

Department of the Interior

Bison Conservation Initiative 2020

Prepared by the United States Department of the Interior Bison Working Group

Representing the National Park Service, Fish and Wildlife Service, Bureau of Land Management, Bureau of Indian Affairs, and the U.S. Geological Survey

Introduction

The 2020 Bison Conservation Initiative (BCI) reaffirms the Department of the Interior (DOI) commitment to both leadership and partnership to ensure the conservation and restoration of wild American bison. Collaborative approaches to ecological and cultural restoration of American bison are central to the BCI.

The DOI has delivered substantial progress in bison conservation, science, and partnerships over the last two decades. Individual managers and technical specialists have institutionalized the DOI commitment to shared stewardship and collaboration with states, tribes, and other partners. Science staff and unit managers have cooperatively designed and completed technical products that directly inform on-the-ground challenges. The DOI Bison Working Group (BWG) has published a conservation genetics framework, promoted and published investigations into metapopulation management and herd health, and strengthened communication across bureaus. DOI has established and acted on a vision for conservation of this American icon that Congress designated as our national mammal in 2016.

The next steps of DOI bison conservation will be to synergize the science, on-the-ground manager experience, bureau and Department leadership with partners from states, tribal nations, and non-governmental organizations (NGOs) to implement coordinated conservation action. DOI remains uniquely positioned to play an active role in developing the next stage in bison conservation by working with others to accomplish linked ecological and cultural restoration goals that are both broader and more meaningful than DOI could accomplish on its own.

Goals of the DOI Bison Conservation Initiative

DOI is committed to five goals of bison conservation:

Wild, Healthy Bison Herds

DOI is committed to conserving bison as wildlife. To the extent possible, DOI will manage bison around principles and practices that maintain the wild character of bison, minimize artificial selection, and allow forces of natural selection to operate, including competition for breeding. DOI is committed to promoting herd health and managing diseases that may have significant impacts to bison conservation.

Genetic Conservation

DOI is committed to an interagency, science-based approach to restore gene flow across DOI bison conservation herds through a metapopulation management strategy to maintain genetic diversity and integrity.

Shared Stewardship

DOI recognizes that shared stewardship with states, tribes, and other stakeholders is essential to address the scale, complexity, and ecological and cultural significance of bison conservation and restoration.

Ecological Restoration

DOI is committed to working with states, tribes, and other stakeholders to establishing and maintaining large, wide-ranging bison herds, subject to the forces of natural selection, on appropriate large landscapes where their role as ecosystem engineers shape healthy and diverse ecological communities. Bureaus may manage smaller and spatially- constrained herds to restore ecological processes.

Cultural Restoration

DOI will provide opportunities to restore cultural connections to bison by working with tribes inextricably linked to bison; youth; and rural and urban communities to honor and promote the unique status of bison as an American icon for all people.

Principles of DOI Bison Conservation

The following guiding principles reflect DOI commitments to learning, wildlife health, and shared stewardship.

1. DOI will base management of its bison herds on the best science available and will engage with scientific partners to fulfill natural, cultural, and human dimensions information needs.
2. DOI will apply and learn from adaptive management.
3. DOI will support development and application of genetic techniques to promote high levels of bison genetic diversity to support adaptive potential.
4. DOI will actively emphasize management of bison health and manage diseases in bison that may affect domestic livestock or other bison herds.
5. DOI will collaborate with interested parties, including States, Tribes, landowners, and conservationists toward shared bison stewardship.

6. The BWG will facilitate discussions among DOI bureaus, tribes, states, and other partners to identify and prioritize prospects for multi-jurisdictional bison herds in order to emphasize large herds on large landscapes to support ecological and cultural restoration.
7. DOI will restore and manage bison as native wildlife.
8. DOI will promote bison conservation broadly and will work with partners to strengthen the connection of Native American peoples and the full American public to our national mammal.

DOI Actions for the 2020 Bison Conservation Initiative

Action 1: Develop and Launch a DOI Bison Metapopulation Strategy

To support the genetic conservation and shared stewardship of wild, healthy bison, the BWG will facilitate reasonable and practicable opportunities to enhance gene flow among DOI bison herds and into tribal herds in FY20.

