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**Record of Decision**  
**Bison Management Plan**

**July 2024**

Lead Federal Agency: National Park Service

Cooperating Agencies: State of Montana, US Department of Agriculture (USDA) Animal and Plant Health Inspection Service, USDA US Forest Service (Custer Gallatin National Forest), InterTribal Buffalo Council, Confederated Salish and Kootenai Tribes of the Flathead Nation, Nez Perce Tribe, Confederated Tribes of the Umatilla Indian Reservation, and the Yakama Nation

Recommended:

Date:

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Cameron H. Sholly  
Superintendent  
Yellowstone National Park

Approved:

Date

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Kate Hammond  
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Interior Regions 6, 7, & 8

# RECORD OF DECISION

## Yellowstone National Park

### Final Environmental Impact Statement for a Bison Management Program

#### INTRODUCTION

The National Park Service (NPS) has sole authority to manage bison within the boundaries of Yellowstone National Park (YNP or the park). However, the NPS coordinates with other federal, state, and American Indian Tribes pursuant to an Interagency Bison Management Plan (IBMP) signed in 2000 by the Secretaries of Agriculture and Interior and the Governor of Montana because bison, like other wildlife, leave the boundary of the park. Under the 2000 IBMP, bison are managed differently than other wildlife because the State of Montana provides limited tolerance for bison migrating out of the park. The National Park Service (NPS) prepared a final environmental impact statement and bison management plan (plan/EIS) pursuant to the National Environmental Policy Act (NEPA) at YNP to provide park staff with tools to manage bison within YNP that reflect the best available information and current circumstances. The NPS will continue to meet with the other federal, state, and American Indian Tribes under the existing framework for the IBMP to coordinate the implementation of the park's bison management plan/EIS and to meet the principal purpose identified in the 2000 IBMP.

Cooperating Agencies for the final plan/EIS are the State of Montana (Montana or state) (Governor's Office, Montana Department of Livestock (MDOL), Montana Fish, Wildlife and Parks (MFWP)), US Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS) (Veterinary Services), USDA US Forest Service (USFS) (Custer Gallatin National Forest), InterTribal Buffalo Council (ITBC), Confederated Salish and Kootenai Tribes of the Flathead Nation (CSKT), Nez Perce Tribe (NPT), Confederated Tribes of the Umatilla Indian Reservation, and the Yakama Nation.

#### BACKGROUND

Archeological evidence indicates bison have lived in the Greater Yellowstone Area (GYA) for more than 10,000 years, and more recently, habituation of wildlife and complex human-wildlife interactions are becoming more common with increasing visitation. By 1902, only 23 bison were counted in the park, the last wild bison remaining in North America. Concerted conservation efforts through the 1900s recovered Yellowstone bison as the most valuable conservation population of bison in the world. Bison began migrating out of the park as the population recovered. The transboundary movement of bison from YNP into the adjoining state of Montana created one of the most complex and intractable wildlife management dilemmas of present day.

In 1995, Montana sued the federal government due to concerns that bison infected with brucellosis bacteria that migrated outside YNP could jeopardize the state's brucellosis-free status for cattle and, in turn, interstate and international trade. Brucellosis is a nonnative disease caused by the bacteria *Brucella abortus* that was likely introduced to bison in the Yellowstone area from livestock. Brucellosis can induce abortions in ungulates and be transmitted among bison, cattle, and elk if they contact infectious birthing tissues or the newborn calf. Brucellosis concerns livestock producers because, if cattle become infected,

producers lose income from killing infected cattle, additional testing requirements, and possible interstate transport and international trade restrictions.

In 1992, the Secretaries of Agriculture and Interior, with APHIS as a cooperating agency, entered into a Memorandum of Understanding (MOU) to develop an EIS and long-term plan for managing Yellowstone bison. In 1995, to resolve a lawsuit by the state, the federal government and Montana entered into a court-approved settlement agreement and schedule for issuing a final EIS and Record of Decision (ROD) regarding the management of Yellowstone bison. In 1999, negotiations were at an impasse. The federal government exercised the withdrawal clause of the MOU, which triggered the dismissal of the 1995 state lawsuit. In 2000, before the court dismissed the suit, the federal agencies and the state agreed to court-appointed mediation. This mediation resulted in the IBMP, for which separate state and federal decisions were issued in December 2000 (State of Montana 2000, USDOJ and USDA 2000b).

The original IBMP partners included the NPS, USFS, APHIS, MDOL, and MFWP. In 2009, the CSKT, NPT, and ITBC became formal partners and assisted in decision-making. Between 2001 and 2023, the agencies and American Indian Tribes successfully met the principal purpose of the 2000 IBMP by preserving a viable, wide-ranging population of bison while preventing the transmission of brucellosis from bison to livestock.

However, many elements of the 2000 IBMP were never implemented, several of the circumstances that influenced the derivation and implementation of the 2000 IBMP changed, and scientific knowledge regarding bison and brucellosis improved substantially. The agencies involved in bison management have made multiple changes through consensus decision-making. Differences of opinions between IBMP partners have remained and resulted in impasses, at times, over the relevance of brucellosis risk management, tolerance for bison outside YNP, removal methods used by the partners to control numbers, and size of the bison population.

Some of the premises regarding brucellosis in the initial plan were incorrect or have changed. The 2000 IBMP envisioned vaccination to substantially reduce brucellosis prevalence in bison and transmission risk to livestock. In 2014, the NPS concluded that the park-wide vaccination of bison would not achieve desired results and could have unintended negative effects to the population and visitor experience (USDOJ, NPS 2014b). The NPS based this conclusion on the lack of an easily distributed and highly effective vaccine and limitations of current diagnostic and vaccine delivery technologies. Remote vaccination by darting or bio-bullet has unknown yet potentially negative behavioral impacts on bison, and in turn, on visitor experiences such as watching wild animals. The 2000 IBMP also envisioned capturing bison exiting the park, vaccinating, and releasing them back into the park. To control numbers, relatively few bison were ever captured and released, instead transferring them to tribes for processing.

Federal and state disease regulators initially thought elk played a minor role in brucellosis transmission to cattle, and bison migrating outside YNP would transmit brucellosis to cattle and jeopardize interstate and international trade. In 2020, the National Academies of Sciences, Engineering, and Medicine concluded infected elk had transmitted brucellosis to livestock in the GYA at least 27 times since 1998 with no transmissions attributed to bison. Elk exposed to brucellosis inhabited an area encompassing about 17 million acres (6.9 million hectares), whereas bison inhabited 1.5 million acres (607,000 hectares) near the core. Control measures in bison would not affect the dynamics of unrelated *Brucella abortus* strains in elk elsewhere.

Circumstances also changed with fewer cattle near the park, and federal and state disease regulators taking steps to lessen the economic impacts of brucellosis outbreaks in cattle. Capturing bison to control numbers, hunting outside the park, and hazing bison off private lands has been completely effective in preventing bison from infecting cattle with brucellosis (National Academies of Sciences, Engineering, and Medicine 2020). The National Academies of Sciences, Engineering, and Medicine advocated in 2017 and 2020 prioritizing efforts on preventing brucellosis transmission by elk, while maintaining separation between bison and cattle (see appendix E in the final plan/EIS). The National Academies of Sciences, Engineering, and Medicine also recommended not using aggressive control measures on bison until tools became available for a brucellosis eradication program in elk.

The 2000 IBMP envisioned capturing bison exiting the park, transferring them to tribes that would then sacrifice them for their meat and hides at meat-processing facilities (i.e., transferred for processing) in order to control their numbers. Since 2000, over 6,000 bison have been captured, almost entirely by the NPS, and transferred for processing to control population numbers. Transfer for processing by the NPS has been extremely controversial. The NPS has made enormous and often disproportionate efforts and investments in using transfer for processing to control numbers and minimize brucellosis transmission risk since the 2000 IBMP. Montana has not captured or shipped a bison for processing since 2008. Montana has implemented few tools at its disposal to help regulate bison population numbers.

In 2015, Montana created year-round tolerance areas for bison adjacent to YNP to provide the potential for greater harvest and hunting opportunities and the use of tribal harvest and public hunting as a tool for bison population management, among other objectives. Tribal harvest and public hunting of bison outside the park began in 2006. Eight American Indian Tribes presently implement tribal harvests outside the park, with more than 4,000 bison harvested since 2006.

In 2018, the NPS created the Bison Conservation Transfer Program (BCTP) by implementing a decision to use quarantine to transfer brucellosis-free bison to American Indian Tribes to meet trust responsibilities and help control numbers. The program is a partnership between YNP, APHIS, MDOL, and American Indian Tribes and has resulted in the transfer of more than 400 bison to American Indian Tribes between 2019-2024. The BCTP is increasing, and American Indian Tribes desire a more significant role and access to more bison.

