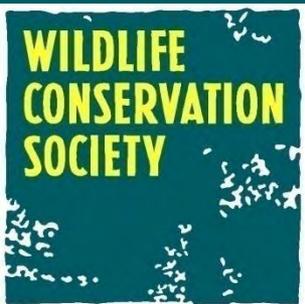
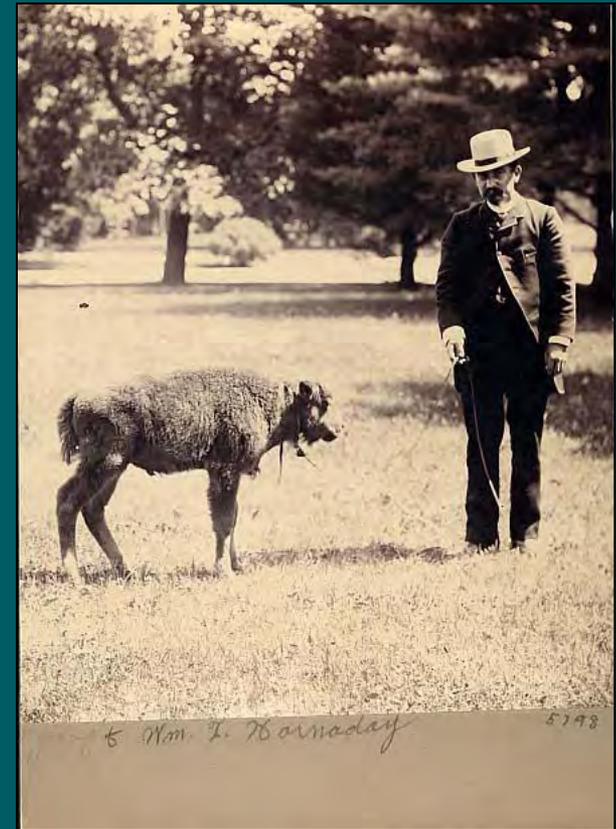


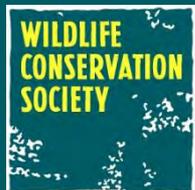
Ecological Recovery of the American Bison

