

*Bison Report*  
American Prairie Reserve *2013*



# *Bison Report*

## American Prairie Reserve

### Introduction

We are pleased to provide you with the annual bison report from American Prairie Reserve (APR). The APR bison population, reintroduced in 2005 after a one hundred and forty year absence from this area of the Glaciated Plains, is healthy and growing steadily. It is an exciting challenge to continue to provide an expanding habitat base for this increasing bison population. Due to the eventual herd size, lack of cattle genes and overall treatment as a conservation herd for the public's enjoyment, this herd is emerging as one of the most important bison populations in North America. We hope you can come visit and enjoy seeing the herd for yourself sometime soon.

Damien Austin  
*Reserve Supervisor*  
*Manager of Bison Operations*



Damien Austin  
*Reserve Supervisor*



James Barnett  
*Reserve Supervisor*



Lars Anderson  
*Reserve Assistant*





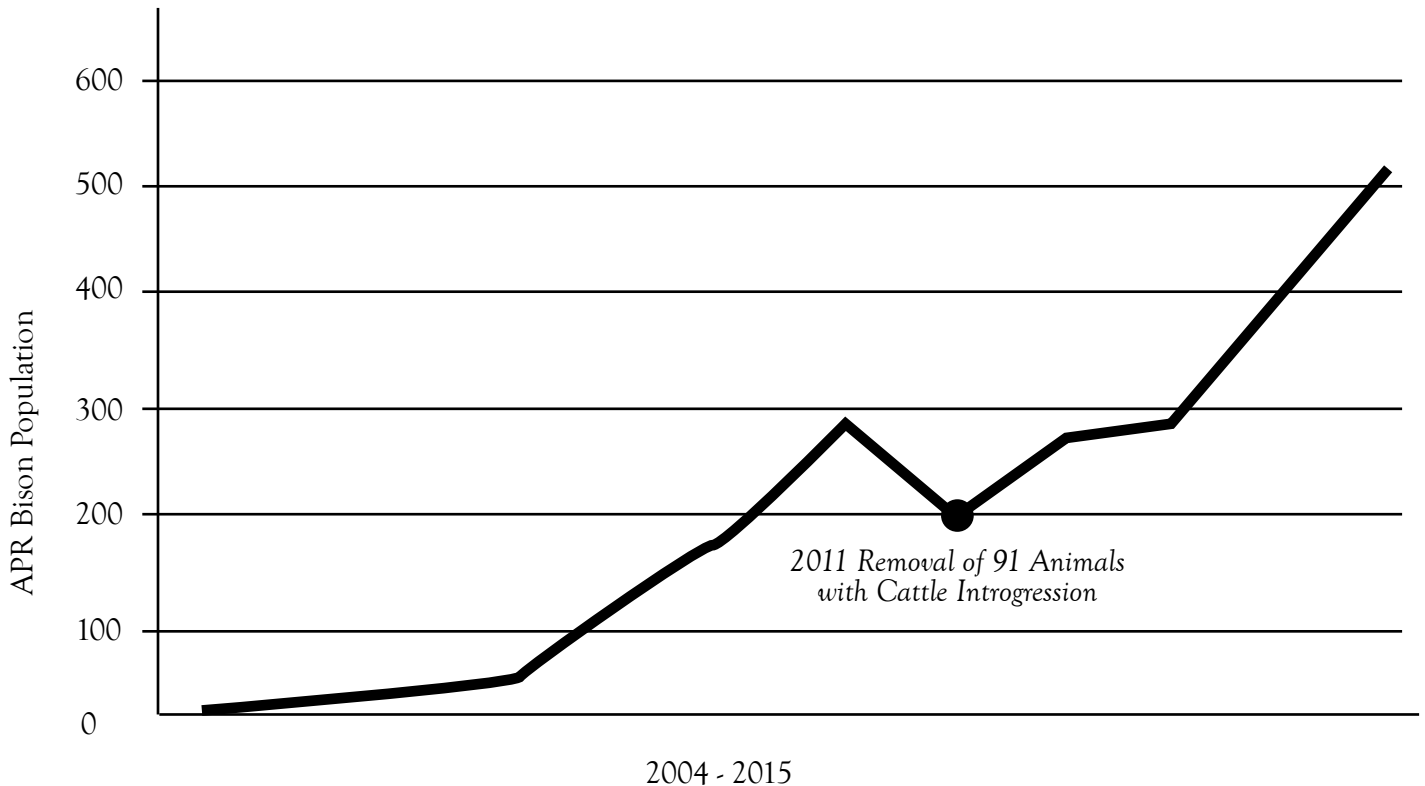
## Population

In 2005, APR started with 16 animals imported from Wind Cave National Park. Since that time, on-the-ground births and additional, semi-annual imports have increased the population to approximately 270 animals. The drop in population in 2011 shown in the accompanying graph resulted from the removal of 91 Wind-Cave originated animals that, when the entire herd was tested with the newer SNPs DNA test, were discovered to have traces of cattle genes (see the following genetics section).