The 2000 IBMP specified a population target of 3,000 bison in late winter and early spring, which equates to about 3,600 to 3,700 bison after calving during summer. In 2006, IBMP partners clarified the number 3,000 as an indicator guiding risk management actions rather than a population target. Since 2000, the bison population has increased, averaging 4,200 from 2000-2023 and 4,900 over the last decade. Snowpack, population size, and forage availability all influenced migratory movements, with instances of few bison migrating out of the park during some winters, even with larger population numbers. Many factors contributed to the population increase since 2000, including several adaptive management actions, such as the state recognition of tribal treaty hunting rights outside the park, consensus among IBMP partners to reduce transfers for processing and use public hunting and treaty harvest as a primary tool for controlling numbers, and initiating the Bison Conservation Transfer Program. Managers recognized that larger numbers would be necessary to provide consistent migrations to the boundary.

Despite higher bison numbers than envisioned in the 2000 IBMP, bison-human conflicts outside YNP have been reduced over time. There have been no documented cases of brucellosis transmission from bison to livestock since the 2000 IBMP. Tribal harvest and public hunting largely replaced agency hazing

to control bison numbers and distribution outside the park. Landowner complaints have decreased over time. Public surveys indicate increasing local and regional acceptance of bison.

Litigation in 2018 and 2019 challenged the age and adequacy of NEPA compliance for bison management at the park. The court granted the NPS a voluntary remand in both cases and the NPS committed to preparing a new plan and additional NEPA compliance. In 2022, the NPS initiated a new plan/EIS for bison management within the park.

The State of Montana requested the NPS rescind their notice of intent to prepare an EIS and opposed the draft plan/EIS. During those negotiations, the NPS requested the state bring forward their own alternative which the NPS would assess in the final plan/EIS, but none was provided. The NPS engaged the state as would be expected for a cooperating agency, including multiple conversations between NPS leadership, the Governor, and their staffs. The NPS evaluated concerns raised by the state in the final plan/EIS, including managing for 3,000 bison, active brucellosis control, impacts of bison on habitat, and preservation of genetic diversity.

The final plan/EIS for the park incorporates new information, changed circumstances, and lessons learned since 2000; describes adaptive management adjustments and environmental compliance implemented over time; and evaluates the effects of alternative approaches for preserving and managing bison. The alternatives were developed by considering NPS management actions that could occur in YNP and current management and conditions on lands outside the park. The final plan/EIS creates opportunities to improve bison management, focusing on NPS actions only. Other tribal and governmental agencies have important roles and responsibilities in bison management outside the park, and the NPS intends to work cooperatively with these groups. Additionally, the final plan/EIS recognizes an enhanced ecological role for bison, provides for increased tribal harvest opportunities outside the park, and creates more opportunities for American Indian Tribes to restore brucellosis-free bison to tribal lands.

## **PURPOSE AND NEED FOR ACTION**

The purpose of the plan/EIS is to preserve an ecologically sustainable population of wild, migratory bison while continuing to work with partners to address brucellosis transmission, human safety, and property damage and fulfill tribal trust responsibilities. Action is needed because of new information and changed circumstances since the finalization of the IBMP in 2000. Additional information on the purpose and need is included in Chapter 1 of the final plan/EIS and is incorporated by reference.

## **DECISION- SELECTED ALTERNATIVE**

This EIS process resulted in a selected alternative that focuses on actions the NPS will take to manage bison within YNP. The NPS selected Alternative 2 for implementation (the selected alternative). Under this alternative, the NPS will implement a suite of tools that reflects the best available science to preserve an ecologically sustainable population of wild, migratory bison while continuing to work with partners to address brucellosis transmissions, human safety, property damage, and fulfill tribal trust responsibilities. This alternative will sustain the important ecological role bison play in manipulating plant communities, redistributing nutrients across the landscape, and providing meat for predators, scavengers, and decomposers. This alternative will support American Indian Tribes' harvest activities outside the park. Under this alternative, some bison will continue to migrate outside the park where state agencies and

American Indian Tribes establish hunting regulations. The NPS will continue to support its partners as they work with private landowners to determine tolerance levels, hazing, captures, and public hunting, and with American Indian Tribes with tribal treaty rights to coordinate the location and extent of their harvest outside the park. The NPS will continue to meet with the other federal, state, and American Indian Tribes under the existing framework for the IBMP to coordinate bison management and meet the principal purpose identified in 2000.

Under this alternative, the NPS will prioritize using the BCTP to restore bison to tribal lands. The NPS will capture bison when space is available in the BCTP and release brucellosis-negative animals that do not qualify for the program. When considering bison for the BCTP, the NPS will selectively transfer to American Indian Tribes brucellosis-positive bison for processing. In addition, the NPS supports tribal partners' efforts to increase tribal harvest outside the park to provide American Indian Tribes with access to traditional food, cultural, and material sources. The NPS will shift away from transfers for processing as a primary tool for population management. If the population surpasses an assurance threshold, detailed below, the NPS will manage for a decreasing population. The NPS will first rely on tribal harvests outside the park to reduce numbers but will resume transfers for processing when necessary.

**Expected Population Numbers**—Under the selected alternative, bison numbers are expected to range between about 3,500 and 6,000 after calving and average about 5,000 bison, consistent with the 10-year average. Late-winter numbers will range between approximately 3,000 and 5,000, averaging around 4,150 bison, pre-calving. The NPS cannot guarantee how many bison will migrate toward park boundaries and be available for lethal removal or placement in the BCTP. Numbers may go up or down within the range and may exceed the upper end of the population range of 6,000 bison due to a series of mild winters.

**Removal Guidelines**— The NPS will coordinate with IBMP partners and American Indian Tribes to manage bison within the expected population range, recognizing that American Indian Tribes have authority over tribal harvests outside YNP, the state has authority over public hunts outside YNP, the state has authority for other lethal removal outside YNP, and APHIS and surrounding states have authority over brucellosis quarantine outside YNP.

The NPS will provide an annual removal recommendation to IBMP partners and American Indian Tribes each fall and further coordinate through winter to assist their decisions on implementing hunts, captures, or other lethal removals outside YNP. The number of bison removed each year will depend on the magnitude of the migration, with more animals removed when more animals migrate. The NPS will take precautions to help ensure the bison population remains within a range of about 3,500-6,000 animals:

- If the late-winter bison population approaches 3,000 bison – The NPS may cease placing bison in the BCTP or lethally remove bison. The NPS will communicate and coordinate with other partners to limit lethal removals outside YNP. Also, the NPS may capture and hold animals for release back into the park or take other actions, such as hazing, to limit lethal removals outside the park if other entities choose not to adhere to NPS recommendations. This may result in short-term effects on the ability of American Indian Tribes or state-permitted hunters to harvest bison outside of YNP that season.
- If the early-winter bison population exceeds 5,200 bison –The NPS will establish a population assurance threshold in early winter of 5,200 bison. The population assurance threshold is not a target for the population but rather a threshold over which the NPS will change its management actions. The NPS set the population assurance threshold at 5,200 bison because it represents when

the post-calving population could surpass 6,000 bison. When there are more than 5,200 bison in early winter, the NPS will manage for a decreasing population, where the post-calving population is smaller than the early winter population.

- The NPS will implement and recommend removal limits to IBMP partners and American Indian Tribes to avoid the unintended, negative consequences of removing large numbers of bison in a single year. The maximum limit may be 25% of the population but may include further limitations to avoid skewing the age, sex, or herd structure. The NPS will follow actions as outlined for a late-winter population of 3,000 bison if the removal limit is exceeded.

**Bison Conservation Transfer Program (BCTP)**— The NPS will continue to implement the BCTP in coordination with APHIS, MDOL, and American Indian Tribes to identify and transfer brucellosis-free Yellowstone bison to tribal and public lands. The NPS will follow its 2018 decision, using facilities in and adjacent to the Stephens Creek Administrative Area in YNP, north of the park in Corwin Springs, Montana (leased by APHIS), and at the Fort Peck Indian Reservation. The NPS will operate its quarantine facility at 200-250 animal capacity and anticipates APHIS will continue to operate its quarantine facilities at 60-90 animal capacity. The NPS will continue to coordinate with APHIS and MDOL by outlining the terms of quarantine using a general agreement that is updated every five years. All bison completing quarantine in YNP will continue to be given to American Indian Tribes. The NPS will coordinate with partners to maximize holding capacity and testing efficiency, collect data to improve testing procedures, use low-stress bison handling, and enhance American Indian tribal involvement in program implementation. Other details of this program are incorporated by reference. They can be found on pages 3-5 of the 2018 Finding of No Significant Impact (FONSI) for the project located here: <https://parkplanning.nps.gov/documentsList.cfm?projectID=53793> and in the final plan/EIS.