The BWG will initiate development of the Metapopulation Management Strategy in FY20. This strategy will emphasize scientific rigor, adaptive management, and intentional learning. Launching this strategy will culminate in gene flow of bison among DOI herds and across bureaus. The BWG will develop a detailed work plan with milestones, assignments, and resource needs. The BWG will solicit input from external conservation genetics experts, and state, tribal, and NGO partners; vet the Strategy with agency experts; complete and publish the peer-reviewed Strategy; complete environmental evaluation; implement bison transfers; and continue to collect genetic data from DOI herds to support and evaluate the metapopulation strategy.

Over the next decade, the BWG will support providing brucellosis-free bison originating from Yellowstone to tribes. In addition to supporting cultural restoration, the quarantine program can support genetic conservation of DOI herds by incorporating Yellowstone-origin bison into DOI metapopulation. If sufficient numbers of bison become available, the BWG can help facilitate bison movement from tribal back to DOI herds.

Action 2: Develop and Implement a DOI Bison Stewardship Plan

Creating new large herds has long been recognized as key to the functional conservation of bison and the ecosystems upon which they depend. DOI remains committed to this objective and recognizes that some of the greatest opportunities for realizing such herds lies with initiatives by tribes, states, and NGOs. The BWG will develop and implement a Bison Stewardship Plan to establish the comprehensive framework and ecocultural vision for long-term bison conservation partnerships. The Stewardship Plan will describe DOI engagement with state, tribal and NGO conservation partners and identify specific opportunities for DOI to lead or support establishment of additional large, free-ranging bison herds. In FY22, the BWG will complete and begin to implement a detailed work plan in support of the Stewardship Plan. Also in FY22, and regularly thereafter, the BWG will also propose a full session on ecocultural restoration of bison at an appropriate technical outlet. The session will include presentations on progress with implementing the metapopulation strategy, related research findings, and invited contributions. By embedding actions under the BCI within the broad and interdisciplinary scientific community, we will strengthen our science-based management approaches; adaptive management; ecological, cultural, and social learning; public engagement; and science communication.

The BWG will also invigorate its role in identifying, prioritizing, and promoting science and information needs to support bison conservation and restoration. The BWG will develop a list of priority interagency research needs and highlight key information need of our shared stewardship partners. The BWG will actively maintain this list and coordinate across bureaus to seek cooperative funding for the highest priority research needs in support of both the Metapopulation Management Strategy and the Stewardship Plan.

Action 3: Improve and Expand Mechanisms to Support Ecocultural Restoration of Live Bison

Ecocultural bison conservation concurrently pursues species conservation, restoration of ecological processes, and support of the traditional human use of natural resources. An ecocultural approach addresses the unique historical connection between bison and indigenous peoples, and the iconic status of bison for the American people and nation. In FY21, DOI will expand effective mechanisms to enable the distribution of live bison to tribes. By delivering bison to tribes, DOI supports realization of tribes' own goals to establish and manage their own bison herds, to rescue and sustain cultural practices and sacred rituals, promote food security, and nourish cultural identity.

The BWG will also facilitate development of a consistent donation protocol for each bureau to provide a clear, transparent process for evaluating requests for live bison to establish or augment conservation herds. In particular, DOI welcomes requests from states, tribes and conservation partners for bison to establish new herds for ecological restoration, public viewing, and development of increased public hunting opportunity.

Action 4: Adopt Low Stress Capture and Handling Practices

Bison herds grow at a rate that rapidly outpaces the available habitat on DOI bison management units. Periodic capture is required to manage herd size, and can provide opportunities to donate live bison in support of partner conservation and restoration efforts. Low-stress handling practices reduce animal stress and increase safety for both bison and personnel during capture operations, while increasing overall alignment with our commitment to manage bison as wildlife. Some parks and refuges have already begun to modify and upgrade facilities to improve animal welfare during capture events, and many have received some site-specific training in low stress handling practices.