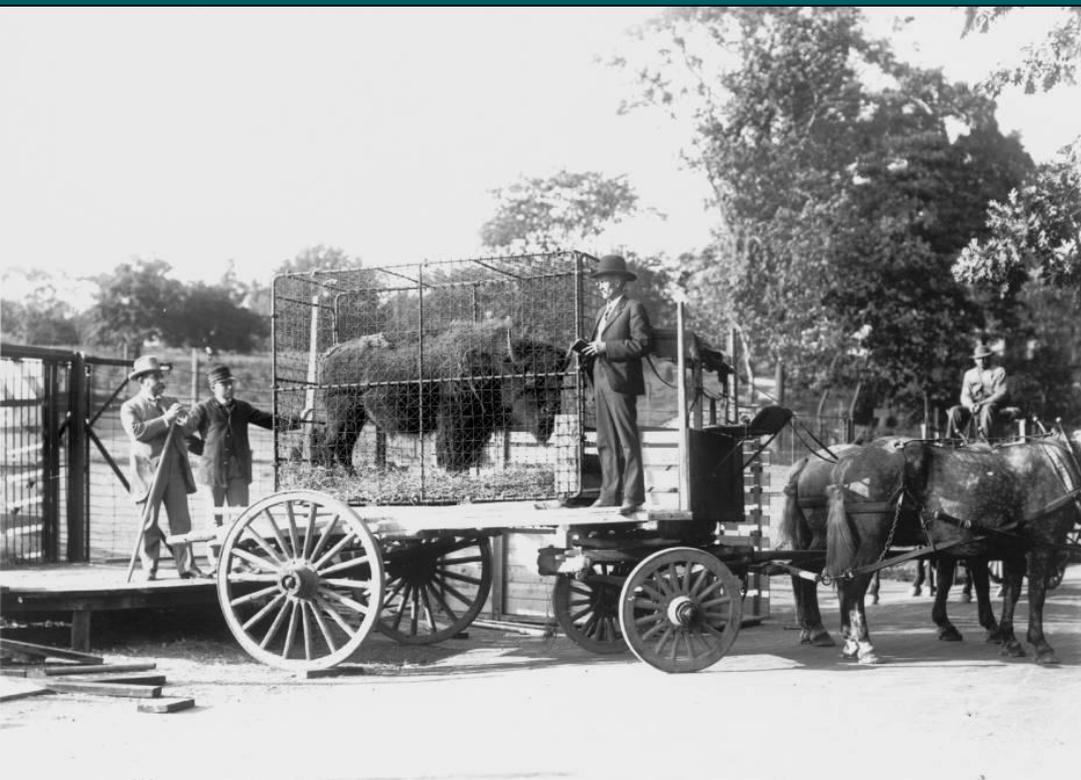


Keith Aune
Senior Conservation Scientist

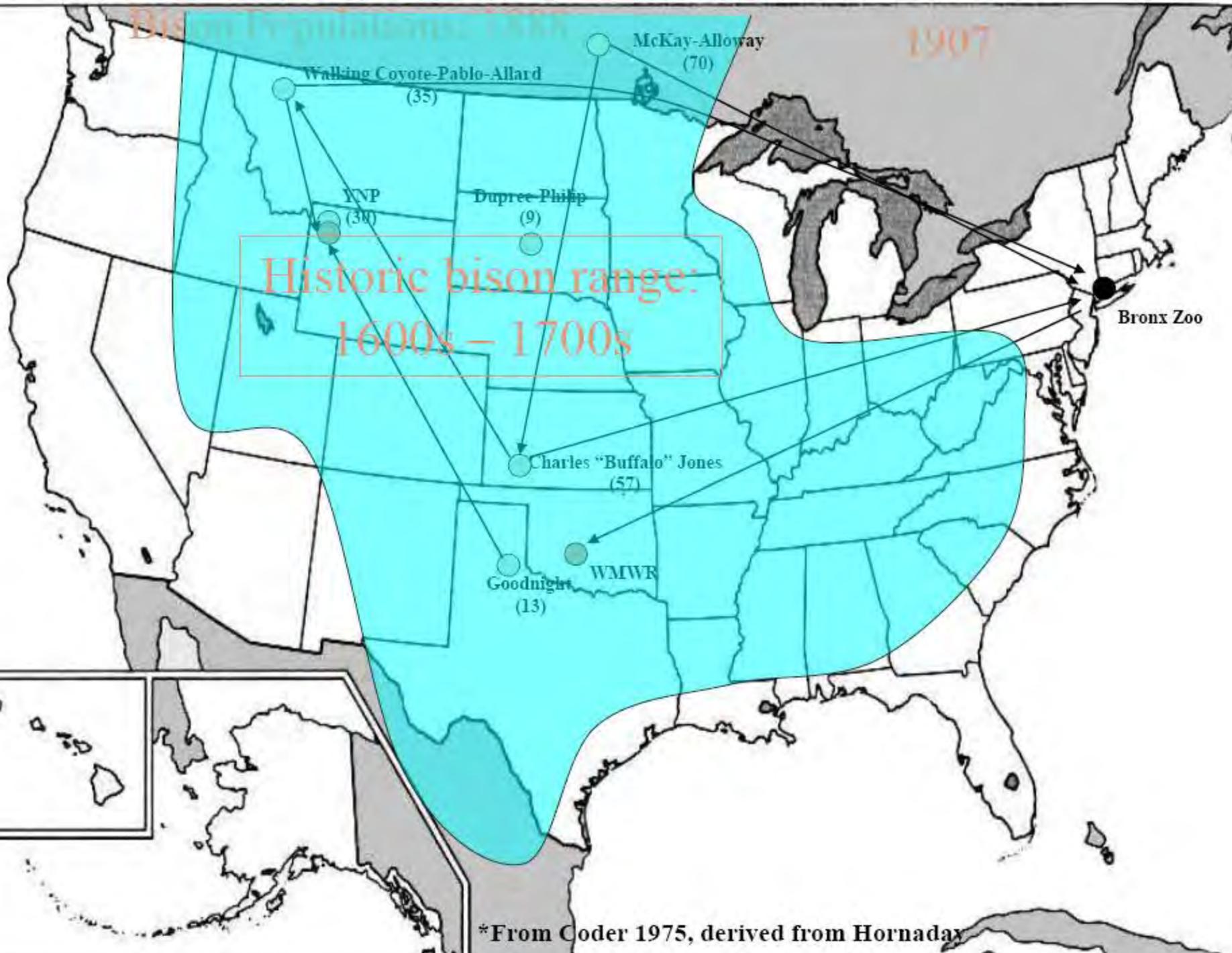


- Nearly extinct at the turn of the 19th Century
 - By 1889, 1091 bison were counted by WCS's first director-William T. Hornaday
 - Saved in 5 captive herds and only 2 remaining free ranging bison herds.





- 1905 The American Bison Society was Chartered
- First Recovery of Bison by the American Bison Society
 - 1907 Wichita Mountains Wildlife Refuge, Oklahoma
 - 1909 Montana National Bison Reserve
 - 1913 Wind Cave National Park, South Dakota



*From Coder 1975, derived from Hornaday

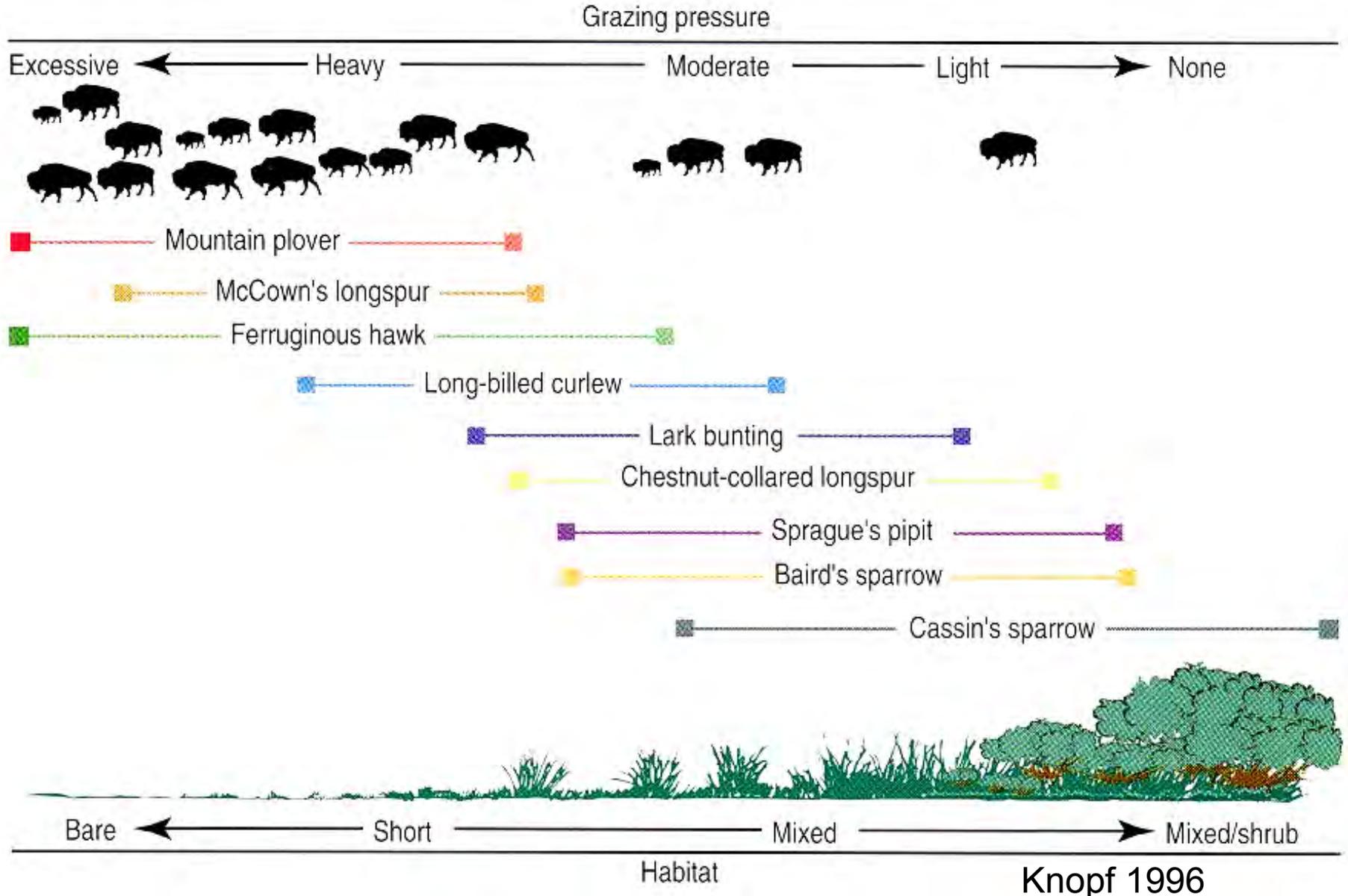
Bison Serve as a Keystone Herbivore



- Grazing patterns promote species diversity in prairie landscapes and influences fire-dependent functions
 - Increased grass diversity and structure
 - Increased insect and bird diversity