The NPS will aim to operate the BCTP at full capacity. Whenever space is available in the BCTP, the NPS will prioritize capturing bison and filling the BCTP over all other removal methods. The NPS will enter approximately 100 to 300 bison into the program annually. Annual variations in migrations may not allow the NPS to operate the BCTP at full capacity in some years. Prior to winter, the NPS will coordinate with the American Indian Tribes and ITBC regarding the composition of bison they will like taken into quarantine (e.g., all males or family groups). The NPS will use passive capture techniques to the extent feasible to allow other bison to move out of the park to support hunting. The NPS may release brucellosis-negative bison captured that are unsuitable for the BCTP.

**Capture of Bison in the Stephens Creek Administrative Area**—The NPS will coordinate capturing bison in the Stephens Creek Administrative Area with IBMP partners and American Indian Tribes to place animals in the BCTP, ship for processing, or hold animals for release back into YNP. The NPS will use passive capture techniques to the extent feasible to allow other bison to move out of the park to support hunting.

- If the early-winter bison population is fewer than 5,200 bison – The NPS will capture bison when space is available in the BCTP and cease capture when the BCTP is full. The NPS anticipates that about 300 to 750 bison will need to be captured during most years to support the BCTP. The NPS may additionally capture bison if tribal harvests or public hunting unnaturally constrain bison within and prevent them from exiting YNP.
- If the early-winter bison population exceeds 5,200 bison – The NPS will be proactive in capturing more bison than are needed for the BCTP and enough bison to ensure for a decreasing population.

The NPS will be proactive because the timing of bison migrations out of northern YNP and limitations posed by processing facility availability will make it infeasible, at times, for the NPS to wait until late winter to make decisions about capturing bison and transferring for processing. With more than 5,200 bison, the NPS anticipates that about 600 to 1,000 bison (total includes capture for the BCTP) will need to be captured to decrease the population, but this number will be adjusted down based on the number of bison harvested outside the park.

- Regardless of population size – The NPS may capture bison whenever the number of bison migrating out of the park exceeds capacity provided by Montana’s tolerance areas. The state did not give a number limit on bison outside northern YNP in its 2015 decision notice on year-round tolerance. The NPS will coordinate with the state and IBMP partners when bison migrate outside the park to determine appropriate courses of action based on migration levels.

**Transfer to Tribes for Processing**—The NPS will transfer bison to American Indian Tribes that would then sacrifice them for their meat and hides at meat-processing facilities through a Tribal Food Transfer Program. The Tribal Food Transfer Program supports tribal food independence and provides bison as food to tribal members who may not be able to participate in harvests outside the park. The NPS will use transfer to tribes and the Tribal Food Transfer Program as follows:

- The NPS will transfer brucellosis-positive bison that do not qualify for the BCTP to reduce the chances of increasing brucellosis prevalence in the bison population. The NPS anticipates this number will vary from 100 to 300 bison per year.
- The NPS will prioritize the transfer of brucellosis-positive bison for processing when the NPS captures bison due to large congregations of bison that aren’t leaving the park in the Stephens Creek Administrative Area.
- The NPS will prioritize the transfer of brucellosis-positive bison for processing when the population is above the population assurance threshold of 5,200. When possible, the NPS will hold bison until late winter before transferring them for processing and reduce transfers based on the number of bison harvested outside the park. The NPS aims to complete transfers for processing by the end of March to prevent sending females late in gestation for processing. Non-pregnant bison could be held and transferred later into the spring based on processing facility availability.

Other details of transfer for processing are outlined in the final plan/EIS on pages 24 and 28 and are incorporated by reference. The NPS may dispatch animals in the Stephens Creek Administrative Area as outlined in the final plan/EIS on pages 23, 27, and 28, incorporated here by reference. The NPS will reduce transfer for processing as follows:

- In years with fewer than 5,200 bison, the NPS will immediately release brucellosis-negative, BCTP-ineligible bison to support tribal harvest outside YNP. The NPS anticipates this number will vary from 60 to 150 animals per year.
- The NPS will not initially release brucellosis-negative bison when the population is above 5,200 animals but could release this subset of bison once it is determined that the removal is sufficient to decrease the population.



- The NPS will release captured bison back into YNP at the appropriate time once the removal recommendation is met.

**Hunt-Capture Coordination**— Tribal harvest and public hunting outside the park are not within the NPS’s jurisdiction or control. Harvests outside the park are anticipated to continue to reduce bison numbers and aid the NPS in meeting population objectives. State agencies, in cooperation with the Custer Gallatin National Forest and American Indian Tribes with treaty rights, would determine and coordinate the location and extent of tribal harvest and public hunting in Montana outside the park. The NPS expects they would implement tribal harvests and public hunting in coming years similar to current conditions.

The NPS will continue engaging with American Indian Tribes associated with Yellowstone bison, the Custer Gallatin National Forest, MFWP, residents, and non-governmental organizations (NGOs) to explore ways to increase the efficiency and safety of hunting outside the park. Tribal harvest and public hunting in Montana could become more effective over time if hunters move away from the park boundary and bison can distribute across the landscape year-round so hunting seasons and locations can be adjusted to more traditional autumn and early wintertime periods in certain areas.

The NPS will use a variety of annual, weekly, and daily meetings during winter to coordinate the timing and extent of capture operations in the Stephens Creek Administrative Area with American Indian Tribes that harvest bison on lands adjacent to the park to reduce the effects of capture operations on harvest opportunities as outlined in the final plan/EIS and incorporated here by reference. The NPS will continue to have no authority or jurisdiction over when, where, and how wildlife harvests occur outside the park. The NPS will continue to support IBMP partners in their efforts to reduce impacts outside the park and address hunting-related issues within each agency's jurisdictional authorities.

**Capture Facilities Outside YNP**—The NPS could collaborate with other IBMP members and American Indian Tribes to evaluate the need, design specifications, and potential location for temporary capture facilities in the northern management area. Details of this are included on pages 28-29 of the final plan/EIS and are incorporated by reference.

**Hazing Bison**—The NPS will haze bison in YNP when necessary for safety reasons, to protect property, or to move bison into the capture facility in the Stephens Creek Administrative Area, primarily from February to April. Details of this are included on pages 24, 25 and 29 of the final plan/EIS and are incorporated by reference.

**Balancing Management Tools**—The NPS will use a decision tree (example provided in Appendix F of the final plan/EIS) to meet the removal guideline that is based on the abovementioned constraints for capture of bison in the Stephens Creek Administrative Area, hunt-capture coordination, BCTP, and the Tribal Food Transfer Program.

**Adaptive Management**—The agencies and American Indian Tribes involved with the IBMP have used the adaptive management process to inform decision-making and adjust bison management since 2000. The NPS will continue to evaluate current conditions, identify trends, implement management actions, monitor progress toward desired conditions, and adjust actions to improve progress as needed. The NPS will later assess whether any adaptive management changes will affect the environment in a manner or to a degree not previously considered and conduct additional NEPA analysis, if necessary, at that time.

The NPS will manage for the following objectives:

1. Sustain a viable, wild population of bison.
2. Maintain a balanced sex ratio of about 50% males and 50% females.
3. Maintain an age structure of about 70% adults and 30% younger animals.
4. Maintain gene flow between primary breeding herds and preserve existing genetic diversity.
5. Sustain the ecological role of bison.
6. Maintain grasslands and sagebrush steppe with functioning energy, nutrient, and water cycles.
7. Sustain bison as a meaningful component of the food web, influencing energy and nutrient transfer through the ecosystem.
8. Promote an environment in YNP where wildlife remain uncontrolled, and visitors could be impressed and inspired by their uninhibited behaviors.
9. Maintain existing low risk of brucellosis transmission from bison to cattle.
10. Protect human safety and property and alleviate conflicts with livestock, people, and property.
11. Operate the BCTP at full capacity.
12. Ensure more bison are removed by harvest than shipped for processing over time.
13. Maintain or lower brucellosis prevalence in the bison population over time.

Following the adaptive management cycle of monitoring and reassessment, the NPS may adjust the population assurance threshold, target population range, transfers for processing, or release of bison back into YNP. The NPS will notify IBMP partners of changes to these numbers and provide a rationale for the adaptive management change. In cases where adaptive management changes may be made, the NPS will assess whether any adaptive changes affect the environment or to a degree not previously considered and conduct additional NEPA analysis, if necessary, at that time. Further information on adaptive management is included in the final plan/EIS on pages 16-18 and is incorporated here by reference.

**Honor and Support American Indian Rights Reserved Through Treaties**—The NPS will continue to honor and support American Indian rights reserved through treaties as described in the final plan/EIS on pages 13-14, and this information is incorporated here by reference.

**Establish Collaborative Partnerships with American Indian Tribes for Bison Management**—The NPS will establish collaborative partnerships with American Indian Tribes for bison management as described in the final plan/EIS on pages 14-15 and this information is incorporated here by reference.

