

Wood Bison News

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Alaska Department of Fish and Game, Division of Wildlife Conservation



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Contents

Status of herd	2
Herd movements.....	3
Monitoring the herd.....	4
Bison benefits	5
Education	6
Ensuring success.....	7
More restorations.....	8



Wood bison restoration partner

Alaska Wildlife Conservation Center



Back from the brink of extinction

Wood bison, a relative of the plains bison, are North America's largest land mammal. They are specially adapted for northern climates and historically filled an important ecological niche in the boreal forest of Alaska and Canada.

Rich oral history accounts suggest that the Native people in these lands used wood bison for food, clothing, and shelter. Wood bison bones abound in Alaska and experts estimate that about 160,000 wood bison once roamed Alaska and northwest Canada.

By the turn of the 20th century this once abundant resource disappeared from the landscape. Thought to be victims of unregulated hunting, ecological change, and later mixing with plains bison, wood bison were presumed to be extinct by the 1940s.

Then in 1957 a small herd (about 200 animals) was discovered in a remote corner of Wood Buffalo National Park, Canada. That discovery set in motion one of the world's greatest conservation efforts. Contributing to both wildlife conservation and ecosystem restoration, the return of wood bison cultivated unprecedented support and cooperation across international borders. Diverse interest groups worked side by side to develop wood bison release and management plans and find creative solutions to ensure the success of this magnificent animal.

Alaska joined this conservation effort more than 20 years ago. Over an eight-year period 66 wood bison were brought to the state from a disease-free herd in Canada. These animals were cared for in captivity at the Alaska Wildlife Conservation Center in Portage, Alaska. As the captive population grew, biologists and managers worked tirelessly to prepare for the future wood bison release. Approval was granted in 2014 and it was time for action. Wood bison could now be transported to their new home in the lower Innoko/Yukon River area, near the remote community of Shageluk, Alaska. In a monumental effort involving biologists, veterinarians, engineers, pilots, heavy equipment operators, community members, and countless volunteers, 130 wood bison were successfully released into the wild in spring–summer 2015.

Wood bison are thriving!

After three years in the Alaska wilderness the wood bison are thriving. They have produced wild bred, wild born calves, learned to locate food on their own, survived three hard winters, and gained the support of people across western Alaska and around the world. Alaska's wood bison population adds to the six disease-free, wild herds already established in Canada. Worldwide there are now about 4,500 disease-free wood bison in the wild. Continue reading to learn more about Alaska's herd and the future of wood bison restoration.



A cow and calf wood bison photographed in the wild near Shageluk, Alaska. Photo by Joy Hamilton.

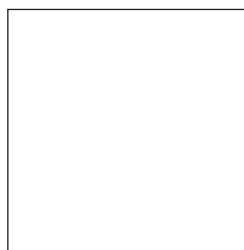
Wood bison oral history

In parts of Interior Alaska, stories of wood bison have been passed down for generations. Bison had many names among the Gwich'in.

- Nan' aak 'ii choo meaning big animal
- Dachantèe aak 'ii meaning cow in the forest
- Dachantèe qwaak 'ii meaning the hefty one among timber
- Ch'atthay daghan meaning humped game

For more wood bison oral histories read *Wood Bison in Late Holocene Alaska and Adjacent Canada* by Robert Stephenson et al. 2001.

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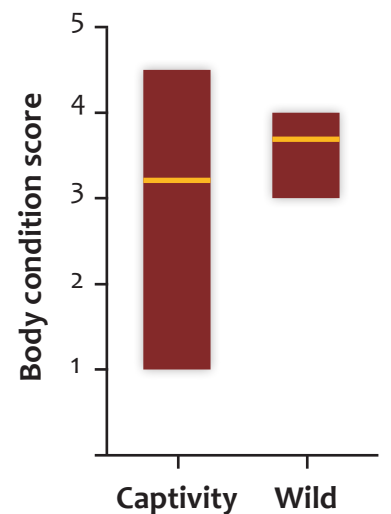


How is the herd doing?

Alaska wild wood bison are in excellent body condition

As Alaska's wood bison transition from captivity to the wild, monitoring their body condition helps us understand how they are adjusting. It also provides an indirect measure of food quality in the lower Innoko/Yukon. The body condition score (BCS) is the amount of fat and muscle a wood bison carries. Scores can range from one (bison is very thin) to five (bison is very fat).

From release through 2017, the body condition of Alaska's wild wood bison was excellent. These animals were thriving in the wild and well suited for their habitat. In fact, the bison were often in better condition than they were during captivity. The excellent body condition of the lower Innoko/Yukon River wood bison will likely continue to have a positive effect on reproduction. Cows who go into the breeding season in optimal condition would have been more likely to become pregnant and birth healthy calves in the spring.



Wood bison body condition (ranges from 1–5) in the wild versus captivity. Bars show ranges, orange line is the average. Wild data from April 2015 to Feb. 2018.

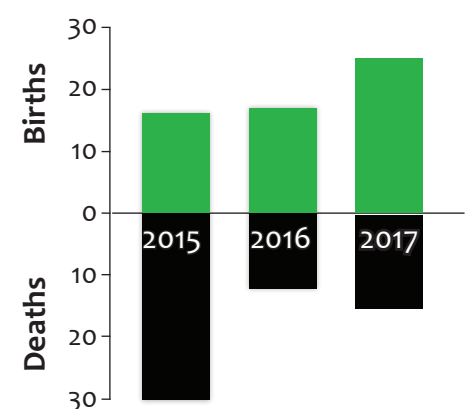
How many calves are produced each year?

Calf production is variable from year-to-year and provides managers with a gauge to anticipate herd growth. During spring 2017 at least 25 calves were born, which was higher than the previous two years (16 and 17 calves were born in 2015 and 2016 respectively). Spring 2017 calves were also born earlier (most were born in April) and had higher survival than any other year (by late October, 88% of calves had survived their first six months of life).

