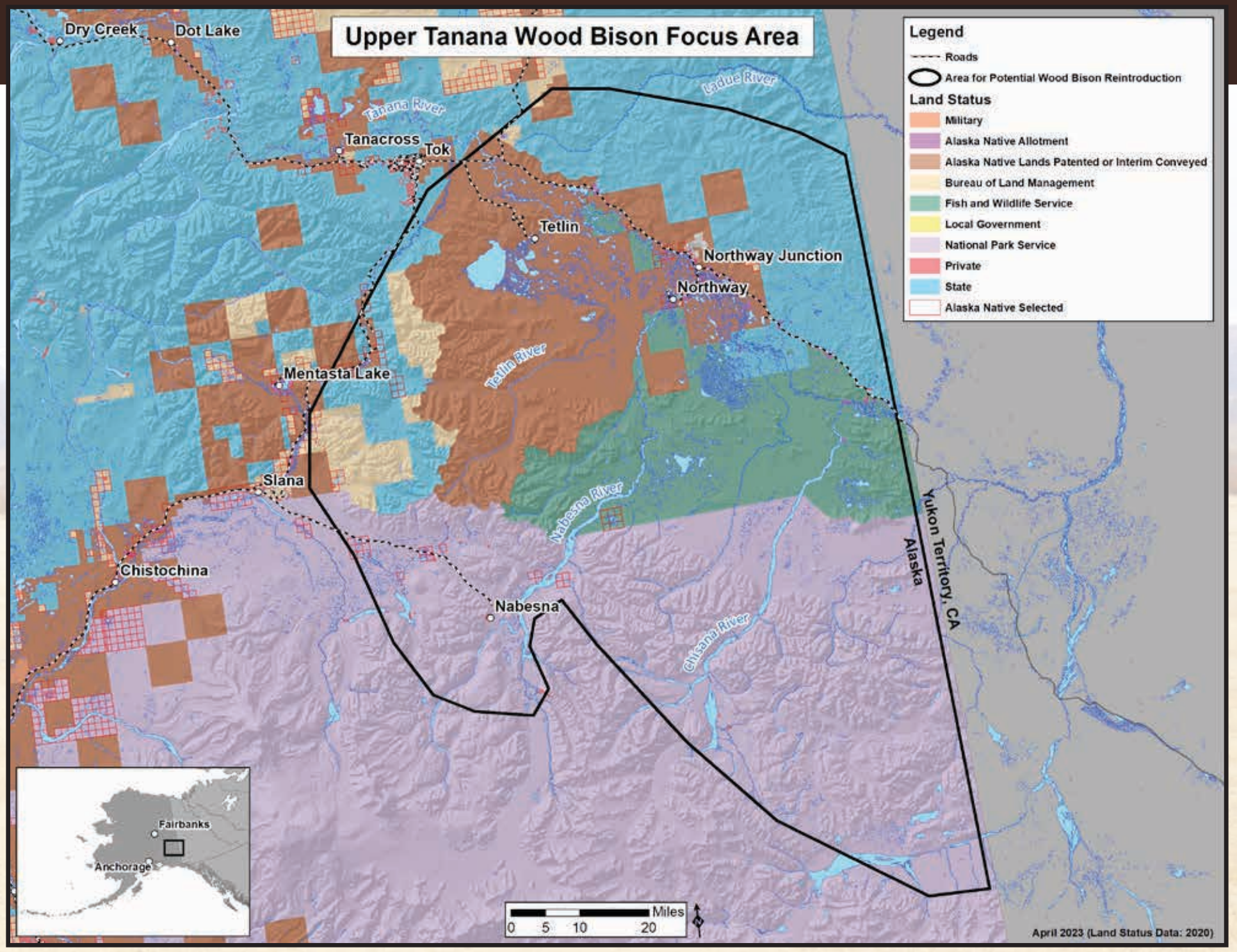
During these meetings, many participants requested that ADF&G biologists visit organizations and local communities in-person to share information and listen to questions, concerns, and comments from members. These visits will occur in the spring, summer, and early fall of 2023. If public support for wood bison restoration is strong after these visits, ADF&G will organize meetings to create formal planning teams in the winter of 2023-24.