**Operations Plans**—The NPS will continue to follow the framework of the IBMP, where annual operating plans are used to set out specific expectations and areas of responsibility for personnel from each of the cooperating agencies. Details of annual operations plans are included in the final plan/EIS on page 18, and this information is incorporated by reference.

**Population Abundance**—The NPS will continue to use an integrated population model to estimate the abundance and composition of the bison population each summer, as detailed in pages 18-19 of the final plan/EIS. This information is incorporated by reference.

**Forage Production and Grazing Research**—The NPS will continue using short, season-long, and multi-year exclosures across the migratory landscape used by bison to track grazing, plant productivity, soil

organic matter, and nutrient cycling as detailed in page 19 of the final plan/EIS and incorporated here by reference.

**Monitor Genetic Diversity**—The NPS will continue to monitor genetic diversity based on existing microsatellite markers, evaluate new markers, and implement future monitoring based on the best available science as detailed in page 19 of the final plan/EIS and incorporated here by reference.

**Habitat Conservation and Enhancement**—The NPS will continue to work with its partners on habitat conservation and enhancement work as detailed in pages 19-20 of the final plan/EIS and incorporated here by reference.

**Encourage More Tolerance for Bison in States Surrounding YNP**—Bison will continue to migrate outside the park where state agencies and the national forest have jurisdiction. It is expected these agencies will work with private landowners to determine levels of tolerance, hazing, and captures, and with American Indian Tribes with tribal treaty rights to coordinate the location and extent of tribal harvests and public hunting outside the park. The NPS will work with the Custer Gallatin National Forest on projects to create or connect suitable bison habitat and allow bison to be present and distributed year-round in the national forest per the 2022 Land Management Plan (LMP) (USDA, USFS 2022a).

**Bison Health and Welfare**—The NPS will continue to obtain veterinary assistance, keep detailed records and documentation, and use low-stress handling methods to reduce bison discomfort, distress, or pain caused by management activities. The NPS will continue implementing a disease surveillance program of animals in the BCTP.

**Brucellosis Management**—The NPS will help to maintain separation between bison and cattle through capturing bison, controlling population numbers, and assisting state managers in hazing bison on a case-by-case basis. The NPS will not vaccinate bison or consider aggressive brucellosis control measures on bison until tools became available for an eradication program in elk. The NPS may provide APHIS or other parties with some Yellowstone bison for brucellosis suppression research. Any brucellosis suppression techniques developed during such research will not be implemented as part of operations on Yellowstone bison until they are proven effective without significant adverse effects, additional NEPA compliance is conducted, and tools become available to eliminate brucellosis in elk.

**Conservation Measures Pursuant to the Endangered Species Act**—Conservation measures that will be implemented as part of the project to avoid or minimize adverse effects to threatened and candidate species include:

*Canada Lynx and their Designated Critical Habitat, Grizzly Bears, and Wolverines:*

Managers will monitor in and around the Stephens Creek Administrative Area for potential occurrence and use of the area by grizzly bears, wolverines, and Canada lynx.

Managers will ensure all participants, including contractors, collaborators, and volunteers, are trained on how to avoid disturbing or encountering bears and other wildlife, including regulations regarding vehicle speed limits, food storage, disposal of garbage and other attractants, and approaching or harassing wildlife.

Unless authorized, workers in YNP will avoid designated closure areas that have high historical use by grizzly bears during spring and summer, as well as closure areas around active bear dens to minimize wildlife disturbance and human-wildlife interactions.

When possible, managers will limit employee or contractor camps and equipment storage areas to existing support facilities.

During and after management activities, managers will take prevention and restoration measures to avoid the introduction of exotic invasive species and discourage the establishment of herbaceous foods such as clover.

If helicopters are used for management activities, staff will report all observations of grizzly bears, lynx, and wolverines to the pilot and project manager as soon as possible after observation.

Except when taking off and landing, or as necessary for management activities, helicopters will travel at least 500 feet above ground to reduce potential disturbance to wildlife below.

As feasible, helicopter landings will be restricted to pre-determined locations, and the number of landings will be minimized to reduce the duration and extent of disturbance.

If a grizzly bear, lynx, or wolverine is observed in or near (approximately 200 yards) a helicopter flight path or landing zone, the pilot will alter the flight path and landing zone to avoid the animal, including during future trips.

#### *Western Glacier Stonefly:*

Managers will avoid working in the upper-most extent of high-elevation streams that originate from glacial meltwater and could be inhabited by the western glacier stonefly.

#### *Whitebark Pine:*

Managers will continue to identify, test, and protect both active and potential 'plus' trees (whitebark pine that are or believed to be phenotypically resistant to white pine blister rust). In some instances, conservation and recovery of whitebark pine could be aided by even single, solitary trees, whether at the stand level or the landscape level depending on how widespread stressors have impeded the health of the whitebark pine in a particular area. Some whitebark pine trees are phenotypically resistant to blister rust, providing viable seeds sources for natural regeneration or cone collection for site rehabilitation. Managers will monitor in and around the Stephens Creek Administrative Area for potential occurrence of whitebark pine.

#### *Monarch Butterfly:*

To the extent feasible, no nectar-feeding plants or host plant species for monarch butterflies or caterpillars will be removed during management activities.

If habitat disturbance is necessary, project managers will try to adjust the timing of activities in areas containing plants used by monarchs to avoid interfering with breeding or feeding.

To the extent feasible, managers will avoid using pesticides or herbicides in monarch butterfly habitat that could result in direct mortality or eliminate host and nectar plants.

If pesticide application is necessary near monarch butterfly habitat, managers will select chemical formulations specific to the targeted pest, time applications to avoid monarch activity periods, establish buffers, and minimize drift to non-target areas by direct ground application.

## OTHER ALTERNATIVES CONSIDERED IN THE FINAL PLAN/EIS

**Alternative 1 (No Action)**—Alternative 1 is the no action alternative required by NEPA and assumes continuation of current management for the planning area. The no action alternative prioritizes maintaining a negligible risk of brucellosis transmission from bison to cattle to assure other states and counties that management will prevent the transmission of brucellosis from bison to livestock. The NPS would continue current management pursuant to the IBMP as adjusted and implemented since 2000 through consensus decisions and annual operations plans by the agencies involved with bison management. Bison numbers are expected to range between about 3,500 and 5,000 after calving. Bison could move to the park boundary and into established northern and western management areas in Montana, where their numbers would be limited by captures in the park for the BCTP or transfers for processing, as well as public hunts and tribal harvests outside the park, primarily on national forest lands. Only bison testing negative for exposure to brucellosis are eligible for the BCTP, which could include bison of either sex, any age, and pregnant or non-pregnant bison. Within YNP, the management of bison, such as capture and quarantine, would generally occur near the northern boundary. However, as requested and appropriate, the NPS may work with partners outside the park to reduce conflicts with cattle, people, and property. Hazing in or outside the park would involve moving bison away from areas they are not wanted, such as developed areas, highways, or private property, and using people walking, on horseback, or in vehicles. The NPS would conduct brucellosis screening and subsequent testing on bison placed in the BCTP.

The NPS would capture some migrating bison inside the Stephens Creek Administrative Area near the northern boundary of the park and ship them for processing to decrease numbers (if desired) and provide meat to American Indian Tribes. If space is available, some bison testing negative for brucellosis exposure would be placed in the BCTP to increase the number of live brucellosis-free animals relocated to suitable and tribal public lands. If space is not available, these bison would be shipped for processing. The NPS would continue to coordinate captures in the park with actions outside the park, like public hunts and tribal harvests, to reduce the effects of capture on these opportunities and continue discussions with American Indian Tribes and other agencies to improve communication, safety, and management.

**Alternative 3**—Alternative 3 would prioritize treating Yellowstone bison more like elk exposed to brucellosis but are not subject to intense disease management like bison. Captures of bison for transfer for processing would immediately cease, with natural selection and public hunting/tribal harvests outside the park in Montana being the primary factors limiting bison numbers. The NPS would continue captures in YNP to maintain the BCTP, but it would release bison not suitable for the program. Bison numbers likely would be substantially higher than under Alternative 1 and are expected to range from about 3,500 to 7,000 bison after calving. The NPS may haze bison within YNP when necessary to protect people and property. Montana could implement hazing outside the park at its discretion. There should be substantially more tribal harvest opportunities for American Indian Tribes outside the park, provided members allow bison to distribute across a larger landscape before harvesting them. The risk of brucellosis spreading from bison to cattle might increase compared to Alternative 1 as more bison migrate outside the park and potentially mingle with cattle if they surpass management efforts to keep them in the existing management area. If the population exceeds a population threshold, even with more harvest opportunities, the NPS would reinstitute transfer for processing, with large captures and hazing events occurring more frequently to reduce numbers, alleviate conflicts with property, and improve safety.