For context we can compare lower Innoko/Yukon River herd productivity to a known prospering herd. The Ashihik herd in Yukon, Canada was established in 1988 from 170 animals. Good calf production and little predation allowed the herd to more than double over the next 10 years. Growth continued and by 2014 there were about 1,500 wood bison in the Ashihik herd. Each year they provide a consistent, high level of harvest. Within the Ashihik herd, calves make up 11–23% of the herd each year. Calf production in the lower Innoko/Yukon River herd is within that range and in July 2017, calves made up 18% of the herd. If calf production remains high, Alaska's herd could mimic the success of the Ashihik herd. Time will tell.

Have bison died?

In healthy Alaska moose and caribou populations 20–30% of animals die every year. In the year following release, 22% of the wood bison herd died as animals adjusted to the wild. Now that nature has selected the strongest and most robust animals, there have been fewer deaths. The most common cause of death was drowning; some bison broke through the ice near beaver houses. Three bison have been unlawfully shot. There is no evidence of disease in the herd. The first signs of predation were recorded in March and April of 2018. Evidence suggests that wolves killed four young bison and injured at least one adult. Based on knowledge of Canadian herds (and plains bison herds in Alaska) bison have few natural predators and predation is not normally a significant factor limiting herd growth. Spring thaw 2018 came late, with deep, hard snow making movement and foraging difficult for bison and predation easy for wolves. Some bison were lost to winter kill as this newsletter was printing. The full effect of the loss won't be known until June when the population groups up again and a census becomes possible.



Estimated wood bison births compared to deaths during 2015–2017. Herd growth is occurring because births exceed deaths.

Is the herd growing?

For herd growth to occur the number of births must exceed the number of deaths. In the year following release this was not the case and the lower Innoko/Yukon River herd size dropped to about 116 animals. Since that initial loss, the herd has been rebounding. With more experience in the wild, in 2016 wood bison births were greater than deaths. Consequently, herd size surpassed the original number of wood bison released and continues to grow. Although growth is slow, there were approximately 140 animals in the herd in June 2017.

Slow population growth is expected for several more years as the wood bison continue to adjust to the wild. Biologists anticipate more rapid herd growth once a larger proportion of the breeding population is made up of animals born in the wild instead of captivity. Bison usually calve for the first time at three years old.

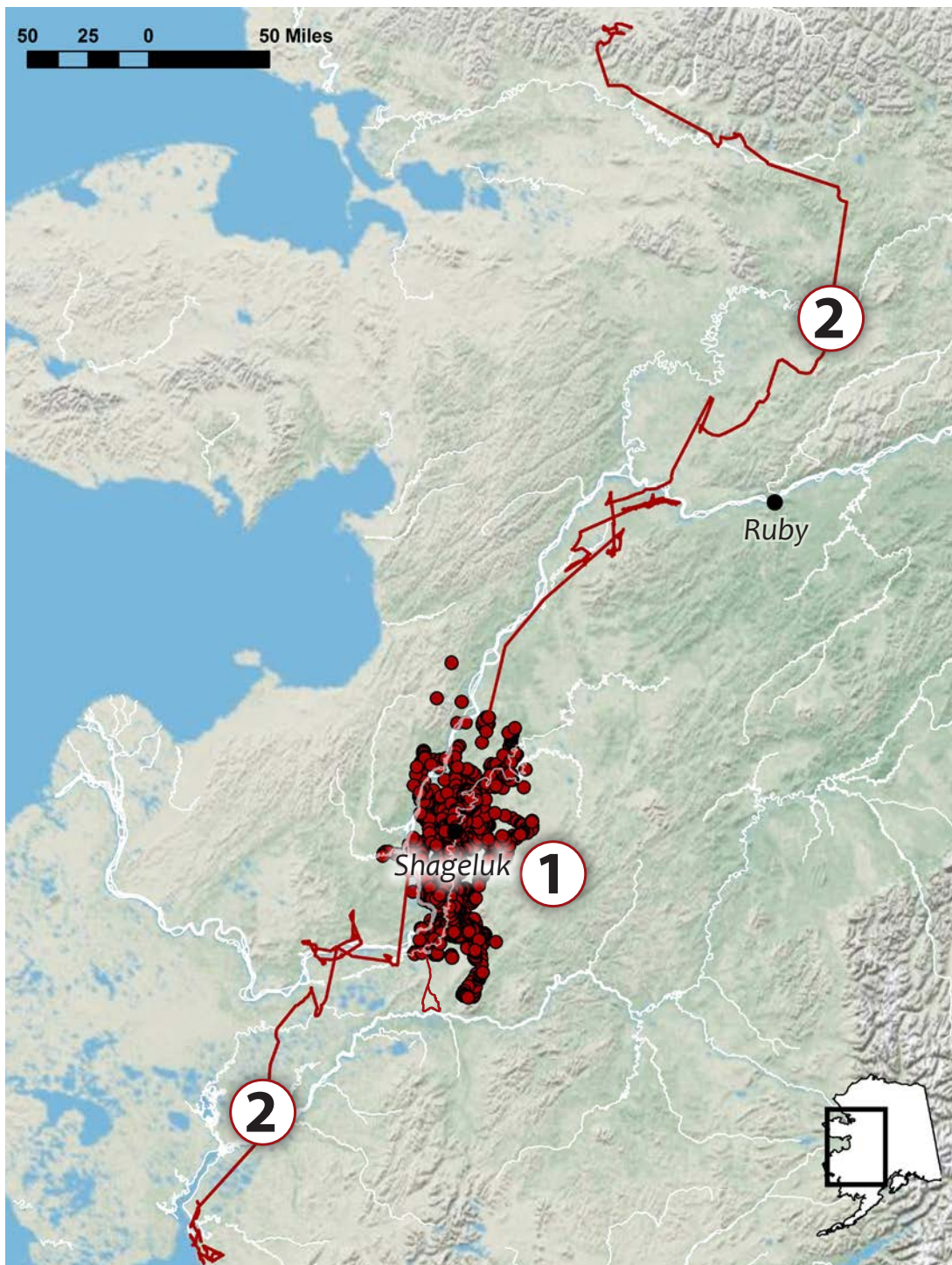
Photo at left: A large wood bison calving group during June 2017. More calves were born last summer than any other year. Continued high calf production could lead to more rapid herd growth in the future. Can you count all the calves (new calves are usually red colored for the first few months, answer is at the bottom of page 4)?