In early 2014, we will import, for the third time, approximately 70 additional calves from Elk Island National Park in Alberta, Canada. Elk Island has emerged as the only known source of bison today that tests 100% free of cattle introgression when using Single Nucleotide Polymorphism analysis, or SNPs test. Those imports, together with an estimated 80 additions from the 2014 spring calf crop, will bring the 2014 APR population to around 400 animals. The 2015 calf crop is estimated to be near 100, which will bring the total population to roughly 500.

Our first goal is to reach 1,000 animals by 2018. Our ultimate goal on the APR is a minimum of 10,000 animals, making it the largest genetically pure, disease-free and largely free roaming conservation herd in North America.

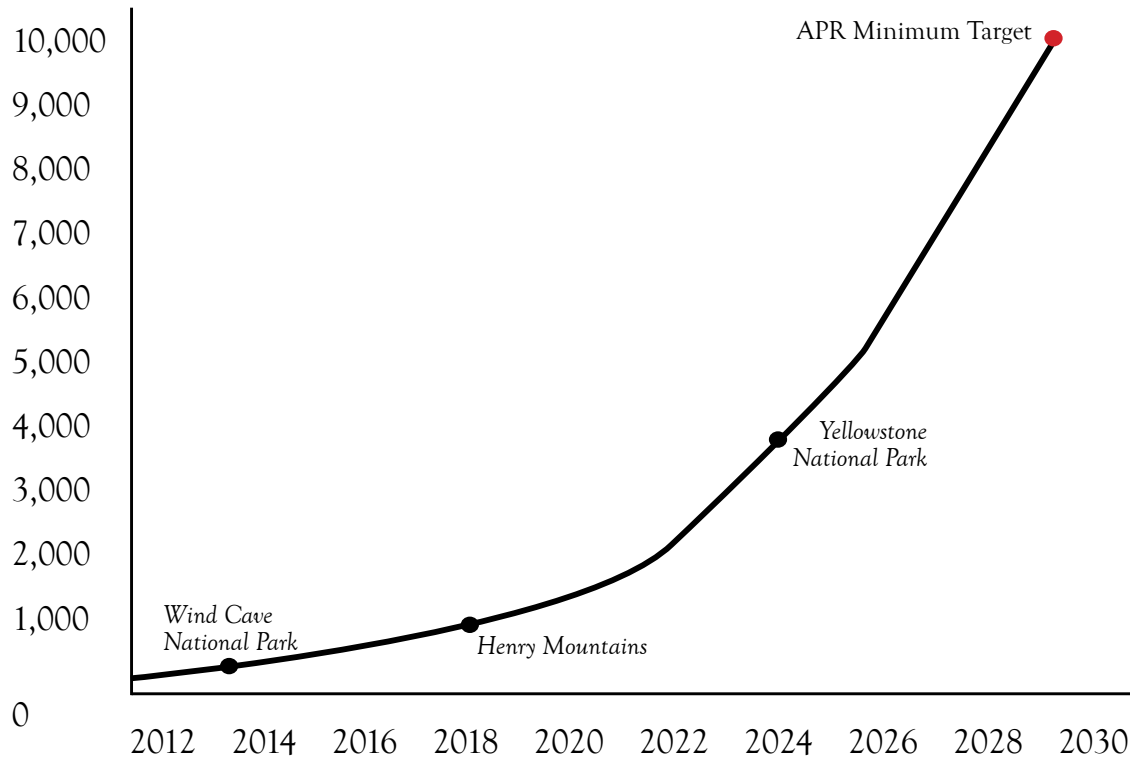
### APR BISON HERD GROWTH OVER TIME





## APR BISON HERD GROWTH PROJECTIONS

*compared to other conservation herds*



*Our initial goal is to reach 1,000 animals by 2018. Our ultimate goal on the APR is a minimum of 10,000 animals, making it the largest genetically pure, disease-free and largely free roaming conservation herd in North America.*

### Herd Health

In 2013, APR employees drew blood from 6% of the current bison population. Subsequent tests indicated zero disease prevalence. We will continue to test a percentage of the herd annually in order to maintain a consistent pattern of testing and to ensure our herd stays healthy in the future. We remain generally unconcerned about brucellosis given that the closest incidence of the disease is primarily in Wyoming in and around Yellowstone National Park, nearly 400 miles away from APR. Elk are suspected of causing the only two known transmissions of the disease to ever have occurred in the wild. The Yellowstone-area elk population is not known to travel north towards the American Prairie Reserve region.