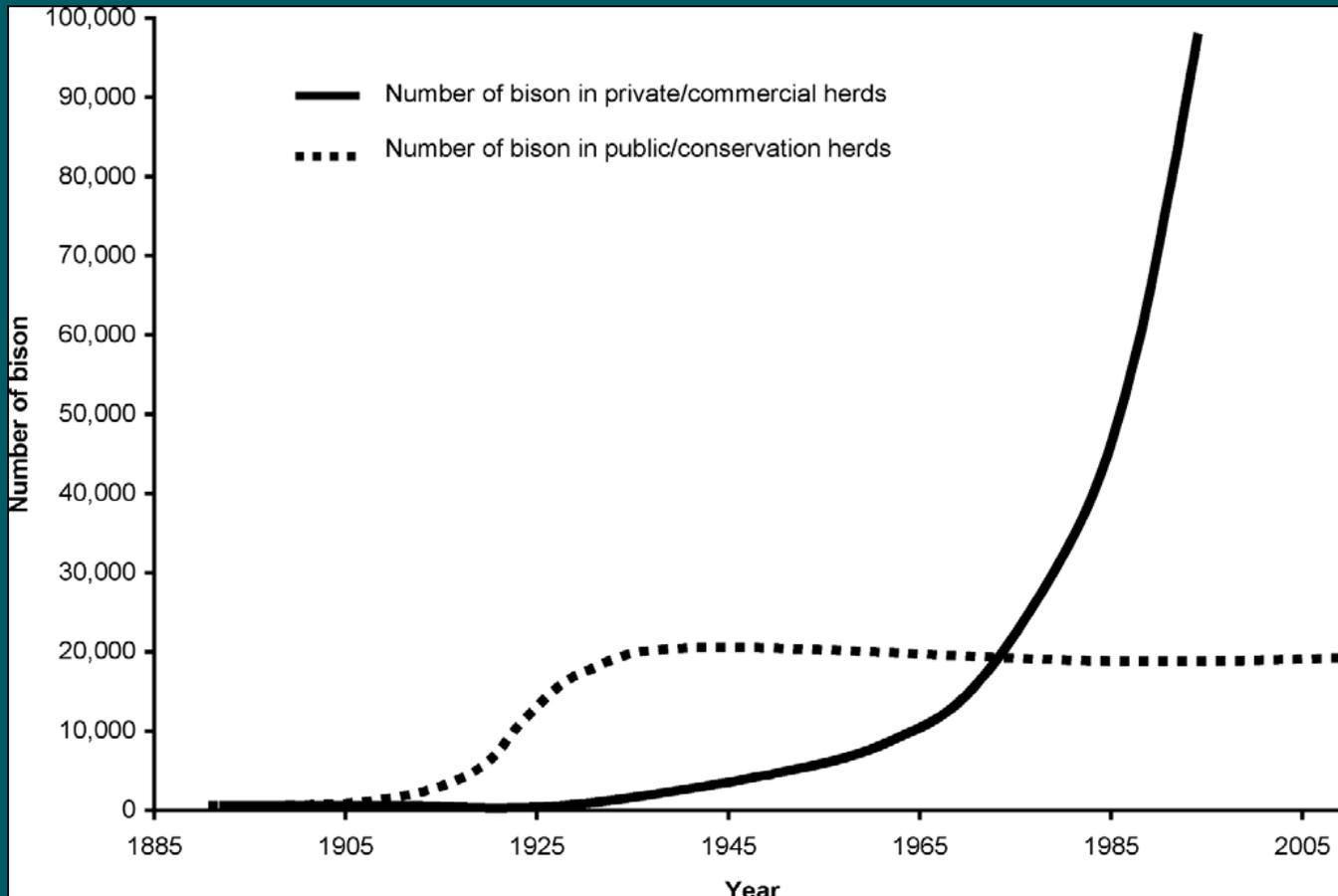


Bison Grazing Makes Bird Habitat



W
CO
SO

Status of Plains Bison





In 2006 ABS completed a Rangewide Priority Setting exercise at Vermejo Park Ranch, NM with 25 experts from academia, agencies, tribes, industry and NGOs to agree on goals for the future of bison

What is the future of bison?



American Bison

Status Survey and Conservation Guidelines 2010

Edited by C. Cormack Gates, Curtis H. Freese, Peter J.P. Gogan, and Mandy Kotzman



 **BIG VALLEY BUFFALO**

Customer Feedback ★
Nutrition Facts ★
FAQ ★

os ★ Specials ★ Gift Services ★ Recipes ★ Wholesale ★

The Original American Meat



- Most (96%) of all bison are in private herds – raised for meat production.
- Most of the conservation herds are small (< 400)



500,000 in 5000 Ranches

30,000 Plains and Wood in Conservation Herds





Free-ranging Bison Herds

- Plains Bison ~9000
- Wood Bison ~7000
- ▲ Proposed Reintroduction
- 🐃 Historical Range

Yukon/Minto Flats

Farewell Lake

Delta Jctn

Copper River

Chitina

Aishihik

Nahanni

Mackenzie

Nordquist

Hay-Zama

Slave River

Wood Buffalo N.P.

Pink Mtn

Etthithun Lake

Caribou Mtns-Peace

Cold Lake

Chitek Lake

Prince Albert N.P.

Yellowstone N.P.

G.T.N.P. Nat'l Elk Refuge

Ute-Ourray

Book Cliffs

Henry Mountains

House Rock State Wildlife Area

Janos-Hidalgo Herd

Conservation Obstacles

- Historical Management Policies
- Genetic Integrity
- Small Population Size of Most Herds
- Confusing Legal Classification and Status
- Human Conflicts especially Agriculture
 - Fencing
- Complex Partnerships necessary to manage large landscapes
- Defining Social-Economic-Cultural Values
- Coordination of Policies, Rules and Regulations



Book Cliffs Reintroduction

- Large Scale 1.5 million acres
- Historic Range-BLM, Ute, State and Private land.
- Ute Tribe introduced bison to Uintah Ouray Reservation in 1986-herd now numbers of 500.
- Plan considers AUM allocations and grassland resources for bison and cattle using the landscape.
- Hunting is the main tool to manage the population
- Plan defines clear habitat, population goals and monitoring strategies.



Book Cliffs Reintroduction

Cooperation among Federal, State and Tribal Governments to Establish New Herd

- 2007 UDWR drafted a plan to Establish a free-ranging huntable herd, publically owned.
- Established cooperation between Utah Game and Fish and Ute Tribes with sportsman and landowner support.
- Introduced about 45 bison from Henry Mountains in 2009



Janos, Mexico

Protected Status and Designation of a Biosphere Reserve

- Janos herd grew to over 100 but ranged into New Mexico.
 - Bison are listed as endangered in Mexico
- Janos Biosphere Reserve established in Dec. 2009-1.3 million acre grassland in N. Chihuahua Desert.
- Reintroduced 23 bison in 2009
 - Developing a species recovery plan



Alaska Wood Bison Recovery

- Approved Plan and EA
- Approved 10J-4D Rule
- Bison from Elk Island held in Quarantine
- Plan to release by 2012
- Public Celebrations

May 3



New WCS Bison Strategy 2010

- 10 year Vision and Goal
- Where to Restore Bison
- 4 Priority Landscapes
 - Restoring 2 Herds of at least 100
 - Enhancing 2 Existing Herds
- Science to support and Inform Restoration
- Beyond Landscapes
 - Living Institutions (our Zoo programs)
 - Policy Initiatives