Herd movements and habitat

Where are the bison?

The bulk of the wood bison herd stayed within about 50 miles of their release site near Shageluk. Several young adult bison have explored new areas, traveling as far north as the upper Noatak drainage and as far south as the mouth of the Kuskokwim. Young bison sometimes go on big forays. If they find a location with good habitat, they may spend months or years gaining weight, then return as a larger, stronger, more successful competitor during the breeding season. Bison forays are also a way that herds expand their range. An animal returning from a foray may gather other bison and bring them back to the newly discovered habitats. This behavior is extremely valuable. As more wood bison fill their historic range in Alaska, dispersal of individual bison will be the main mechanism for genetic interchange between herds.



The range map shows the locations of all lower Innokol/Yukon wood bison since release in 2015.

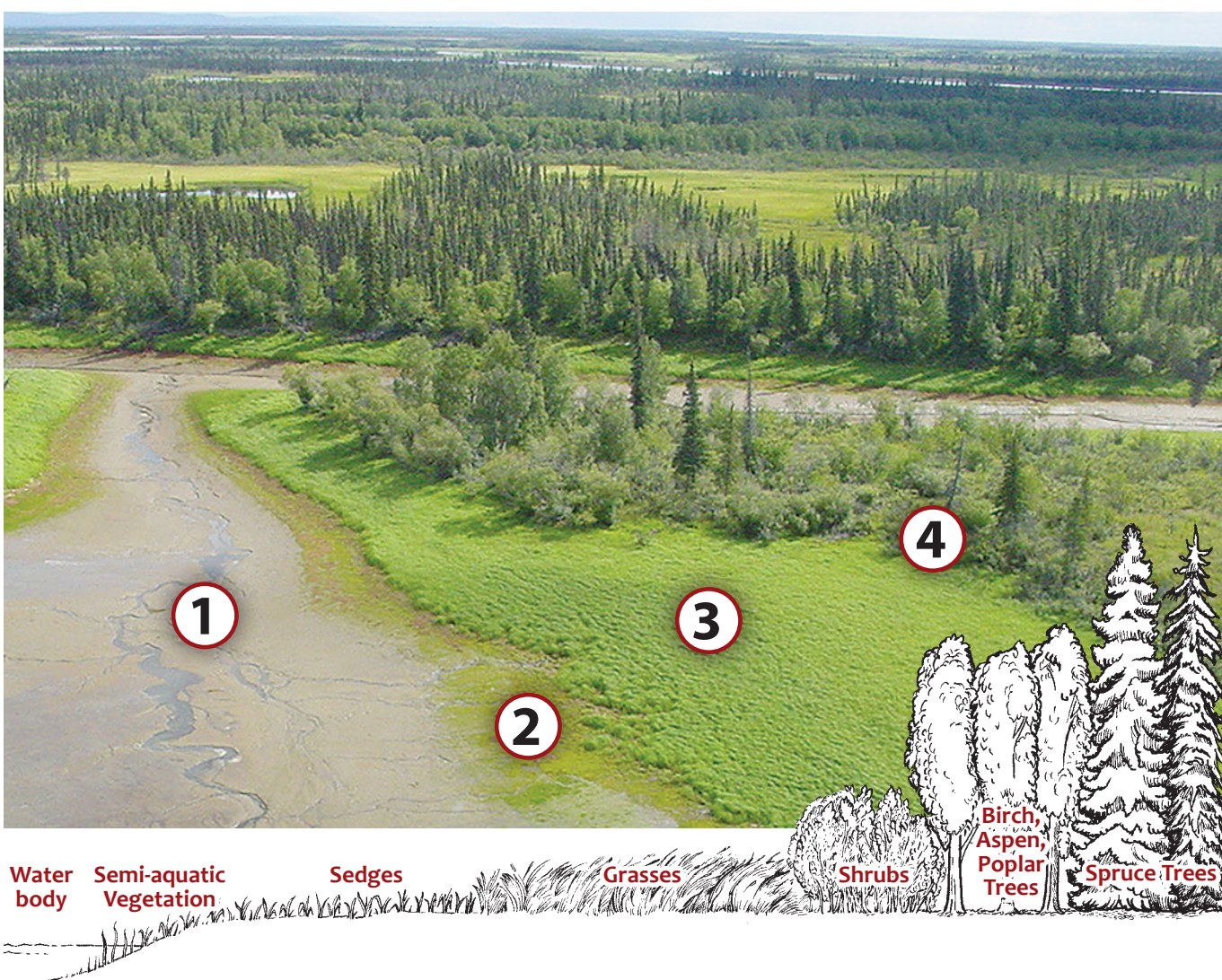
- 1** The points show the location of the 98% of the herd that stayed within 50 miles of Shageluk. Each dot represents a single location where a wood bison was recorded based on collars (there are a total of 61,683 wood bison locations shown on this map).
- 2** The lines show the movements of the three bison who explored new areas far from the rest of the herd (one went south and two traveled north).

What do the bison eat?

Throughout the year bison forage on different plants depending on what is available and provides the most nutrients (young green plants are more digestible than mature tough plants). The diagram at the bottom of the page shows the change of vegetation types from water to forest. Bison use each of these vegetation types differently.

The photo demonstrates high quality bison habitat:

- 1** The lower Innoko/Yukon area is mainly a wetland. Seasonal changes in water levels make the area a great place for grasses and sedges to grow. These are important foods for wood bison.



- 2** In spring bison feed on *semi-aquatic plants* (like equisetum a.k.a. horsetail or goose grass) that grow in and along thawing lakes.
- 3** During winter bison rely heavily on *sedges*. These plants store more nutrients in their stems than grasses. In deep snow bison expose sedges by sweeping snow with their faces.
- 4** In summer bison feed on many plants including *grasses, sedges, shrubs, and semi-aquatic vegetation*. As each type “greens-up,” bison take advantage of the tender young leaves.

Monitoring the herd

Radio collars

ADF&G maintains about 30 radio collars on wood bison. Radio collars are equipped with a small transmitter and attached to wood bison for locating animals via airplane.