## Genetics: Allele Diversity and Cattle Introgression

Most all major sources of bison, including Yellowstone National Park, Custer State Park, and the National Bison Range, have been supplemented at one time or another with bison from commercial herds where cattle introgression is likely. The APR bison herd is the only known conservation herd where every animal entering the population is tested with Single Nucleotide Polymorphism (SNPs) technology. Over the past five years, SNPs analysis has been shown to be far more effective at detecting cattle gene introgression compared to older mitochondrial tests. When importing animals from Elk Island, APR tests each individual with a SNPs process. To date, every animal coming from Elk Island has tested clean with regard to cattle introgression.

To steadily increase allele diversity, we anticipate importing bison from other sources in the future, provided every imported animal tests negative for cattle introgression using the SNPs test. Since SNPs testing is applied to each individual as opposed to a sampling of a herd, we are optimistic that we will identify a variety of sources from both public and private conservation herds that will yield animals suitable for APR.

## Herd Management

The APR herd is managed as lightly as possible given today's land base and current guidelines we need to follow when the herd is on Bureau of Land Management (BLM) and State Lands. Blood samples for annual herd health monitoring are acquired through darting a sample of animals with tranquilizers in the field rather than bringing in the entire herd and running them through chutes. Aside from brucellosis vaccination of imported females, APR does not vaccinate or medicate any of its bison. The Reserve does not provide supplemental feed in the winter except in very rare cases where snow has temporarily buried border fences and there is a risk of animals leaving the Reserve and entering neighboring property.