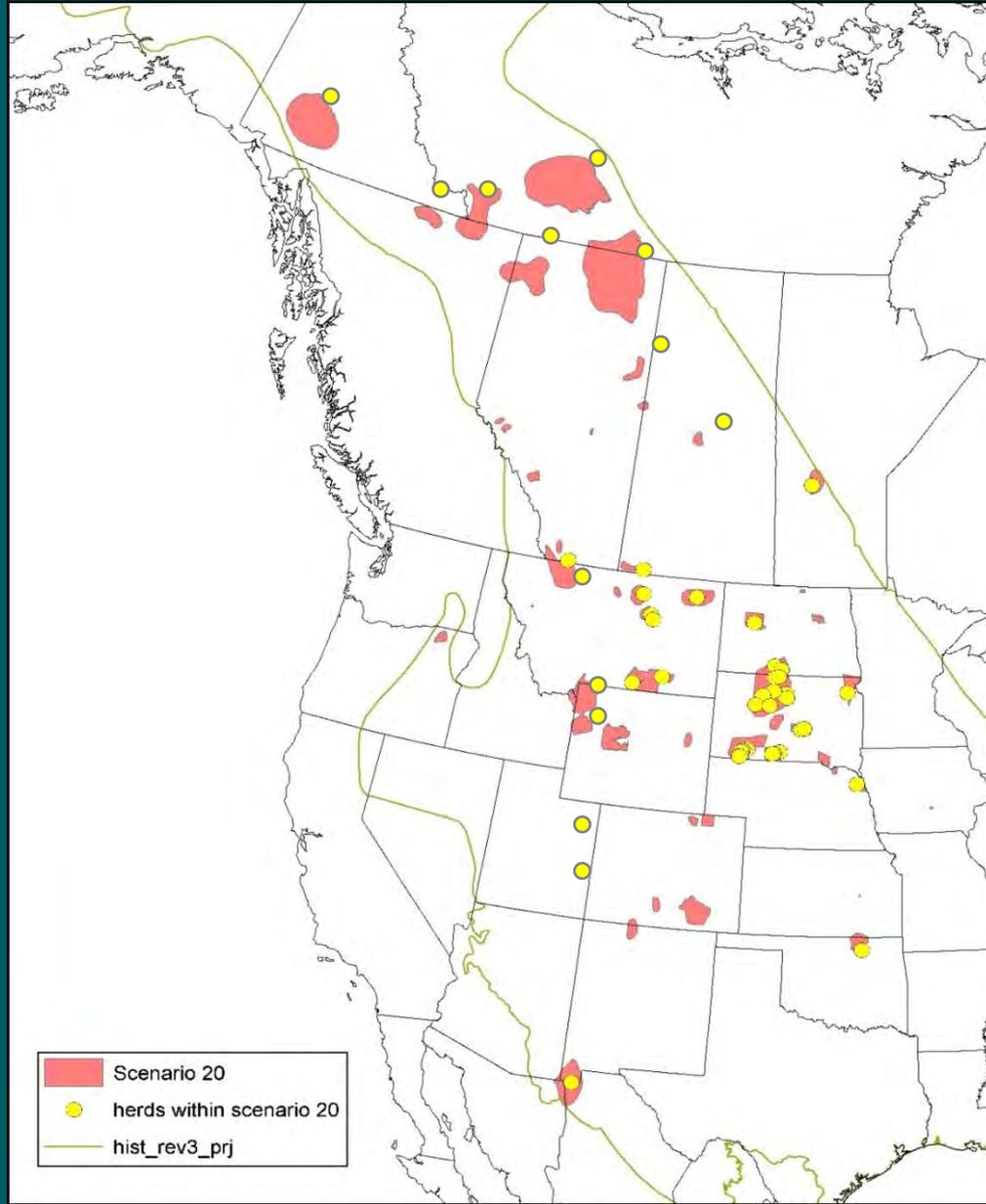
Vision and Goals

- **Vermejo Statement:** *Ecological recovery of North American bison will occur when multiple large herds of plains and wood bison move freely across extensive landscapes within all major habitats of their historic ranges, interacting in ecologically significant ways with the fullest possible set of other native species, and inspiring, sustaining and connecting human cultures.*
- **10 year Vision and Goals:** By 2020, WCS will work with partners to: (1) Initiate and ensure restoration of at least 100 bison at two priority landscapes and (2) fully restore and maintain bison herds of greater than 1000 animals at two priority landscapes. To support the larger vision of bison restoration, WCS will work through a defined network to share information and help create an enabling environment to influence restoration at a limited set of non-WCS sites.



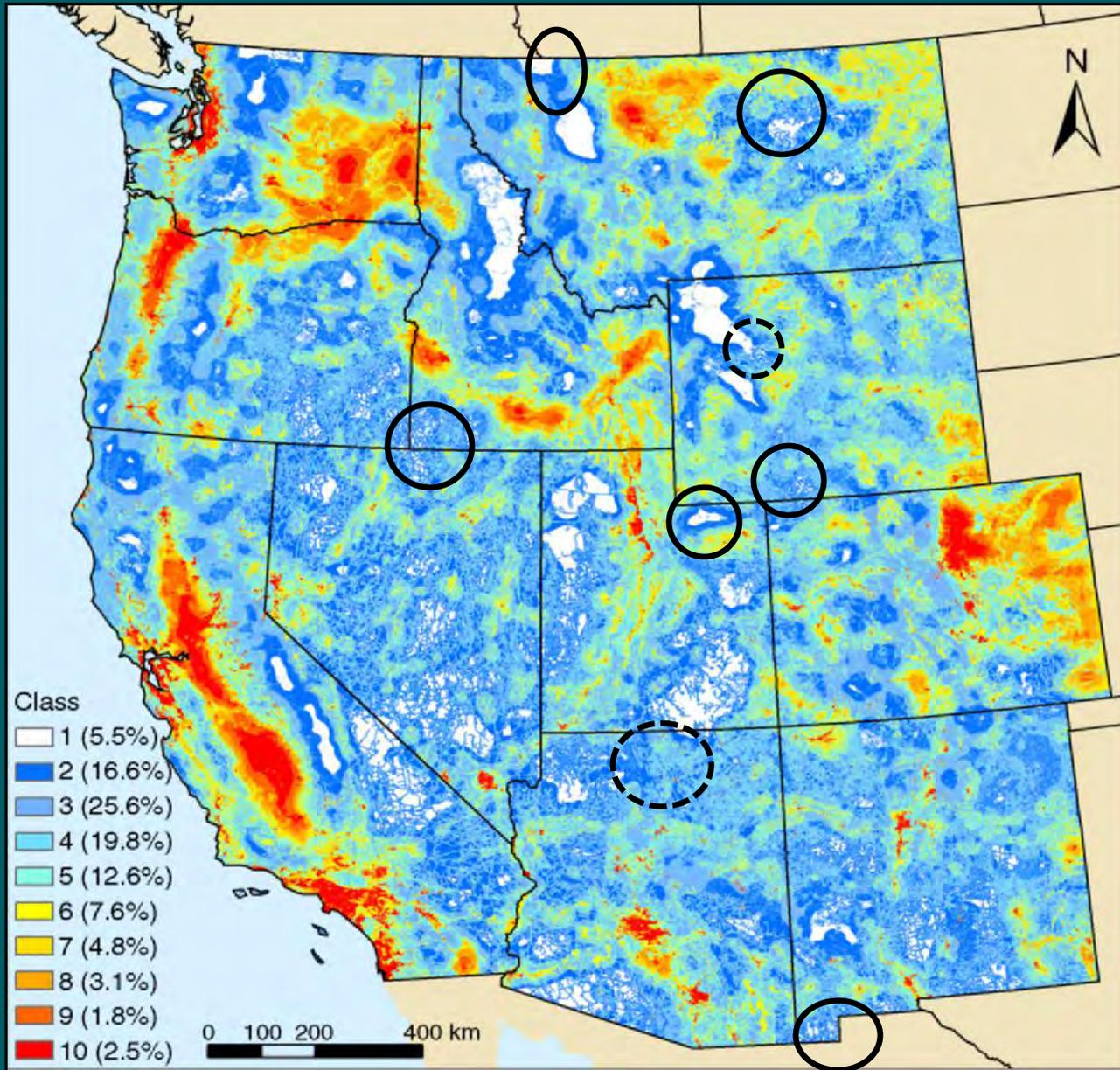
Where will we restore bison?