Bison are social animals and typically form groups of about 20 animals (sometimes increasing seasonally to 90). During the non-breeding season (September–June) mature bulls often split off by themselves or with a few other males. Cows and young animals typically remain in larger groups. There are usually 5–12 groups in the lower Innoko/Yukon River area. Biologists take advantage of this grouping behavior to monitor herd structure, productivity, body condition, and habitat use. Even though only a portion of the herd is collared, at least one collared animal is usually in each large group (referred to as a collared group). This allows biologists to keep track of the herd.

What do radiotracking flights tell us?

Each month ADF&G flies over the lower Innoko/Yukon area to locate the radiocollared wood bison. Biologists count the number of animals in each group and record other information (like the habitat type being used). During calving (April–June) biologists increase their monitoring effort. Each week they track collared animals looking for new calves. Biologists come up with an estimate of annual calf production which they call “peak calves.” This is the maximum number of calves observed during any of the tracking flights. Some calves that die between flights, or are born to cows not in a collared group, may not be observed. Intensive calving flights help biologists understand calf production and mortality.

How do bison interact with other mammals?

In the lower Innoko/Yukon, moose and wood bison have been seen near one another with no conflicts. The two species focus on different resources: wood bison graze in sedge meadows while moose browse on willows. A study in Canada assessed potential conflict between reintroduced bison and caribou, Dall's sheep, and moose. They concluded that competition for food resources between bison and caribou, and moose, was low. There was dietary overlap with sheep in areas where bison were at high elevations.

Both black and grizzly bears have been observed grazing alongside lower Innoko/Yukon River bison with little to no interaction. An observed interchange between wolves and a bison calving group was different. As the wolves drew near, wood bison calves and yearlings moved close to their mothers. Some of the bison faced the wolves and two adult bison walked out of the herd to meet the wolves. If the wolves were attempting to catch a calf, they were unsuccessful in that event.

New technology to assess herd demographics

ADF&G recently upgraded the camera equipment used to photograph and count Alaska's caribou herds. The new system, which is mounted in the belly of an airplane, takes extremely high resolution digital photos that are linked to GPS software. The software can be used to measure objects on the ground.

Prior to release into the wild, biologists measured the body length and horn width of many wood bison. These data are being used to develop a protocol to assign bison to a specific age class and sex based on their dimensions. Using ADF&G's new camera equipment biologists will soon be able to photograph bison from the air, measure characteristics like body length and horn width using the GPS software, and determine the age and sex composition within each group. This demographic information gives us another way to monitor mortality and productivity of wood bison, which will help us better manage the population.

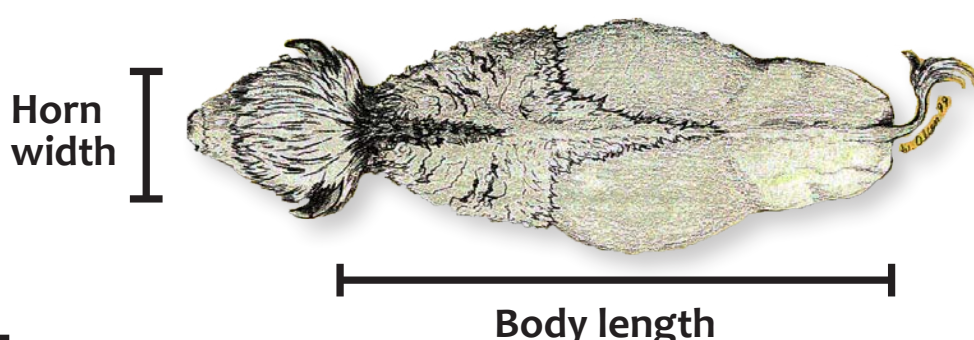
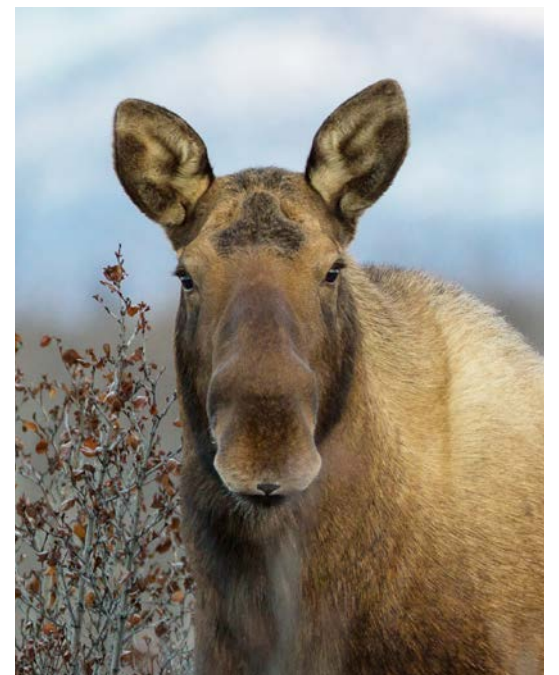


Illustration at left: Horn width and body length may be two dimensions used to determine the sex and age of wood bison from aerial photos.



A group of 19 wood bison forage in a meadow during February. The group was located using radio telemetry (the airplane's radio antenna is in the upper left corner). The density of bison tracks along the edges of this meadow illustrate where bison are eating sedges.



A Canadian study and biologist observations in the lower Innoko/Yukon River area indicate that moose and wood bison do not compete for the same resources. Photo by Jim Dau.

Answer:

There are 19 calves in the photo on page 2.

Wood bison benefits

What have we gained from bison?

Conservation is the primary reason for restoring wood bison to Alaska. Social and cultural benefits are second. Still another way to analyze the benefit is dollar value. Restoring wood bison to Alaska took 23 years of planning and five million dollars. It may sound like a lot, but that cost is equivalent to constructing a single mile of paved road in Alaska and the return on wood bison investment could be more than 20-fold in 50 years.

Communities near wood bison restoration will see the most return and are among the first to benefit. In 2015, ADF&G hired 35 local residents from Shageluk, Grayling, Anvik, and Holy Cross to help build fences, feed and care for the bison in temporary holding facilities, and later train wood bison to stay away from human infrastructure. Whenever possible, ADF&G also used local materials for building fences, rented local equipment, purchased local food and lodging, and bought local fuel.