Planning team meetings are opportunities to discuss and plan for issues of concern to communities and interest groups relating to wood bison. Topics may include identifying a specific location of release (close or far from communities), future harvest strategies, private land issues, living safely around wood bison (including training bison to stay away from human infrastructure), and bison interactions with other species.



Cow wood bison before release in 2015. Photo: Johan Jenelle.




Upper Tanana Wood Bison Focus Area
Legend
Roads
Area for Potential Wood Bison Reintroduction
Land Status
Military
Alaska Native Allotment
Alaska Native Lands Patented or Interim Conveyed
Bureau of Land Management
Fish and Wildlife Service
Local Government
National Park Service
Private
State
Alaska Native Selected
Dry Creek
Dot Lake
Tanacross
Tok
Tetlin
Northway Junction
Northway
Mentasta Lake
Slana
Chistochina
Nabesna
Tanana River
Ladue River
Tetlin River
Nabesna River
Chisana River
Yukon Territory, CA
Alaska
Fairbanks
Anchorage
Miles
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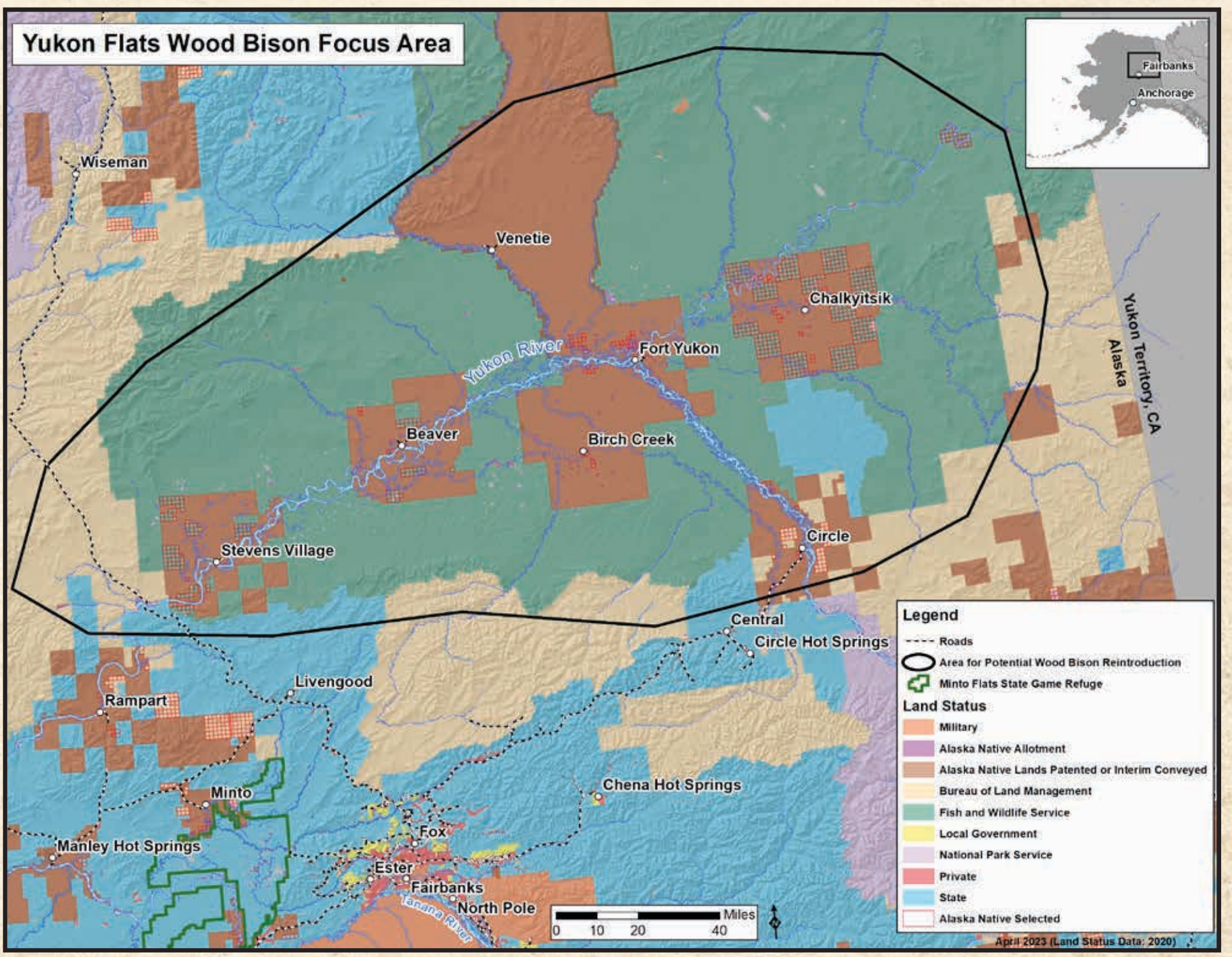
April 2023 (Land Status Data: 2020)