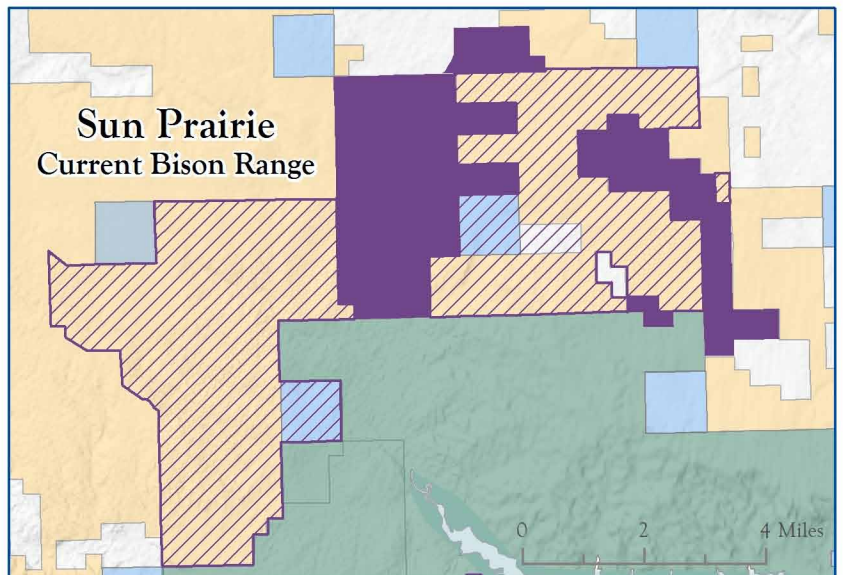
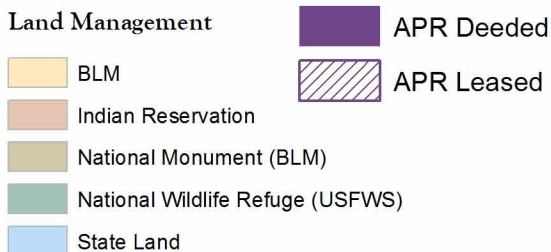
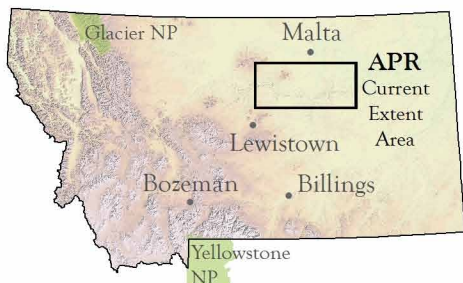
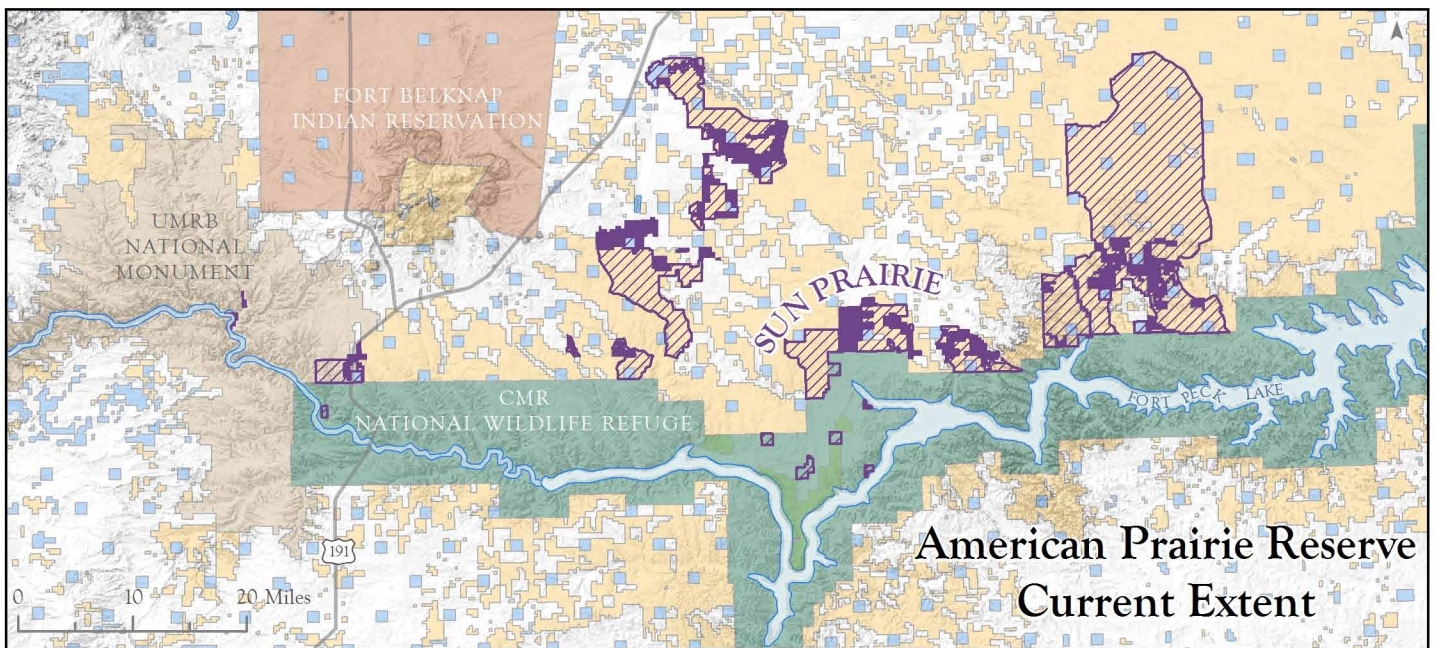
To date, more than 37 miles of interior cross fencing have been removed in order to allow the most free-range opportunities as possible. Many more miles of fence will be removed annually. The BLM in particular has been very fair and open-minded about allowing us to remove certain interior fences on APR's BLM leases as well as allowing for year-round grazing, where possible, on those leases. The opportunity for increased natural movement across APR's private lands and BLM and State leases will grow steadily as the APR land base continues to expand.





## Movement Across the Landscape

As the Bison herd and their available range expand, we witness them foraging and moving on the land more like they did a few hundred years ago. Bison move more often and greater distances than their distant cousin, the domestic cow. They tend to face into a storm and prefer open ground. They generally move far away from water sources soon after using them. They also find a high dry windy hill during the heat of the day to keep biting insects at bay.