Sanderson et al, 2007

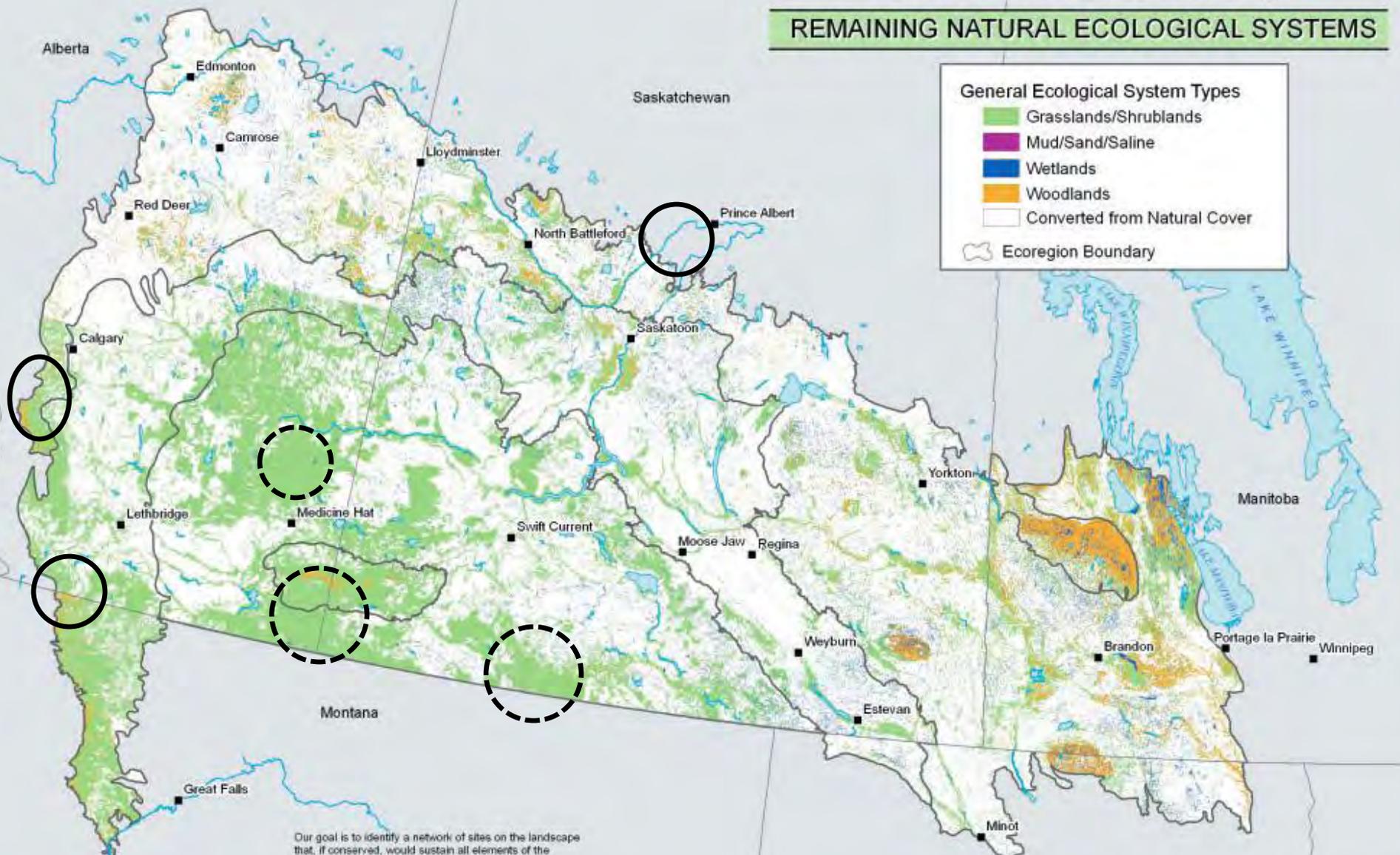


Priority Reintroduction Sites

Western Human Footprint (Lue et al)



REMAINING NATURAL ECOLOGICAL SYSTEMS



General Ecological System Types

- Grasslands/Shrublands
- Mud/Sand/Saline
- Wetlands
- Woodlands
- Converted from Natural Cover
- Ecoregion Boundary

Our goal is to identify a network of sites on the landscape that, if conserved, would sustain all elements of the terrestrial biodiversity of the Canadian prairie and parkland biome.

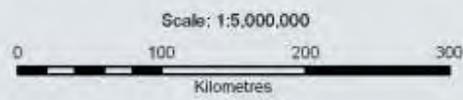
For further information contact the Nature Conservancy of Canada at 1-866-622-7275

This map is not precise. It illustrates results from the following report: Conservation Blueprint for Canada's Prairie and Parklands, 2006. Nature Conservancy of Canada.

Published February 2006
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Projection: Canada Albers Equal Area (NAD 83)



WCS Priority Bison Landscapes

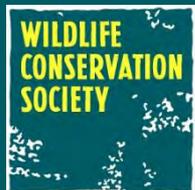
- Restoring new herds
 - Glacier Waterton Front
 - Owyhee Wilderness and Backcountry
- Enhancing existing herds
 - Prince Albert NP-Saskatchewan
 - Greater Slave Lake