Once hunting begins, wood bison restoration will bring meat to household tables locally and statewide and increase hunter spending. Experts predict that the return on the lower Innoko/Yukon River herd investment will be around 120 million dollars over the next 50 years. This figure is based on observed herd status, conservative population growth patterns of wood bison herds in Canada, and a study that quantified spending by hunters in Alaska (*The Economic Importance of Alaska's Wildlife*, see *Final Report, May 2014* in www.adfg.alaska.gov/index.cfm?adfg=ongoingissues.economicstudy).

Where will we see this economic gain?

- **Meat value.** There is about 540 pounds of edible meat on an average wood bison, at \$10 per pound each bison is worth approximately \$5,400.
- **Hunter spending.** Alaska residents spend on average \$3,767 per hunting trip while nonresidents spend on average \$11,315. Purchases typically include fuel, groceries, equipment, and transportation (see Table 6 in *The Economic Importance of Alaska's Wildlife*).
- **Land use fee.** In accordance with the publicly developed wood bison management plan, each hunting Alaskan will be charged \$300 (nonresident fee will be \$500–\$1,000) to access wood bison on private land. These funds will support student scholarships.

Wildlife restoration has social and cultural advantages. A growing number of studies show that connecting people with nature makes them happier and healthier. Bison are particularly good for connecting the public to nature because of bison's ecological, cultural, historical, and economic significance. The important role of bison in the United States was acknowledged in April, 2016 when the bison was declared the U.S. national mammal.

When will hunting occur?

The *harvestable surplus* of a population is the number of individuals that can be harvested without affecting long-term stability. Wood bison hunting will become legal once the harvestable surplus exceeds 20 bison per year. This will likely occur when the herd reaches 200–250 animals and produces at least 40 calves annually. At this size, biologists are confident that 20 permits can be issued while still maintaining herd growth. According to the wood bison management plan, and with final regulatory approval by the Alaska Board of Game, one fifth of

permits will be issued locally, equally split between each of the four villages (Shageluk, Grayling, Anvik, and Holy Cross) involved in the initial restoration. The remaining four fifths of permits will be issued by a drawing available to all hunters (Alaska nonresidents are limited to only 10% of the drawing permits).

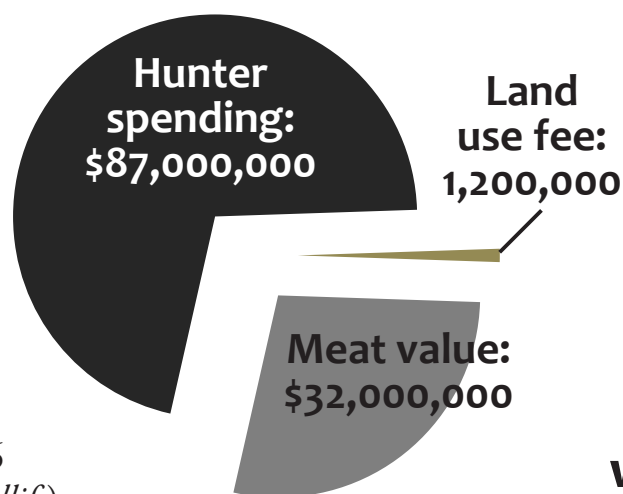
As Alaska's wood bison population continues to grow, bison will once again regain their place as a valued resource for Alaskans. Someday wood bison may even be as important as moose. What many people do not know is that in the 1880s moose were only found in eastern Interior Alaska. With the help of favorable conditions, proper management, and

relocation efforts in some areas, moose extended their range and are presently found across most of the state. Moose are now an integral part of Alaskan's diet and culture. With public support and proper management, wood bison may one day fill a complementary role.



Bernard Edwards and Dion Benjamin from Holy Cross and Shageluk clear trees for a soft release pen during the lower Innoko/Yukon River wood bison release in 2015.

Potential economic return after 50 years (Assuming ~2,000 wood bison harvested)



In an account highlighting stories from Athabaskan elders, David Salmon described how Yukon Flats Gwich'in once lived on wood bison, "especially before moose became more common." Bison provided valuable food and material for people and were said to be a "good animal" (*Wood Bison in Late Holocene Alaska and Adjacent Canada* by Robert Stephenson et al. 2001).

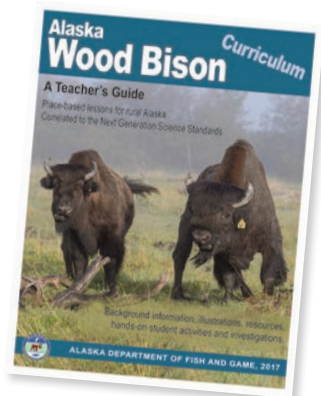
Bison can benefit other wildlife too!

Biologists are still learning how lower Innoko/Yukon River wood bison interact with the ecological community around them. In Canada, wood bison play an important role in their environment, positively impacting many species (they are known as a *keystone species*). They manipulate their physical environment through grazing which provides better forage for animals like ground squirrels, shrews, and grasshoppers. Bison feces, hair, and carcasses are used by many animals. Their wallows and feces provide rich nutrients to soils which increases plant growth. These ecological benefits have been associated with Alaska's nonnative plains bison too. The abundance of wildlife near the Farewell and Delta Junction plains bison herds suggests that other species thrive when bison are present.

Education and outreach

Wood bison in the classroom!

Education provides the tools for people to participate in wood bison restoration. Instilling a basic understanding of ecology and identification characteristics is especially critical for youth who will someday become wood bison decision-makers and hunters. In 2017, ADF&G launched the Alaska Wood Bison Curriculum, a set of 11 lessons specifically designed for Alaska. The teacher guide provides background information and covers wood bison ecology, ecosystem benefits, habitat, identification, and ecotourism opportunities.



Would you like to teach about wood bison?