DOI commits to further adoption and institutionalization of low-stress handling practices by ensuring that training is available to all staff engaged with bison capture and handling. In addition, DOI commits to investing in appropriate operational and infrastructure modifications and upgrades to minimize stress and to ensure both animal and personnel safety.

Summary

DOI commitments to bison conservation made over the last two decades have produced meaningful technical products and organizational improvements that continue to advance the conservation of American bison (Appendix A). Prior planning efforts have served as valuable touchstones and guidance for coordinated development of conservation approaches. DOI now enacts this 2020 BCI to build upon those accomplishments and reaffirm the commitment to wild healthy bison herds, genetic conservation, shared stewardship, ecological restoration, and cultural restoration.

The Bison Working Group, established as a mechanism for implementing DOI's 2008 Initiative, quickly became a productive model of interagency collaboration. Today we enjoy an unprecedented degree of coordination, open communication, and cooperative planning in support of bison conservation. The benefits of keeping agencies organized and self-directed has resulted in numerous efficiencies and meaningful technical products. These gains have been realized not only by the federal agencies working to conserve bison, but also through the strength of our collective attention to fostering fundamental partnerships with states, tribes, and other conservation partners.

With this 2020 BCI, the Bison Working Group also commits to this vision of shared stewardship of large, wild, connected, genetically diverse bison herds for ecological and cultural renewal. Through sound science, effective communication, and productive collaboration, DOI will expand access of all Americans to our national mammal.

Appendix A: Selected DOI Accomplishments Since 2008

The DOI Bison Working Group (BWG) was established by the 2008 DOI Bison Conservation Initiative to promote active communication and coordination among these bureaus, identify and support high priority science needs, and develop and communicate guidance to field managers and bureau and Department leadership on shared bison stewardship. The following accomplishments are organized under the goals articulated by this 2020 Bison Conservation Initiative.

Goal: Wild, Healthy Bison Herds

- Completed DOI Bison Health report (Jones and Powers, *in press*)
- Brucellosis quarantine program resulting in translocations to Fort Peck for further distribution (Clarke et al. 2014)
- Science to demonstrate limited role of bison in brucellosis transmission to livestock (Shumaker et al. 2010; Kamath et al. 2016; National Academy of Sciences 2017)
- Began institutionalization of low-stress handling techniques to ensure animal welfare and improve management of bison as wildlife
- Contributed to USDA research on *Mycoplasma bovis*, an emerging pathogen in bison

Goal: Genetic Conservation

- Genetics workshop and report (Dratch and Gogan 2010);
- Sampled and analyzed tissues for a standardized genetic inventory of 16 of 19 DOI herds
- Completed DOI-wide conservation genetics modeling (Hartway et al. 2020)
- Established satellite herds of Wind Cave NP, Yellowstone NP, an National Bison Range NWR, including herds with NGO partners and Mexico
- Science for mean kinship management to conserve genetic diversity within herds (Giglio et al. 2016)

Goal: Ecological Restoration

- Led collaborative science and management to demonstrate the ecological effects of large, wide-ranging herds (e.g., Geremia et al. 2019)
- Established the Book Cliffs state-managed herd in 2009
- Expanded Badlands NP and herd area by 22,000 acres in 2019
- Worked with states, USFS, APHIS, tribes, and NGOs to establish a Greater Yellowstone disease surveillance zone to allow bison to roam across larger landscapes beyond park boundaries

Goal: Cultural Restoration

- Established transparent and equitable bison donations protocols
- Increased social tolerance of bison with expanded range outside Yellowstone NP
- Resumed tribal treaty hunting rights, enabling the harvest of over 1,500 bison since 2012
- Transferred over 10,000 bison for tribal uses

Goal: Shared Stewardship

- Formalized consultation with BIA by having a BIA representative named as a permanent voting member to the BWG in (2009)
- Established a shared stewardship vision in the DOI Bison Looking Forward Report (2014)
- Bolstered relationships within DOI, states, USDA APHIS on numerous complex bison management issues, including cooperative development and implementation of quarantine protocols
- Established unique bison stewardship partnership at Tallgrass Prairie (2009)