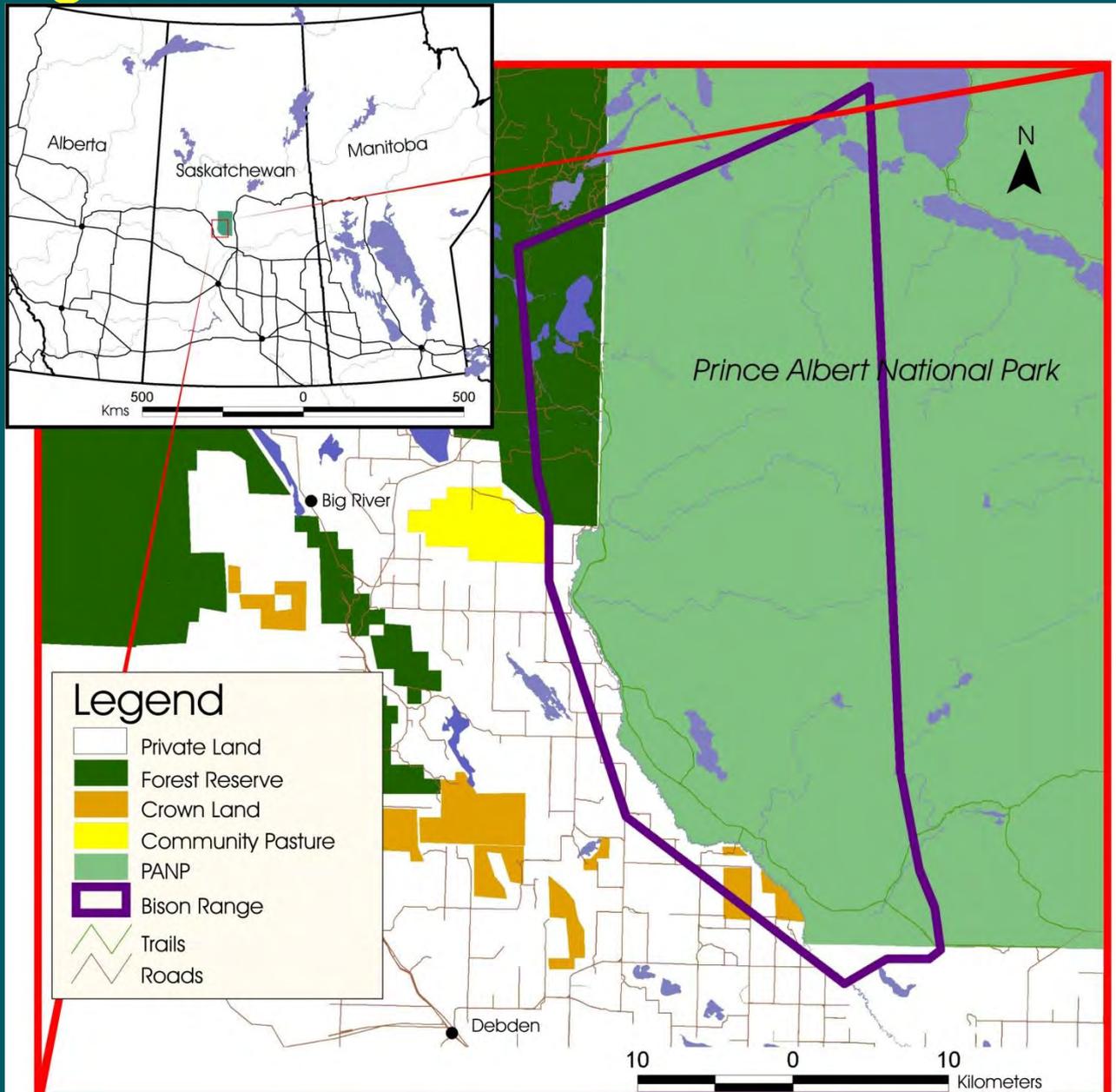
Sturgeon River-Prince Albert Initiative, Sask. Federal Park and Adjacent Private Landowners Cooperate



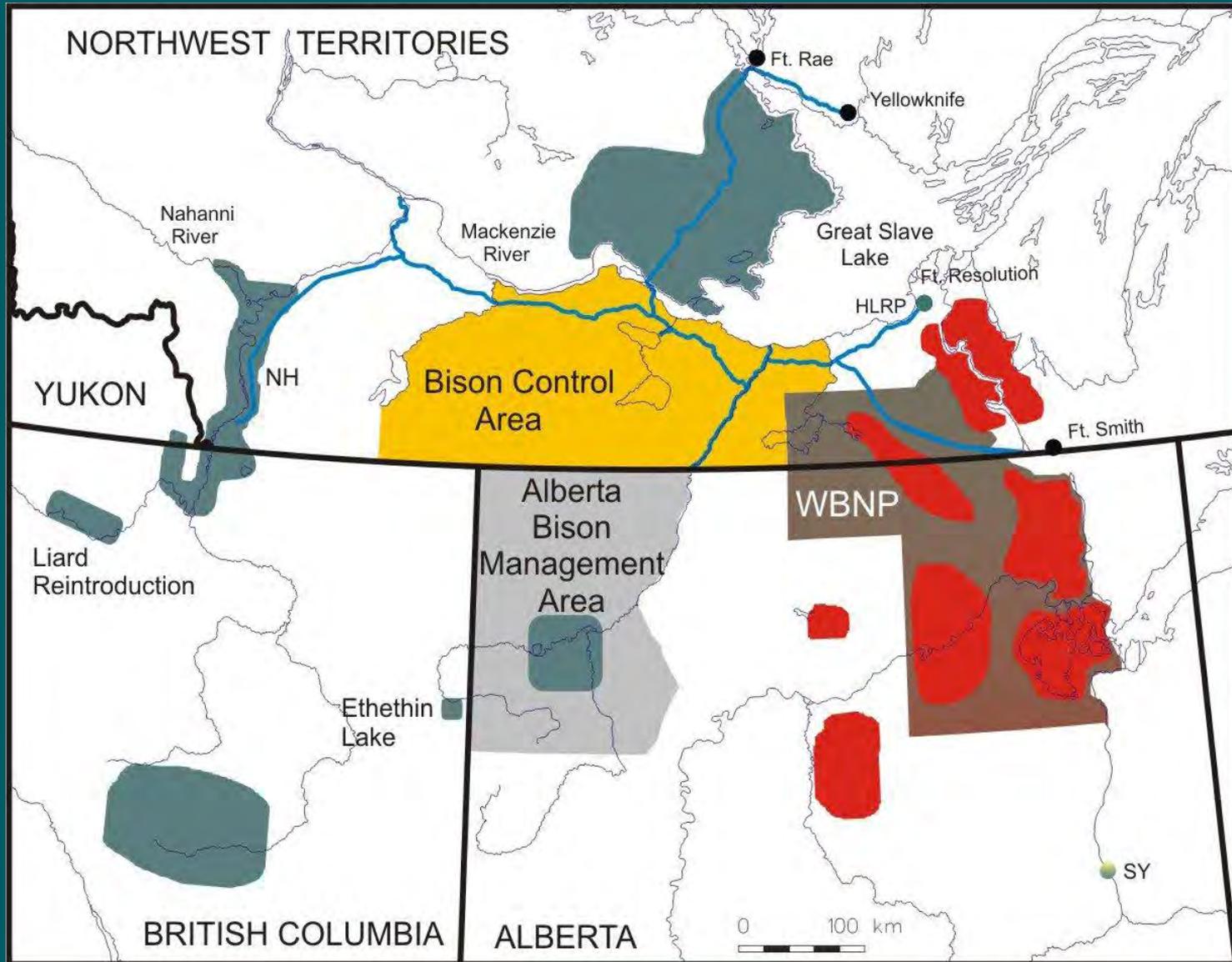
- This is the only free ranging plains bison population that exists within its historic range in Canada!