The wood bison teacher guide can be downloaded in electronic form for free or hard copies can be purchased from ADF&G. Department educators also periodically offer workshops on the topic. To request a teacher workshop in your school district contact dfg.dwc.woodbison@alaska.gov. View the wood bison curriculum:

www.adfg.alaska.gov/index.cfm?adfg=curricula.woodbison

Near and far involvement in wood bison restoration

Wood bison attract support and attention from a wide range of audiences including local residents, students, media, wildlife enthusiasts, and hunters. Quantifying this interest is difficult, but below are a few examples:

- **Team mascot.** Following wood bison restoration near them, students from Grayling, Anvik, Shageluk, and Holy Cross voted to make their joint team mascot the bison.
- **Community letters.** Tuntutuliak Traditional Council sent a letter asking for wood bison restoration near their community.
- **Alaska Board of Game requests.** Representatives from the Lower Kuskokwim Advisory Committee (representing the communities of Kwethluk, Napaskiak, Napakiak, Kasigluk, Oscarville, Nunapitchuk, Tuntutuliak, Tuluksak, Atmauthluak, Akiak, Akiachak, and Eek) and the Central Kuskokwim Advisory Committee (representing the communities of Crooked Creek, Aniak, Chuathbaluk, Lower Kalskag, and Upper Kalskag) requested wood bison restoration at their Board of Game meeting.
- **Social media following.** Wood bison related Facebook posts by ADF&G are consistently among the most liked and shared posts. Tens of thousands of people have been reached worldwide.
- **Press coverage.** Alaska wood bison restoration has been featured by Alaska Business Monthly, Alaska Dispatch News, Alaska Magazine, CBC News, Fairbanks Daily News-Miner, Fox News, Huffington Post, KTVA (Frontiers with Rhonda McBride), KUAC (University of Alaska), KYUK (Public Media for the Yukon-Kuskokwim Delta), LA Times, Newsweek, Smithsonian, Sunset Magazine, Turnagain Times, The Wildlife Professional, to name a few.

Randy Rogers Wood Bison Foundation

In 2017 the Randy Rogers Wood Bison Foundation was established to honor the return of wood bison to Alaska. The goal of this scholarship foundation is to help young people learn about and contribute to wood bison conservation, management, tourism, and other related fields. The first scholarship will be awarded to a person from Grayling, Anvik, Shageluk, or Holy Cross. To learn more visit <https://woodbison.org>.

New wood bison themed education hall

The Alaska Wildlife Conservation Center (AWCC), ADF&G's wood bison restoration partner, recently completed Bison Hall. The hall commemorates their monumental contribution to wood bison restoration in Alaska. The new education facility provides a heated, year-round space for animal presentations to students and visitors.

Along with other wood bison related outreach efforts, AWCC also sponsors the Bison Run Wild 5-kilometer race in Portage, Alaska. The event takes place each year to celebrate the reintroduction of wood bison to the lower Innoko/Yukon area.

Hunters are important founders of the modern wildlife conservation movement. They, along with trappers and sport shooters, provided funding for this publication through payment of federal taxes on firearms, ammunition, and archery equipment, and through state hunting license and tag fees. The State of Alaska is an Affirmative Action/Equal Opportunity Employer. Contact the Division of Wildlife Conservation at (907) 465-4190 for alternative formats of this publication.



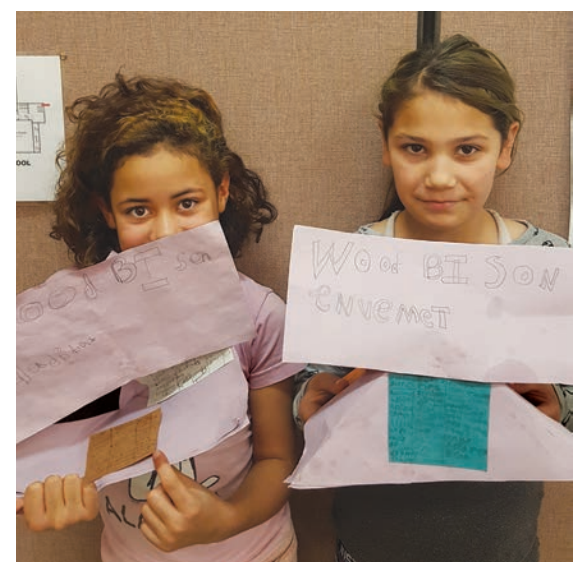
Wood bison biologist Tom Seaton (center) and department educators Heather McFarland and Mike Taras (right) load up after a teacher workshop.



A Chuathbaluk student holds a wood bison sculpture she made from recycled materials. Her artistry illustrates the distinct shoulder hump and U-shaped horns that distinguish wood bison from muskoxen.



Shageluk students play the Wood Bison Business Game which teaches about wood bison ecotourism opportunities.



Takotna students display triads that show how wood bison interact with other animals and plants.

Ensuring successful restoration

Why are multiple populations important?

A *metapopulation* is made up of several *subpopulations* that have some interchange of individuals. Developing a metapopulation of wood bison in Alaska is a robust way to restore them. The benefits to releasing additional subpopulations include:

- Just like the saying, *don't put all your eggs in one basket*, presence of multiple populations will ensure that chance events (a spring flood, icing event, or extremely deep snow) that effect one subpopulation do not eliminate all populations.
- There is a *genetic benefit* to the metapopulations strategy. Small populations can develop inbreeding depression. That means that there is not enough genetic diversity between individuals to maintain a healthy population. Reintroducing subpopulations across the landscape addresses this issue. As natural selection acts on each herd differently, their genetic makeup becomes slightly different. Since a small proportion of bison explore farther from their herd, some bison will interchange between subpopulations. These bison will bring the distinct genetic makeup from their herd to the other populations. In this way the metapopulation strategy will be more successful at maintaining genetic diversity.
- Connectivity within the metapopulation also has a *learned trait benefit*. Each subpopulation of bison experiences slightly different environmental conditions. One herd may be exposed to deeper snow while another may learn to thrive in a coastal landscape. Since bison are social animals, when interchange between subpopulations occurs, the learned behaviors can be shared. Through this sharing, bison throughout the metapopulation learn advantageous behaviors that can improve survival.



A cow (left, notice the thin horn bases, shorter beard, and less hair on forehead) and bull (right, notice the thick horn bases and long beard) wood bison interacting. Wood bison are extremely social and learn from one another. Photo by Doug Lindstrand.