## BASIS OF DECISION

The decision-making process for selecting an alternative for implementation involved careful consideration of the following: the purpose and need for this plan; environmental impacts of the alternative considered; and comments received from other governmental entities, American Indian Tribes, and the public during the EIS and associated consultation processes. In making the below decision, the NPS considered all adverse and beneficial effects to park resources resulting from the management of bison as well as those indirect effects outside the park on human health and safety, visitor and resident experience, and wildlife from tribal harvest and public hunting (described in detail in Chapter 3 of the final plan/EIS and incorporated here by reference).

The NPS selected Alternative 2 for implementation because it best meets the purpose and need for taking action and responds to new information and changed circumstances since the issuance of the IBMP in 2000. The NPS selected this alternative with a population range of 3,500 to 6,000 bison because it would preserve an ecologically sustainable population of wild, migratory bison; provide ample harvest opportunities for American Indian Tribes; allow for enough bison to enter the BCTP, restoring live bison to tribal and public lands across the nation; and is a population range the NPS can successfully manage considering the limited available summer and winter habitat outside the park.

New information obtained since the approval of the IBMP in 2000 indicates some of the premises regarding brucellosis transmission in the initial plan were incorrect or have changed over time. In addition, there are fewer cattle ranging near the park, and federal and state disease regulators have taken steps to reduce the economic impacts of brucellosis outbreaks in cattle. The 2000 IBMP proposed managing a population of 3,000 bison using intensive disease suppression methods to reduce the number of brucellosis-infected bison leaving the park significantly. However, due to the ongoing efforts of IBMP partners, managing a larger bison population as a wild, migratory species that freely moves in and out of YNP has become feasible. This management approach has not increased the risk of brucellosis transmission to livestock, reducing the need for the intensive brucellosis suppression efforts outlined in the 2000 IBMP.

The bison population averaged nearly 4,900 animals over the last decade, during which IBMP partners successfully met the principal purpose of the IBMP to maintain a wild migratory bison population and minimize the risk of brucellosis transmission from bison to livestock. The larger number of bison benefited the NPS's efforts to sustain the ecosystem, provide for a world-class visitor experience, and meet tribal trust responsibilities. Also, larger bison numbers did not equate to proportional increases in bison-related conflicts outside YNP.

The NPS desires to manage bison like other wildlife and move away from the intensive management actions that were outlined in the 2000 IBMP; however, the NPS realizes this is still not entirely possible given the constraints imposed by its partners. The NPS must consider the capacity of wintering areas outside the park when managing numbers within YNP. Montana defines tolerance areas outside YNP. Montana has stipulated that how the NPS manages abundance within the park could influence how the State manages these areas in the future. The selected alternative will prioritize other tools over transfer for processing and allow for a slightly larger bison population on the landscape compared to Alternative 1. The NPS has made enormous and often disproportionate efforts and investments in using transfer for processing to control numbers and minimize brucellosis transmission risk since the 2000 IBMP. Since

2000, the NPS has transferred over 6,000 bison for processing. Montana has not captured or shipped a bison for processing since 2008. Montana has implemented few tools at its disposal to help regulate bison population numbers, and the NPS does not anticipate a more active role by Montana. Additionally, for these reasons, the management of more than 6,000 bison under Alternative 3 could be unsuccessful and would not provide for a sustainable management model for the NPS.

Sustainable tribal harvest and public hunting outside YNP that accommodate the constraints imposed by Montana are necessary for the long-term management of Yellowstone bison. As discussed in the final plan/EIS, state hunters and American Indian Tribes will continue to hunt or harvest outside the northern boundary of the park where the NPS does not have regulatory authority or jurisdiction, and hunting and tribal harvest will continue regardless of this NPS decision on bison management. Presently, most tribal harvests and public hunting occur in small areas adjacent to the park, limiting the out-migration of bison from YNP and harvest success during most years. When the density of accumulated snowpack is well above average, more than 1,000 bison may migrate toward the boundary of YNP, as seen in the last five years, and this could slightly increase under the selected alternative. However, substantially fewer bison migrate under more moderate weather conditions, even when there are more than 5,000 bison. Thus, based on best available science, potential migrations will range from a few individuals to more than 1,000 bison in any given winter, similar to or slightly more than current conditions. Because of this, harvest alone cannot manage bison abundance, and more coordination among hunting entities and more tolerance for bison across a broader area of Montana may be necessary before the NPS could consider an alternative with more than 6,000 bison or completely cease transfer for processing.

The BCTP offers the NPS and its American Indian Tribe partners an opportunity to transfer brucellosis-free live Yellowstone bison to tribal and public lands. The current capacity for the BCTP is 200-250 bison in YNP and an addition 60-90 bison in USDA facilities, which accounts for a smaller percentage of bison removed from the population than other methods. Placing bison in the BCTP to recover Yellowstone bison to tribal and conservation lands is a transformational advance that was only conceptualized in the 2000 IBMP. APHIS has been an important partner in the BCTP by developing a protocol for brucellosis quarantine, revising procedures based on best available science, and committing to operating quarantine facilities adjacent to YNP. However, opportunities for American Indian Tribes to participate in the BCTP are still limited and require substantial coordination among APHIS and affected states.

Furthermore, the NPS recognizes that some American Indian Tribes perceive the BCTP as an obstacle to successful tribal harvests outside YNP. For these reasons, the final plan/EIS does not propose actions to increase the BCTP output. The selected alternative was chosen to prioritize placing bison in the BCTP whenever there is space in the program. Also, based on best available science, the selected alternative will maintain existing brucellosis prevalence in the population by selectively shipping for processing brucellosis-positive bison when selecting animals for the BCTP, giving their meat and hides to American Indian Tribes as part of a Tribal Food Transfer Program.

The NPS made the decision outlined above, given these constraints, to maintain the health and conservation of the park's bison population and its values, to allow for placing animals in the BCTP, to provide for migration and opportunities for tribal harvest and public hunting outside YNP, to support the protection of the state's livestock industry through effective disease risk management, and to manage at a population level that does not exceed winter range capacity provided by the Montana's tolerance areas.

The selected alternative will continue to uphold the NPS’s trust responsibility to American Indian Tribes by using tools that directly support the tribes and their ability to obtain live bison and bison meat, hides, and other parts. The selected action is grounded in best available science and is consistent with NPS Management Policies and the park’s enabling legislation. For these reasons, Alternative 2, described above, was selected for implementation.

The NPS did not select Alternative 1 because there is no longer a need to manage the bison population to a lower number to prevent the spread of brucellosis and reduce conflicts outside YNP. Since 2012, the NPS and other IBMP partners have met the principal purpose of the 2000 IBMP while averaging about 5,000 bison after calving. During this time, there have been no documented transmissions of brucellosis from bison to cattle, fewer conflicts with people and property, high visitor enjoyment and economic contributions to gateway communities, increased hunting opportunities, more brucellosis-free bison sent to tribal lands, and improved ecological conditions in YNP.

The NPS did not select Alternative 3 because it is uncertain whether public hunting, tribal harvest, and the BCTP would be sufficient to control numbers below the upper population range of 7,000 bison. The late-winter movement patterns of bison and a concentration of hunters near the park boundary have limited the effectiveness of tribal harvest and public hunting in Montana to manage bison numbers in many winters. More bison would migrate to Montana with higher population numbers, particularly during severe winters. Movements of more bison into Montana could require more and intense hazing to maintain separation between bison and cattle and protect people and property. The Governor of Montana indicated in a July 21, 2023, letter sent to the NPS regarding the draft plan/EIS that “absent commitment to specific, predictable population and disease management activities, the state may be forced to re-examine its tolerance.” If most bison are forced to remain in the park by hazing or other methods due to reduced tolerance, there could be adverse effects to vegetation, soils, and other ungulates in areas where bison are concentrated. For these reasons, the NPS did not select Alternative 3 for implementation.

## **ENVIRONMENTALLY PREFERABLE ALTERNATIVE**

The NPS is required to identify the environmentally preferable alternative in the ROD. The DOI, in accordance with the NEPA regulations, defines the environmentally preferable alternative (or alternatives) as the alternative that causes the least damage to the biological and physical environment and best protects, preserves, and enhances historical, cultural, and natural resources (43 Code of Federal Regulations 46.30). In identifying the environmentally preferable alternative, the NPS considered all adverse and beneficial effects to park resources resulting from the management of bison as well as those indirect effects outside the park on human health and safety, visitor and resident experience, and wildlife from tribal harvest and public hunting (described in detail in Chapter 3 of the final plan/EIS and incorporated here by reference).