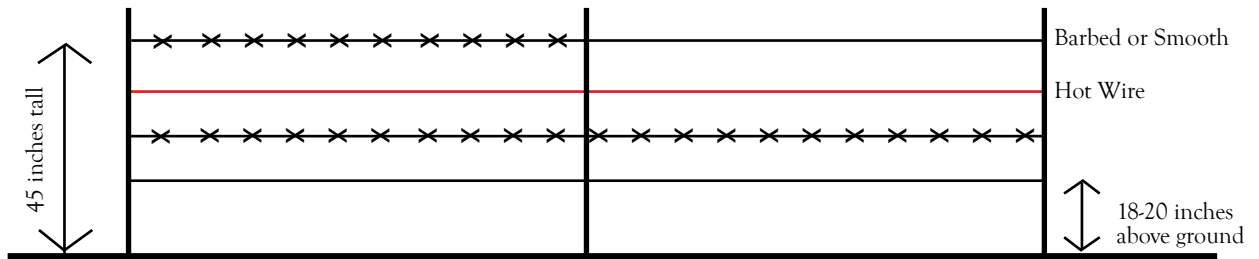




## Fencing

Thanks to a \$270,000 grant in 2013 from the Swedish Post Code Foundation in Stockholm, we were able to remove 5 miles of fence to increase the herd's ability to move as freely as possible within what is now a 31,000-acre enclosure. In addition, 30 miles of new periphery fence were erected this year on the enclosure's western and northern boundaries. We estimate that similar fencing projects will occur annually on the Reserve for at least the next decade.

Since 2005, APR has experimented with a variety of fencing solutions. Our current design is working well for our multi-faceted definition of success for fence.



FENCE DIAGRAM

The bottom smooth wire is high enough for easy navigation by pronghorn and, lacking barbs, is gentle on their backs should they touch it while going under. At 45 inches tall, the top wire is navigable by elk, mule deer and white tail deer. The wire that is second from the top is a hot electric wire, powered by solar panels every 8-12 miles, and carries 7-8 kilovolts and 7 joules. This is more than ample to keep the bison in. Recently, there have been an increasing number of moose sightings in and around APR. We hope to learn more in future years how moose navigate such fences.



## Interaction with Human Visitors

APR has adopted a bison movement philosophy similar to Yellowstone National Park. Bison are allowed to roam in all areas where human beings may be, including Buffalo Camp (our public campground), Grouse Camp, Kestrel Camp, and all viewing and hiking areas. Bison are also present in some of the tens of thousands of acres of APR private lands currently enrolled in the Fish, Wildlife and Parks Block Management program. To date, no bison/human conflicts have occurred.







## Looking Forward

National and local trends indicate that the American public's interest in bison continues to increase. At the national level, the Interior Department continues to seek opportunities to further distribute bison populations to other parks and refuges. In Montana, public opinion favoring the reintroduction of wild, free roaming bison in the state is growing and now exceeds sixty percent; a substantial increase from just twenty years ago.

We assume that at some point in the future Montana's bison will achieve the same status as elk, deer, grizzlies, wolves, moose, big horn sheep and all other wildlife, and, like those species, they will be allowed to move freely about the state. This could take another eight to ten years or perhaps even decades, but we assume it is inevitable.

As we have noted since the inception of the American Prairie Reserve project, our hope is that, when bison are finally considered wildlife in Montana, we will be able to turn our bison herd over to Montana Fish Wildlife and Parks to, like all other wildlife, be owned by the public and be managed by FWP. Until that time comes—potentially many decades from now—APR is content to focus on creating one of the largest, genetically important, disease-free conservation bison populations anywhere in the world. Our current task primarily involves expanding the land base, managing APR lands for maximum biodiversity and allowing the steadily growing APR bison herd to live as naturally as possible. On average, APR is adding 33,000 acres of deeded and leased acres per year to its land base.

## Summary

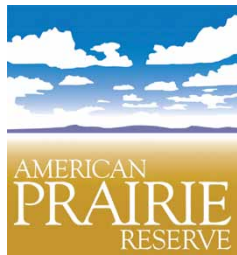
American Prairie Reserve is pleased to be a part of a growing number of exciting efforts to bring free roaming bison back to fulfill their ecological role on the American landscape. We greatly value learning from these efforts and are actively working to visit as many other reintroduction projects as possible.

We intend to distribute future APR bison updates once or twice per year. We hope you find this informative. Please contact us with any questions and ideas for how we can improve this report.

## Thank You

APR wants to express our gratitude to a wide range of colleagues and supporters who have advanced the bison component of the American Prairie Reserve project. These collaborators help with the substantial annual financial requirements to pay for bison imports, disease testing, fencing that allows for expanding pasture size and many other important details associated with this ambitious effort. Thank you very much. We could not move this fast or this confidently without you.

- The 28 generous people who, to date, donated \$25,000 apiece through our *Band of Bison* program
- Superintendent Stephen Fleming, Archie Handel and the whole team from Elk Island National Park in Alberta, Canada
- National Geographic Society, for spreading the word of this bison project around the world
- Conservation scientist Dr. Kyran Kunkel
- The Swedish Post Code Foundation
- World Wildlife Fund-Northern Great Plains
- Dr. Schnabel and associated researchers who lead our SNPs technology testing effort



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