What is a nonessential experimental population?

Wood bison are listed as "threatened" under the Endangered Species Act (ESA). Due to this listing, landowners and developers feared that allowing a threatened species on their property could restrict future resource development. To avoid this issue a special rule under Section 10(J) of ESA was used to designate wood bison in Alaska as a nonessential experimental population (NEP). The designation ensures that wood bison will not interfere with oil, gas, and other resource development. It also allows the state to manage wood bison for hunting on a sustainable basis, just like moose or other big game species.

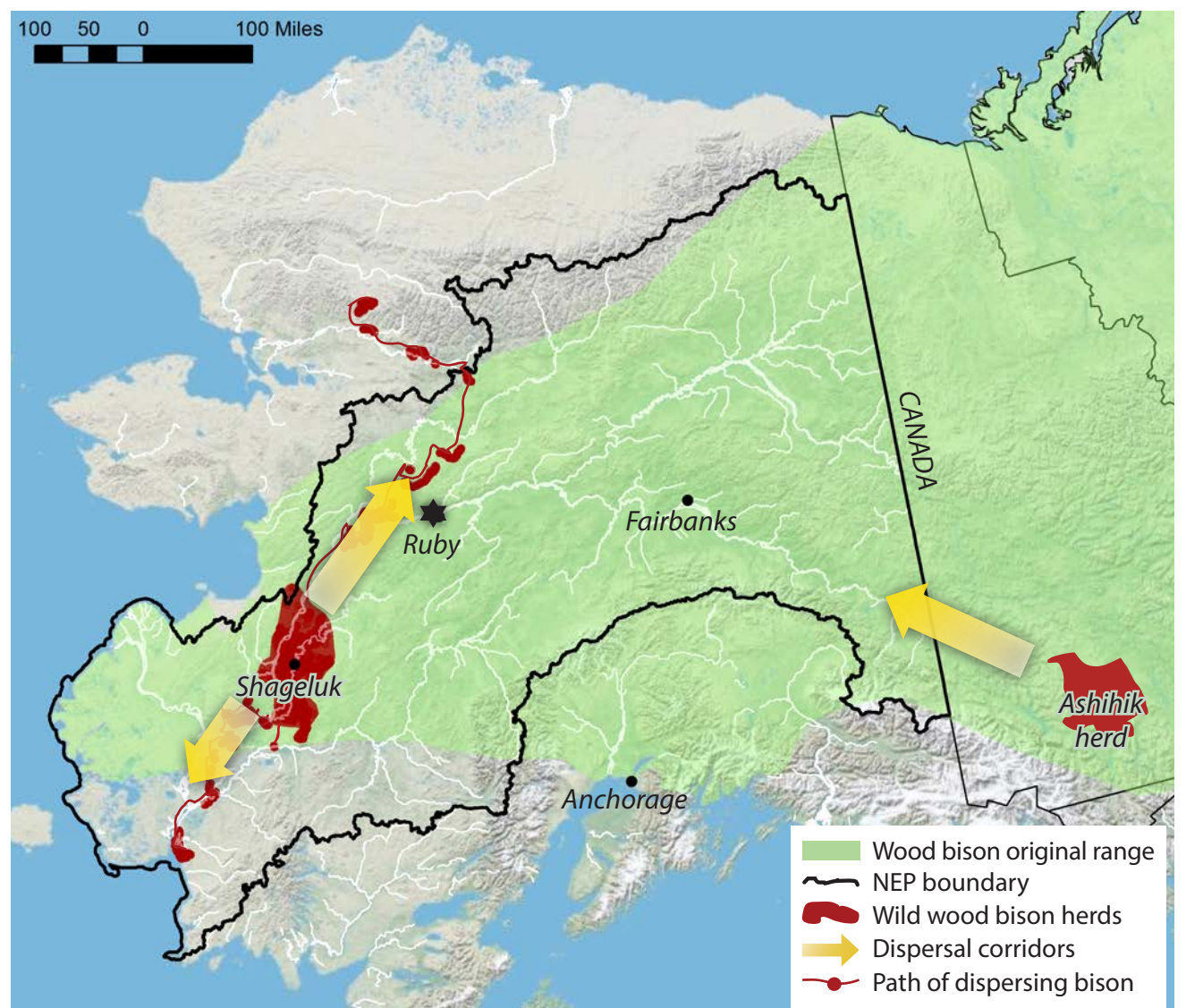
The 10(J) rule requires ADF&G to use a public planning process to develop implementation and management plans for wood bison restoration. Therefore, community participation and approval

"Successful restoration requires local support"

is essential for the release of wood bison to new areas. Wood bison biologist Tom Seaton emphasizes this necessity, "areas with very supportive communities and landowners will receive priority for future wood bison restoration. It is impossible to have a successful restoration program without the support of local people."

Where can wood bison be restored?

Under the NEP designation wood bison can be restored to areas north of the Alaska Range and south of the Brooks Range. This area covers most of the original range of wood bison in Alaska. Although wood bison restoration projects can only take place within this area, individual animals may disperse outside the NEP area on their own, but may then be subject to relocation or removal by the State.



Under the nonessential experimental population (NEP) designation, wood bison can be restored to the area outlined in black. Within this area, ADF&G could establish east and west metapopulations to supplement the lower Innoko/Yukon River herd and the Aishihik herd in Yukon, Canada. Animals in both herds have already explored new areas demonstrating future dispersal corridors (yellow arrows) where interchange between subpopulations will likely occur.

Will there be future releases?