The NPS identified Alternative 2 as the environmentally preferable alternative because it balances increasing the bison population compared to Alternative 1, furthering bison’s role as ecological engineers, while minimizing some impacts associated with a larger bison population under Alternative 3 such as the increased spread of invasive plants and the increased conversion of riparian areas from woody to grassy habitats locally within YNP. Alternative 2 balances the conservation and management of Yellowstone bison with partner and public values and constraints. The NPS will continue to meet the principal purpose of the 2000 IBMP under Alternative 2 while managing the bison population within a range that promotes



visitor enjoyment, sustains the Yellowstone ecosystem, supports migration outside YNP, and maintains a low risk of brucellosis transmission to livestock.

## **CONCLUSION**

Overall, among the three alternatives considered, the selected alternative (Alternative 2 from the final plan/EIS) best meets the purpose and need of the plan/EIS. It is expected to preserve an ecologically sustainable population of wild, migratory bison while continuing to work with partners to address brucellosis transmission, human safety, and property damage and fulfill tribal trust responsibilities. It fulfills the NPS's statutory mission and responsibilities, considering economic, environmental, technical, and other factors. The selected alternative incorporates all practical means to avoid or minimize environmental harm. It will not impair park resources or values or violate the NPS Organic Act (see Appendix A).

The NPS certifies that it considered all the alternatives, information and analyses, and objections submitted by states, American Indian Tribes, local governments, and other public commenters in developing the draft and final plan/EIS.

The required "no-action period" before approval of the ROD was initiated on June 7, 2024, with the US Environmental Protection Agency's *Federal Register* notification of the filing of the final EIS (89:111 p 48610).

## APPENDIX A – NON-IMPAIRMENT DETERMINATION

This non-impairment determination has been prepared for the selected alternative, as described in the Record of Decision (ROD) for the *Yellowstone National Park Bison Management Plan Environmental Impact Statement* (plan/EIS).

By enacting the National Park Service (NPS) Organic Act of 1916 (Organic Act), Congress directed the US Department of the Interior and the NPS to manage units “to conserve the scenery, natural and historic objects, and wild life in the System units and to provide for the enjoyment of the scenery, natural and historic objects, and wild life in such manner and by such means as will leave them unimpaired for the enjoyment of future generations” (54 United States Code 100101).

NPS *Management Policies 2006*, section 1.4.4, explains the prohibition on impairment of park resources and values:

While Congress has given the Service the management discretion to allow impacts within parks, that discretion is limited by the statutory requirement (generally enforceable by the federal courts) that the Park Service must leave park resources and values unimpaired unless a particular law directly and specifically provides otherwise. This, the cornerstone of the Organic Act, establishes the primary responsibility of the National Park Service. It ensures that park resources and values will continue to exist in a condition that will allow the American people to have present and future opportunities for enjoyment of them.

An action constitutes impairment when its impacts “harm the integrity of park resources or values, including the opportunities that otherwise will be present for the enjoyment of those resources or values” (NPS 2006 Section 1.4.5). To determine impairment, the NPS must evaluate the “particular resources and values that will be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in question and other impacts.”

An impact on any park resources or values may constitute an impairment, but an impact is more likely to constitute an impairment to the extent that it affects a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park; or
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- identified in the park's general management plan or other relevant NPS planning documents as being of significance (NPS 2006 Section 1.4.5).

The significance and importance of each resource analyzed, based on the Yellowstone National Park (the park or YNP) enabling legislation and its 2014 Foundation Document (NPS 2014a), is discussed in the following sections. As a basis for evaluating the potential for impairment or unacceptable impacts on the park's resources, the NPS relied on the *Yellowstone National Park Bison Management Plan Final Environmental Impact Statement* (final plan/EIS). The final plan/EIS, Chapter 3, includes an analysis of direct, indirect, and cumulative effects to Yellowstone Bison, Wildlife, Threatened Animals and Plants, American Indian Tribes and Ethnographic Resources, Human Health and Safety, Socioeconomics, Visitor Use and Experience, and Vegetation from the range of alternatives. The final plan/EIS analysis is incorporated by reference to this determination. Consistent with NPS guidance, a non-impairment determination is not made for American Indian Tribes, Human Health and Safety, Socioeconomics, and

Visitor Use and Experience because these are not considered to be park resources or values subject to the non-impairment standard established by the Organic Act, clarified further in Section 1.4.6 of NPS Management Policies, and the NPS Guidance for Non-Impairment Determinations and the NPS NEPA Process (2011).

As was documented in the final plan/EIS, the selected alternative was found to have minimal or no impacts on other resources such as environmental justice, archeological resources, historic structures, cultural landscapes, trust resources, geology and topography, natural soundscapes, paleontological resources, floodplains and wetlands, aquatic resources, prime and unique farmland, energy requirements and conservation potential, natural or depletable resource requirements and conservation potential, air quality, wilderness, other wildlife, and climate considerations. See Appendix C in the final plan/EIS for more information. The impacts to these resources are small and insignificant. The resources will remain available to be enjoyed by current and future generations. Therefore, they will not be impaired by implementation of the selected alternative.

## **YELLOWSTONE BISON**

Surrounded by six national forests, private and reservation lands, and over 2 million designated wilderness acres, the Greater Yellowstone Ecosystem is one of the last, largest, mostly intact temperate-zone ecosystems on earth. Ninety percent of the acres within park borders are managed as wilderness, where human intrusion and intervention into natural processes are minimized. These lands support a wide variety of wildlife, including bison, grizzly and black bears, gray wolves, elk, bighorn sheep, coyotes, otters, cutthroat trout, and other species. Archeological evidence indicates bison have lived in the Greater Yellowstone Area (GYA) for more than 10,000 years, and more recently, habituation of wildlife and complex human-wildlife interactions are becoming more common with increasing visitation. The park's 2014 Foundation Document identified YNP as one of the world's largest, mostly intact temperate ecosystems and identified bison among its overall wildlife population as an element of the park's fundamental resources and values. As described in the park's Foundation Document, bison are an important feature of the park due to their role in shaping the functionality of this immense ecosystem (NPS 2014a).

Bison are highly adaptable and quickly respond to management actions and environmental changes. They also are prolific, with a high survival rate of calves compared to other ungulates in YNP and lower rates of predation due to their large body size and group defensive tactics. As a result, bison numbers can increase quickly when conditions are favorable. Most bison migrate to some extent along elevation gradients in response to forage production and snow accumulation or melting. Since YNP is primarily mountainous with limited areas of low-elevation winter range for ungulates, some migrating bison move across the park boundary into Montana. The timing and extent of these movements depend on snow conditions, available forage, and the density of bison in the park.

Brucellosis can be transmitted between bison, elk, and cattle. When the Interagency Bison Management Plan (IBMP) was negotiated during the 1990s, bison were believed to be the primary risk of brucellosis transmission to cattle, and Montana has limited tolerance for them. Thus, under the IBMP signed in 2000, NPS personnel have captured bison near the northern boundary of YNP during the winter to reduce bison numbers. Captured animals have been shipped to processing facilities or placed in quarantine as part of a Bison Conservation Transfer Program (BCTP) to provide live, brucellosis-free bison to American Indian

Tribes for restoration on their lands. Since the issuance of the 2000 IBMP decision, no actions have resulted in the impairment of Yellowstone bison.

Per statute and policy, the NPS manages wildlife populations to sustain them in their natural condition, defined as what would occur without human dominance over the landscape. Thus, to the extent feasible, the NPS allows bison to move freely and unpursued within the park's interior with their behaviors, movements, reproductive success, and survival primarily affected by their decisions and natural selection, more commonly known as survival of the fittest. Given existing political and social constraints, NPS personnel have captured bison near the northern boundary of YNP during winter to reduce bison numbers and prevent movements outside the designated management areas in Montana. As stated in the final plan/EIS, these management actions over the last two decades have not suppressed the bison population meaningfully and have not had a detectable impact on bison genetic health, natural migratory tendencies, or overall herd health of YNP. Based on the analysis in the final plan/EIS (Chapter 3, Yellowstone Bison), bison genetic health, natural migratory tendencies, and overall herd health are expected to improve under the selected alternative.

With around 4,400 to 5,900 bison in the population since 2013, the number of bison moving north of Mammoth Hot Springs in the park averaged 1,389 animals per winter, with up to 1,000 animals outside the park at one time. Public hunts and tribal harvests outside the park have removed about 4,300 bison during winters from 2006 through 2023 and around 1,175 bison in the winter of 2022-2023. The NPS expects a similar or slightly larger average range of harvests to continue under the selected alternative. The NPS will continue to monitor the number of bison migrating out of the park and adjust management actions to meet the population objectives of the selected alternative. For this reason, tribal harvest and public hunting outside the park, a tool relied upon by the NPS under the selected alternative, will not impair Yellowstone bison.