Sturgeon River-Prince Albert Initiative, Sask



Greater Slave Lake Initiative



Greater Slave Lake Initiative-WCS Role

- Disease issues in wood bison
 - Risk Assessment
 - Monitoring
- Opportunities to expand populations in the Greater Slave Lake Ecosystem (Includes WBNP)
- Wood bison as a landscape species in northern boreal forest
- Transforming the public view of wood bison nuisance status to valued wildlife
- Culturally reconnecting first nations





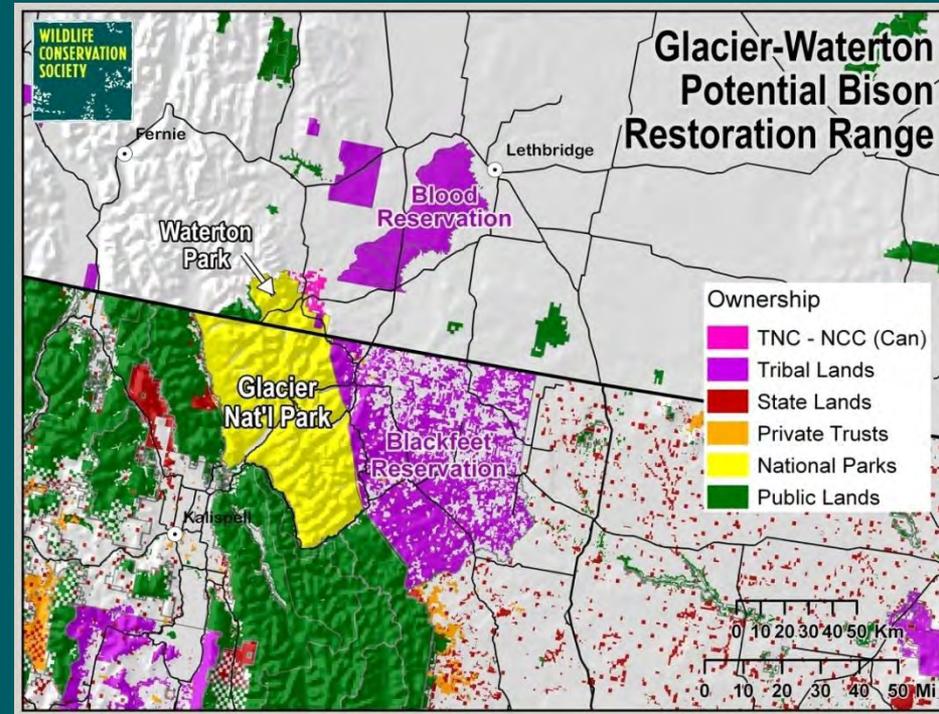
Glacier- Waterton Front

- Cultural tie to Blackfeet People
- Historically important to bison



Rocky Mountain Front- Canada and U.S.

- Large tracts of intact grasslands
- Portions are protected by Parks
- Bison legally classed as wildlife in U.S.
- Predator community is intact
- Community of Interest- but complex ownership
- Agriculture conflict primarily with cattle grazing



linnii Initiative

Vision Statement

Structured Workgroups

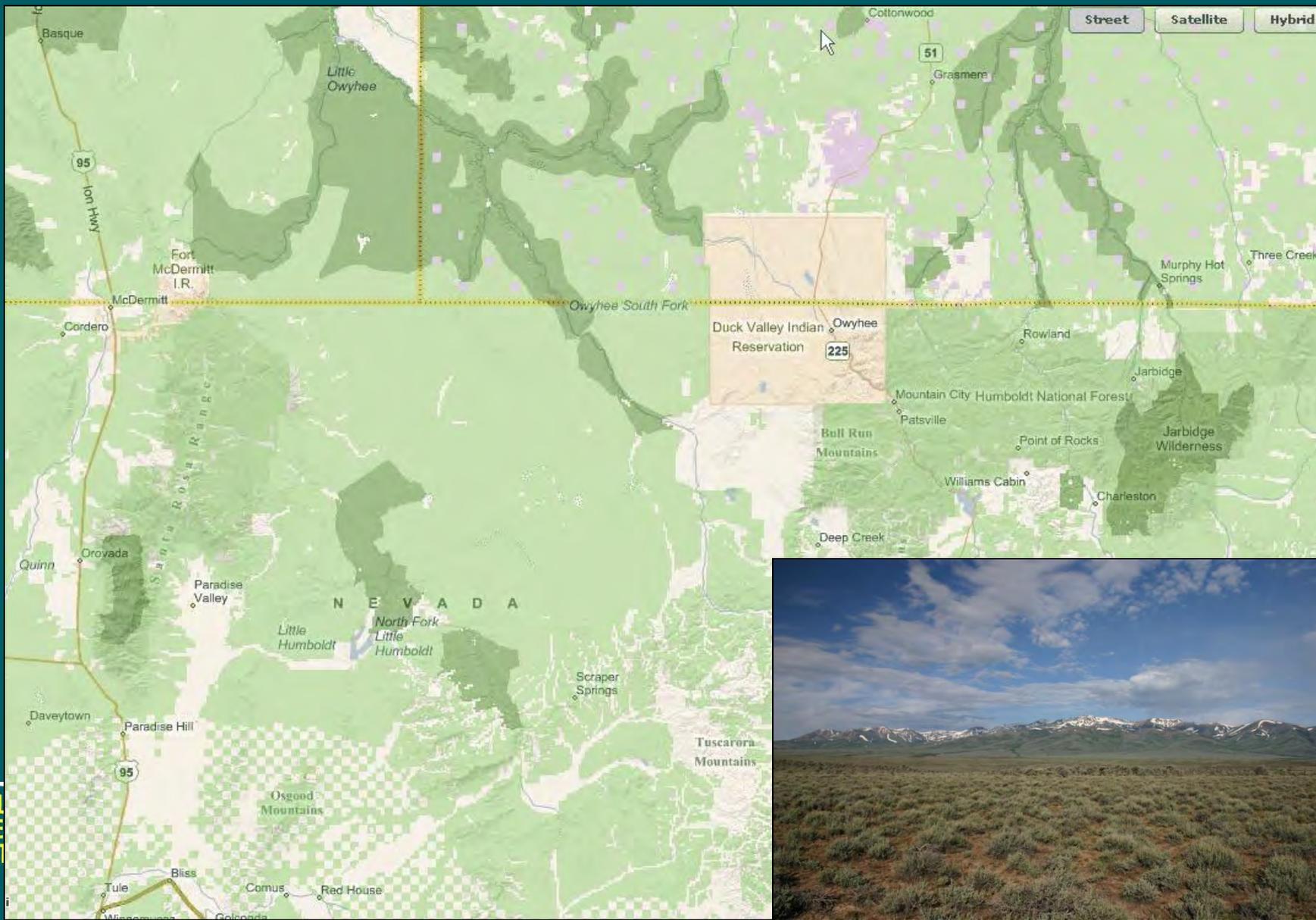
- Education/Outreach
- Research
- Strategy
- Cultural