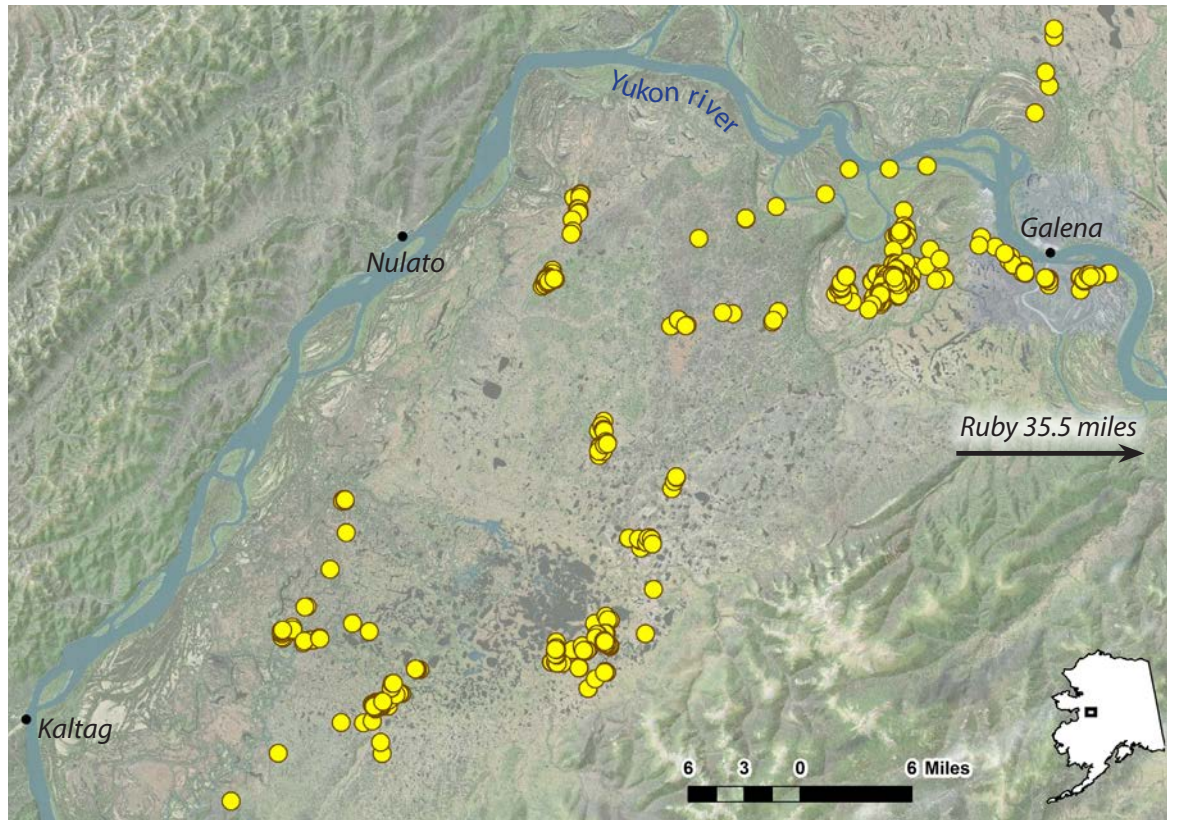
Could middle Yukon River be next?

To build a more robust metapopulation in western Alaska, one possibility is to restore wood bison to the middle Yukon River. Two bison from the lower Innoko/Yukon River herd have already traveled through the middle Yukon River area. These forays demonstrate a movement corridor that future bison will follow. Adding wood bison to this area would help to supplement the bison that have already spent time there.

Residents from Ruby are working hard to investigate wood bison restoration on behalf of their neighboring communities. In September 2017 the Native Village of Ruby applied for a U.S. Fish and Wildlife Service, Tribal Wildlife Grant to help explore the possibility of restoration in their area. Next, local communities, interest groups, agencies, and landowners (including the villages of Huslia, Hughes, Koyukuk, Nulato, Kaltag, Galena, Ruby, Tanana, and Doyon Limited) will be included in a wood bison scoping process. If local and regional support is recognized, these interest groups will develop a wood bison management plan to outline goals and objectives for restoration.

In a recent interview, Edward Sarten, the natural resource technician for the Ruby Tribe, described the three things that sparked his interest in wood bison. First he emphasized that wood bison belong in the middle Yukon River area, "in the distant past, 500 years ago or so, they were a subsistence animal in our area." Mr. Sarten even found bison bones in a gold mine near Ruby. The second reason he supports wood bison restoration is because of the positive impact bison can have on their environment. Wood bison "cohabitate very well with other animals... Moose and bison live side by side... as far as I know wood bison even help with habitat. They open up areas for willow." The final reason wood bison restoration is important to Mr. Sarten is because other local food sources fluctuate, so "wood bison give us another resource to hunt in the future."

"wood bison give us another resource to hunt"



Wood bison have been near Kaltag, Nulato, Galena, and Ruby since September 2015. This map shows over 1,600 wood bison locations over 22 months recorded from two collared bison.

Can you request wood bison for your area?

Many Alaskans are interested in the prospect of wood bison restoration near them. However, for an area to be considered a potential part of future wood bison restoration it must satisfy the following criteria: **1)** it must fall within the NEP area, see page 7 map; **2)** there must be suitable habitat; and **3)** local public must be supportive. Review these steps to learn more about the process of wood bison restoration.

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

Step 1. Regional planning. ADF&G collaborates with local entities in a public planning process which outlines wood bison release and future management.

Step 2. Approval. Before release into the wild, all the necessary permits must be acquired and the final state and federal authority given.

Step 3. Locate and secure wood bison. Only about 20 captive wood bison remain available in Alaska. Future releases must obtain additional animals from the wild in Alaska or from Canada.

Step 4. Site selection. ADF&G biologists identify a site for temporary holding pens. This site must be accessible by barge or cargo plane, have adequate forage, be in close proximity to a release location, and be able to withstand seasonal changes such as flooding.

Step 5. Training and education of local people. Prior to release, wood bison are held at the site for a period of time. Local residents are hired to build holding pens, and trained to care for and interact with bison pre and post release.

Step 6. Transportation. Wood bison can weigh 2,000 pounds; their safe transport requires special containers, equipment, and expertise.

Step 7. Release. ADF&G biologists and local people work together to practice strategies for a future of harmonious human-bison interaction.

How can you start the process?

Step 1. Write to us. Write a letter to ADF&G expressing interest in restoring wood bison to your area. Send letters to dfg.dwc.woodbison@alaska.gov

Step 2. Coordinate. Coordinate with ADF&G biologists and local leaders to outline the best approach to proceed.



Photo by Doug Lindstrand.