The selected alternative will preserve a similar number of bison (around 3,500-6,000), thereby sustaining a viable, wide-ranging population influenced by annual differences in weather and other factors compared to current conditions. Based on best available science, Yellowstone bison will retain existing genetic diversity under the selected alternative because numbers will average more than 3,500 bison. Hundreds of mature males will compete for breeding opportunities, and many adults will produce offspring during their lifetimes. Additionally, large groups of bison will continue to move freely across the wilderness and other undeveloped areas in YNP to provide prey for predators, provide carcasses for scavengers, and restore grasslands with native grazers. For these reasons, the selected alternative supports one of the park's fundamental resources of preserving one of the world's largest, mostly intact temperate ecosystems where natural processes shape ecosystem function.

The selected alternative will maintain a robust bison population, healthy genetic diversity, natural migratory tendencies, and good overall herd health. For these reasons, Yellowstone bison will continue to be present in the park for the enjoyment of future generations, and the selected alternative will not result in the impairment of bison at the park.

## **WILDLIFE**

The park's wildlife resources are an important element of its identity and contributed to its designation as the United States' first Biosphere Reserve by the United Nations Educational, Social, and Cultural Organization (UNESCO) and its subsequent designation as a World Heritage site in 1978. The park's 2014 Foundation Document identified wildlife as an element of the park's significance and identified

wildlife as one of the park's interpretive themes. As described in the park's 2014 Foundation Document, YNP is home to abundant, diverse, and free-ranging wildlife in a largely undisturbed setting. Their survival depends on sufficient and healthy habitats, the preservation of biological diversity, and minimal human interference and impact. Yellowstone's wildlife provides outstanding opportunities to experience and appreciate the diversity of life. Bison are considered Yellowstone wildlife, but because they are the focus of the selected alternative, they are discussed separately above. The analysis in this section primarily focuses on how the presence of bison and NPS actions to manage bison affect non-Endangered Species Act (ESA) listed wildlife, including elk, pronghorn, bighorn sheep, mule deer, bears, cougars, and gray wolves. Impacts to other wildlife species, detailed in Appendix C of the final plan/EIS, are so small they are not discussed in the body of the plan/EIS or the non-impairment determination. Threatened animal and plant species are discussed separately in the following section.

Implementation of the selected alternative, specifically bison hazing and management actions near the Stephens Creek Administrative Area, may disturb wildlife in the short term if it causes them to move to other areas, resulting in minor energetic expenditures. However, these occasional additional energy expenditures will have no impact on the survival and reproduction of any affected species or their populations. Many wild animals in the Gardiner and Hebgen Basins are used to the day-to-day activities of people and often feed, move, and rest near houses, roads, agricultural fields, and recreational areas. Animals adjust their behaviors and movements to recurring activities, though some unexpected disturbances may cause short-term movements. Some ungulates, such as deer, elk, and pronghorn, may be disturbed during bison hazing operations within or outside the park and move short distances away with minor energetic costs. These impacts are mitigated by avoiding, temporarily halting, or ceasing hazing if other wildlife are affected. There are no disturbances to other animals from bison processing because these activities occur within the capture facility area and pastures.

Implementation of the selected alternative will likely result in more bison grazing in portions of the Lamar and Hayden Valleys during the summer and in the Gardiner and Hebgen Basins during the winter and spring. However, these grazed areas make up a small portion of the park's available habitat for bison and other ungulates. Most summer and all winter bison ranges generally experience low to moderate grazing during the summer growing season. Thus, it is unlikely that grazing by bison will substantially affect the seasonal movement patterns or demographics of other ungulates, such as bighorn sheep, deer, elk, and pronghorn. Numbers of ungulates in YNP have remained high for numerous decades, with many thousands of animals attaining adequate forage to sustain body condition, reproduction, and survival.

The selected alternative will not create barriers to the movement of other wildlife species because they will become familiar with bison management operations and existing fencing patterns near the Stephens Creek Administrative Facility as they routinely move around them. More bison on the landscape under the selected alternative will result in more carcasses for consumption by predators, scavengers, and decomposers, which is anticipated to reduce predation on elk and other ungulates and result in higher survival and reproductive success of the consumers. For the few species of wildlife that could migrate out of the park in the winter (excluding bison), tribal harvest and public hunting of bison near Beattie Gulch on USFS land could result in noise and human disturbance, resulting in avoidance of the area, the presence of bison gut piles and potential spread of disease, and lead ammunition and the potential for lead poisoning. While these impacts could affect an individual of a species, they would not affect the population as a whole.

Under the selected alternative, the risk of brucellosis spreading from bison to elk will be similar to current conditions but could increase slightly because the population range and distribution of bison could increase. The prevalence of brucellosis in elk has been on an increasing trend since the 1980s, and elk

exposed to brucellosis now inhabit an area encompassing about 17 million acres. However, because the current spread of brucellosis is not linked to Yellowstone bison or elk but rather to other lineages of elk, the slight increase in the risk of brucellosis transmission from bison to elk will be minimal and will not likely result in measurable effects on elk populations. Under the selected alternative, bison will not out-compete other ungulates for forage (sufficient food sources for other ungulates will remain in YNP), bison will remain an available food source for predators, a larger bison population may slightly reduce predation on elk, and brucellosis transmission risk will remain low. For these reasons, wildlife populations will continue to exist consistent with the range of natural viability in the GYA in a manner that can be enjoyed by current and future generations. The selected alternative will not result in impairment of wildlife populations.

## THREATENED ANIMALS AND PLANTS

As stated in the park's interpretive themes, identified in its 2014 Foundation Document, "the Greater Yellowstone Ecosystem preserves a world-renowned biological reserve that includes mostly intact wildlife communities and rare and endangered species." Federally listed and candidate species that occur in the area include Canada lynx (*Lynx canadensis*), grizzly bear (*Ursus arctos*), western glacier stonefly (*Zapada glacier*), whitebark pine (*Pinus albicaulis*), wolverine (*Gulo gulo*), and monarch butterfly (*Danaus plexippus*). The park also contains designated critical habitat for Canada lynx.

In general, adverse effects to grizzly bears, Canada lynx, and wolverines are unlikely from brief disturbances during bison management operations, including bison processing, as evidenced by the lack of effects over the last 20 years from bison management. Bison capture in the Stephens Creek Administrative Area typically occurs from January to mid-March. Few, if any, grizzly bears are in this area during winter. In addition, fewer hazing events of bison back to YNP have occurred in recent years because of the increased tolerance for bison in Montana. The NPS does not expect lynx and wolverines to occupy the relatively low-elevation, high-desert, grassland area with sparse vegetation around the capture facility or quarantine pastures due to their preference for thick forest. If a grizzly bear, lynx, or wolverine encountered bison operations, they would likely run a short distance away or move away from the area. Some bison removed from the population might otherwise have died and become carrion for grizzly bears, lynx, and wolverines. More bison on the landscape under the selected alternative will result in more carcasses for consumption by predators, scavengers, and decomposers. Grizzly bears, lynx, and wolverines may continue to consume brucellosis bacteria while scavenging bison carcasses, but this should not result in sickness, and they cannot spread brucellosis.

For the few species of threatened animals that could migrate out of the park in the winter, tribal harvest and public hunting near Beattie Gulch on USFS land could result in noise and human disturbance, resulting in avoidance of the area, the presence of bison gut piles and potential spread of disease, and lead ammunition and the potential for lead poisoning. While these impacts could affect an individual of a species, they would not affect the population as a whole.

In accordance with the Canada Lynx Conservation and Assessment Strategy, personnel from YNP mapped suitable lynx habitat, typically mature forests dominated by subalpine fir, Engelmann spruce, and lodgepole pine, and lynx habitat currently in an unsuitable condition, such as forests 1 to 20 years after disturbance. The NPS identified 20 Lynx Analysis Units in the northern and eastern portions of YNP. The NPS uses the Canada Lynx Conservation and Assessment Strategy to gauge the effects of projects on lynx. Few, if any, bison management activities occur in lynx habitat or analysis units, and bison management does not modify critical habitat for lynx.

Few, if any, bison management activities will occur in whitebark pine habitat as most management actions occur in relatively low-elevation, high-desert grassland areas with sparse vegetation; therefore, no trees will be adversely affected. Effects to the monarch butterfly could include the rare, inadvertent trampling of forage plants and larvae by bison, horses, or people, however, these impacts are unlikely to occur. Most bison management activities will occur during winter, and few, if any, monarch butterflies occur in upland areas with nectar-feeding plants for monarch butterflies or host plants for caterpillars. Naturalists have only observed a handful of monarch butterflies in upland, dry areas of YNP, where they seem transitory and feed on pollen from plants like rabbitbrush. To date, there have been no documented impacts to monarch butterflies from current bison management activities, and this is expected to be the same under the selected alternative.

The upper-most extent of high-elevation streams originating from glacial meltwater and inhabited by the western glacier stonefly will not be affected by bison management actions or the presence of bison.