Owyhee Landscape



Owyhee Canyonlands and High Desert



WILDLIFE
CONSERVATION
SOCIETY

Policy Opportunities

- National Mammal Campaign
- Federal Framework
 - DOI Framework
 - NPS “Call to Action”
- Legal and Conservation Status
 - Cosewic Review
 - State/Province Status
 - Agency Status Reviews
- Planning Initiatives
 - CMR Comprehensive Cons. Plan
 - BLM Res. Mgmt. Plans
 - NPS-management
 - Montana State Bison Plan
- Canada
 - Parks Canada-Prince Albert and Banff
 - Disease Management for Wood Bison
- Tribal Treaty Rights



Research Opportunities

- Ecological Relationships
 - Birds as an Indicator of restoration
 - Wood bison/caribou/moose-Interference competition
 - Plant community response to restored bison
 - Bison on intermountain grasslands
 - Boreal transition and forest
 - Aspen parklands and fire
 - Invasive species
- Cattle and Bison Landscapes
 - Fencing
 - Grazing mgmt.-spatial relationships
- Genetics
 - SNP Technology-screening cattle genes
- Disease Ecology-Management



“One” WCS

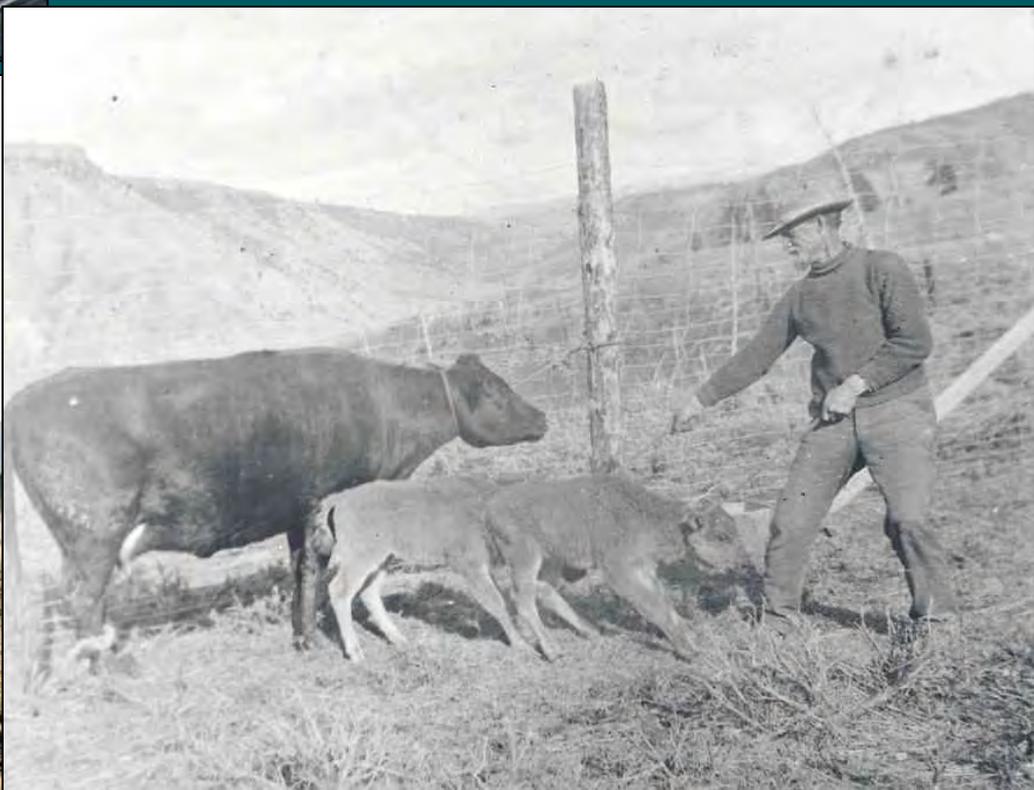
- Living Institutions
 - Restoration Stock
 - Genetic Rescue
 - Education
- Livelihoods
 - Bison Economics
 - “Living with Bison”
- Global Health
 - Field Epidemiology
 - Livestock-Bison Interface



Cultural Context

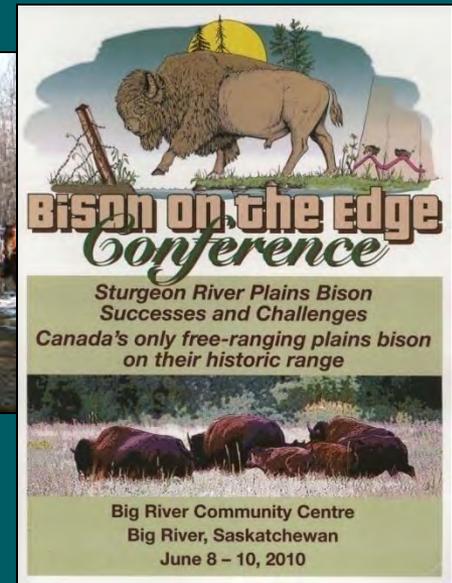
- Bison are perceived through many cultural and historical lenses.
 - Native Americans-an ancient culture-12,000 years
 - Western Agrarian culture-150 years
 - Wildlife Manager-an evolving culture-60 years
 - Bison Producer-a new culture-40 years
 - North American Public– ancient relic to be viewed but not experienced
- The various cultural lenses also have significant yet very different historical reference points.
- The “Left Behind” wildlife species





Reconnecting People to Bison

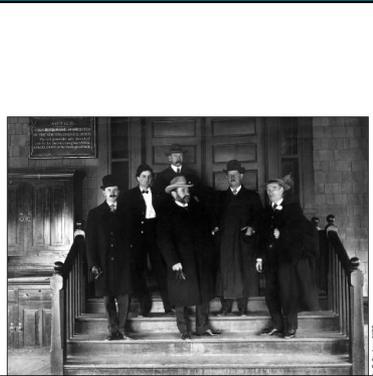
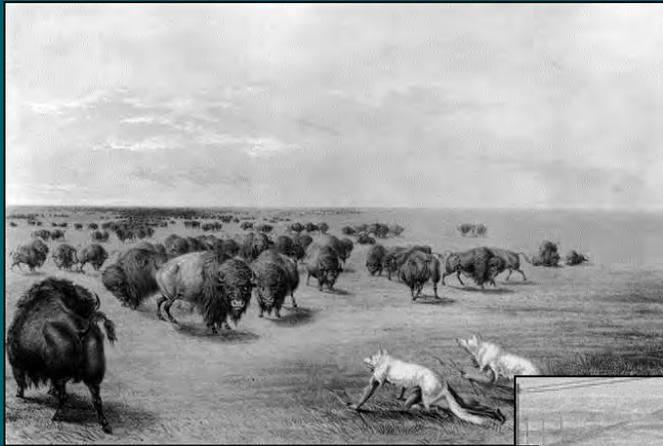
- Bison on the Edge
 - Mayors and Ministers
 - Scientists to bison producers
 - Ranchers and Tribal Elders
 - Wagon and walks
 - Art and Music



- Tribal Dialogues
 - Siksika, Kainai, Pikanii tribal elders
 - A generation apart-connecting the youth
 - Dissolving boundaries
 - Transboundary discussion
 - Connecting, Healing the land and People
 - Linguistic legacy---Dialogue in Blackfoot language



An American Buffalo Tale



How will we write the next chapter of this tale?