Yukon Flats Wood Bison Focus Area
Fairbanks
Anchorage
Wiseman
Venetie
Chalkyitsik
Fort Yukon
Yukon River
Beaver
Birch Creek
Stevens Village
Circle
Central
Circle Hot Springs
Livengood
Rampart
Minto
Chena Hot Springs
Fox
Manley Hot Springs
Ester
Fairbanks
North Pole
Tanana River
Yukon Territory, CA
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Bureau of Land Management
Fish and Wildlife Service
Local Government
National Park Service
Private
State
Alaska Native Selected
Miles
0 10 20 40
April 2023 (Land Status Data: 2020)

The planning process & more information

What does it take to release bison in a new area?

Identify potential wood bison habitat

Includes a habitat study, GIS/mapping analyses, local observations and visits, and requests from the public or the governor.

↓

Engage with the public

Current step for eastern interior focus areas: ADF&G has initiated conversations with the public, including communities and organizations about any potential sites considered for wood bison release, wood bison history, biology, and management.

↓

Assess if there is support for planning

Support is gauged by ADF&G based on meetings with organizations and communities, site visits and conversations, and written requests or opinions.

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Assemble the planning team for chosen site

Planning teams make management recommendations and include local communities, Alaska Native interests, wildlife conservation interests, industry, landowners, regional population centers, and state/federal agencies.

↓

Plan for bison release at chosen site

Includes submitting a management plan to the Alaska Board of Game and Federal Subsistence Board, training local people to care for and live safely with bison, bison health checks, and determining the specifics of releasing bison at a chosen site.

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Release wood bison

Includes transport of bison, holding pens, monitoring bison pre- and post-release, and organizing additional planning team meetings as necessary.

Wood bison at the AWCC. Photo by Doug Lindstrand.

What do you think?

We want to hear from you. ADF&G is starting to assess where support exists for a new herd.

Write a letter to ADF&G expressing your opinion about the potential of having wood bison in your area.

Send letters to:
dfg.dwc.woodbison@alaska.gov

Wood bison at the AWCC. Photo by Doug Lindstrand.

Wood bison at UAF LARS.

Want to see live wood bison?

Alaska Wildlife Conservation Center (AWCC)
Mile 79 Seward Highway, Girdwood, AK 99587

UAF Large Animal Research Station (LARS)
2220 Yankovich Rd, Fairbanks, AK 99709

ADF&G Fairbanks office provides limited educational opportunities for organizations to view wood bison and learn about the project directly from wood bison biologists. Contact the ADF&G Fairbanks office for more information.

For more on wood bison:

Follow us on Facebook for updates:

Search "ADF&G Wildlife Conservation - Wood Bison Restoration in Alaska"

ADF&G wood bison restoration webpage:

woodbisonrestoration.adfg.alaska.gov

For in-depth information and downloadable resources focused on the history, research on, and management of wood bison in Alaska.

Questions? Contact us:

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