Conservation measures that will be implemented as part of the selected alternative will avoid or minimize adverse effects to threatened and candidate species. Under the selected alternative, effects to federally listed and candidate plants and animals and their critical habitats include temporary disturbances from noise or human presence, none of which will result in take of a listed species. On June 24, 2024, the USFWS concurred with the NPS' determination that the selected alternative may affect, but is not likely to adversely affect, Canada lynx, grizzly bears, or whitebark pine, and the selected alternative would have no effect to western stoneflies or designated critical habitat for lynx. For this reason, federally listed and candidate plants and animals and their critical habitats will continue to be present in the park for the enjoyment of future generations. The selected alternative will not impair these resources at the park.

## **ETHNOGRAPHIC RESOURCES**

The park's 2014 Foundation Document identified the park's unique tapestry of cultural resources as an element of the park's significance. Yellowstone bison represent a connection to the plentiful, wide-ranging bison herds that were central to the lifeways of their native ancestors. Bison are considered sacred to many American Indian Tribes. Throughout history and today, bison have played a crucial role in the cultural, ceremonial, and spiritual practices of many American Indian Tribes.

The NPS defines ethnographic resources as the traditional sites, structures, objects, landscapes, and natural resources that are significant to a particular group's present way of life (NPS 2002). YNP's ethnographic resources represent important religious, historical, and cultural concepts, such as American Indian Tribes' creation stories. Ethnographic resources within YNP remain important to the American Indian Tribes' sense of themselves and their traditional practices. Yellowstone bison are culturally significant to many American Indian Tribes because they are perhaps the only remaining link to the indigenous herds that once roamed the area. The selected alternative will preserve a higher number of bison compared to current conditions, thereby sustaining a more viable, wide-ranging population influenced by annual differences in weather and other factors compared to current conditions. This larger population of bison will provide for increased tribal harvest outside the park and the restoration of live bison to tribal lands through the BCTP. Because the selected alternative continues to provide for the use of bison to American Indian Tribes, ethnographic resources will not be impaired.

## VEGETATION

As stated in the park's purpose statement, YNP was set aside to protect, among other things, ecological systems and processes in their natural condition. The park's 2014 Foundation Document identified the Greater Yellowstone Ecosystem, one of the last, largest, and mostly intact natural ecosystems in Earth's temperate zone, as a fundamental resource and value. Many vegetative communities contribute to this ecosystem, and a few vegetative communities are affected by the presence of bison. Archeological evidence indicates bison have lived in the GYA for more than 10,000 years, and historical narratives suggest they were abundant and widely distributed into the 1830s. Today, bison use more than 500,000 acres of land across the 2.2 million acre park, with most of their use occurring in wet grassland, riparian, sagebrush steppe, and wetland habitats. As a result, the impact analysis in the final plan/EIS focused on wet grassland, riparian, sagebrush steppe, and wetland habitats in the northern region of YNP, as numbers of bison using northern YNP increased substantially since the creation of the 2000 IBMP and are likely to remain high under the selected alternative.

Vegetation in the same habitat can exist in many vastly different conditions, depending on the aggregate effects of land use, climate change, and natural and unnatural disturbances. The baseline for assessing impacts to vegetation are the conditions present at the time the plan/EIS was prepared, acknowledging past and present actions that continue to affect vegetation. Several events fundamentally changed plant communities in areas of northern YNP, changing baseline conditions for vegetation from the conditions present when the park was created.

Between 1904 and 1952, hundreds of acres in northern YNP, including in the Lamar Valley, were cleared of native vegetation and cultivated with nonnative, desired forage plants to grow hay in support of bison restoration, including oats, Smooth Brome, and Timothy. The introduced nonnative plants are highly invasive and spread across suitable habitats of northern YNP. Second, other nonnative plants invaded from outside the park, including Kentucky bluegrass, clover, dandelion, and Canada thistle. More recently, winter annuals, including cheatgrass, desert madwort, and annual wheatgrass, invaded the park and are spreading. These invasions could have been impacted by vehicles, people, elk, bison, fires, and other wildlife. Third, high numbers of elk through the first half of the 1900s reduced woody plants in riparian habitats of northern YNP, creating a cascade of events including fewer beavers, lowered water tables, stream downcutting, and conversion of riparian habitats from woody to grassy vegetation. Finally, predator recovery and hunting outside YNP reduced the elk population starting in the late 1990s. While there has been some increase in woody vegetation in riparian habitats, grassland plants persisted in many areas. Bison replaced elk as the dominant grazer based on species biomass during the 2010s. Bison are less vulnerable to predators. Their increasing numbers have had increasing effects on plant communities despite a fully recovered predator guild. Though the transition of the northern area of YNP to nonnative conditions occurred before large increases in the bison herd and regular use of wintering areas by bison, bison grazing creates conditions that increase the competitive advantage of invasive plants.

Per statute and policy, the NPS manages wildlife and vegetation to sustain them in their natural condition, which includes allowing plant communities to change in response to wildlife. This is consistent with the park's purpose statement and fundamental resources and values defined in the 2014 Foundation Document. The NPS must also control invasive plants when feasible. The selected alternative would allow the NPS to manage up to an additional 1,000 bison on the landscape, which is unlikely to impair vegetative communities compared to current conditions, as discussed below.



In wet grassland habitats, plant communities will continue to change in response to bison under the selected alternative, with bison having both positive and negative impacts. Bison will, directly and indirectly, sustain plant primary production at the landscape level and increase biodiversity in lightly grazed areas, which could occur over a broader region of the park. Bison create grazing lawns, which are areas of intense grazing with short, dense plants, which may increase in size and occur in new areas of YNP. Nonnative species will thrive and dominate plant communities in grazing lawns because of their competitive advantages over native plants. Eradication of many of the cool season invasives historically introduced to YNP, which occur in grazing lawns, is infeasible due to the extent of current invasions. Under the selected alternative, larger or more grazing lawns will have a slightly negative impact on vegetation because of the increased spread of nonnative plants, loss of some palatable forage species, and predominance towards communities composed of a few species. However, the intensely grazed areas are mostly limited to the Lamar Valley and account for only 6% of the grazeable acreage in the park.

Sagebrush-steppe vegetation will continue to change in response to bison under the selected alternative, with bison having both positive and negative impacts. Bison will directly and indirectly sustain plant primary production at the landscape level. Plant diversity will likely be positively impacted across a broad extent of YNP used by bison at light to moderate intensities. Bison will negatively impact plant communities by horning, digging, and wallowing. Bison will also negatively impact plant communities by facilitating the spread of winter annuals through dispersing seeds, reducing plant litter, creating bare areas on the soil surface, and stimulating soil nitrogen recycling. Many factors in addition to bison determine the spread of winter annuals in Sagebrush Steppe, including climate change. The increase in bison under the selected alternative is not anticipated to significantly increase the spread of winter annuals compared to current conditions.

Under the selected alternative, riparian habitats across the park will continue to exist in multiple conditions, including willow-dominated, aspen-dominated, cottonwood-dominated, and grassland-dominated. Some return of woody dominance in riparian areas will occur depending on variations in microclimate, soil type, water depth, beaver activity, and ungulate grazing. The return of woody dominance will not occur as rapidly as the loss of woody species that occurred during the 1900s. Under the selected alternative, bison herbivory may reduce the recruitment and growth of woody species, particularly in the Lamar Valley areas. However, woody riparian areas of the Lamar Valley transitioned to grasslands prior to increases in bison numbers, and these altered riparian areas represent less than 0.1% of woody riparian areas in the park. Under the selected alternative, cool season nonnative plants will continue to invade riparian areas converted to grasslands. The increase in bison under the selected alternative is not anticipated to significantly increase negative impacts to woody plants and spread of cool season nonnatives.

Wetland habitats, including natural springs, are also susceptible to the spread of invasives. Bison graze the periphery of wetlands during the growing season and increase use during winter. Disturbance from bison under the selected alternative will likely continue to exacerbate invasions, particularly near bison summering areas in the Lamar watershed and Hayden Valley, however, these impacts are not likely to expand beyond bison summering areas, and ample wetland habitat will continue to exist in these areas and other areas of the park.

Under the selected alternative, there would be no additional impacts from disturbance in the Stephens Creek Administrative Area, where most operations occur because this area is already denuded of native vegetation.

Overall, vegetative communities will continue to resemble their natural conditions throughout most of YNP, with some isolated effects in areas such as the Lamar and Hayden valleys attributed to a larger bison community. For these reasons, vegetation will continue to be present in the park for the enjoyment of future generations, and the selected alternative will not result in impairment of this resource at the park.

## SUMMARY

The NPS has determined that implementation of the selected alternative will not constitute an impairment of the resources of YNP. This conclusion is based on consideration of the park's purpose and significance, a thorough analysis of the environmental impacts, including direct, indirect, and cumulative described in the final plan/EIS, comments provided by the public and others, and the professional judgment of the decision-maker guided by the direction of the NPS *Management Policies 2006*.

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