National Park Service
U.S. Department of the Interior
Yellowstone National Park
Idaho, Montana, Wyoming

Finding of No Significant Impact
The Use of Quarantine to Identify Brucellosis-free
Yellowstone Bison for Relocation Elsewhere

Background

In compliance with the National Environmental Policy Act (NEPA), the National Park Service (NPS) prepared an Environmental Assessment (EA) to examine various alternatives and environmental impacts associated with a proposal to establish a quarantine program for Yellowstone bison at one or more facilities, which could be located within Yellowstone National Park (YELL), on the Fort Peck Reservation, or elsewhere. The purpose of quarantine is to (1) augment or establish new conservation and cultural herds of plains bison, (2) enhance cultural and nutritional opportunities for American Indians, and (3) reduce shipments of Yellowstone bison to processing (slaughter) facilities. The alternatives considered by the NPS are discussed in detail in the *Alternatives* section of the EA.

There is limited capacity for bison in YELL and limited political and social tolerance for bison migration into nearby areas of surrounding states (Idaho, Montana, Wyoming) due to concerns about transmission of the disease brucellosis to cattle, competition with cattle for grass, human safety, and property damage. However, the bison population is prolific with high reproductive and survival rates that lead to rapid population growth. During 2008 to 2016, numbers of Yellowstone bison increased from about 3,000 to 5,500, which is the largest number in recorded history. High densities of bison could lead to resource degradation in the park and, during winters with high snowfall, mass migrations into local communities that cause conflicts such as highway traffic hazards, property damage, and mingling with cattle. Thus, there is a need to regulate bison numbers unless and until there is additional tolerance in surrounding states for them to migrate and disperse elsewhere. Given current circumstances, culling bison from the population is necessary for the proper management of YELL under the NPS' statutory authorities to manage the park.

Today there are less than 20,000 plains bison in conservation herds and fewer than 7,500 bison without genes from inter-breeding with cattle. Also, the U.S. Fish & Wildlife Service is currently reviewing whether sufficient scientific evidence exists to warrant the listing of Yellowstone bison as threatened or endangered pursuant to the Endangered Species Act based, in part, on the paucity of other large, unfenced populations of plains bison, as well as the relatively frequent culling of large numbers of Yellowstone bison by shipping them to slaughter, which could affect genetic diversity and population structure (U.S. District Court for the District of Columbia, Case No. 16-cv-1909 [CRC]). Given this situation, there is a need to establish additional wild, wide-ranging populations of plains bison elsewhere in North America to preserve the species and its adaptive capabilities across suitable portions of its historic range. Yellowstone bison are considered a valuable source population because they have high genetic diversity compared to many other populations of plains bison. Also, they have special significance to many Indian tribes because they are the last living link to the indigenous herds of bison which once roamed across North America and provided sustenance to tribes for centuries. Thus, there is substantial tribal interest in obtaining Yellowstone bison for conservation and cultural purposes.

To address these needs, the U.S. Department of the Interior began a Bison Conservation Initiative and Working Group in 2008 to promote cooperative conservation in bison management by partnering with states, tribes, and others interested in bison recovery (https://www.fws.gov/uploadedFiles/BisonConservationInitiative.reduced%20size.pdf). This was followed by *A Call to Action* in 2011 from the NPS Director to restore and sustain three wild bison populations across the central and western United States in collaboration with tribes, private landowners, and other public agencies (https://www.nps.gov/calltoaction/PDF/Directors_Call_to_Action_Report.pdf). In 2012, the Secretary of the Interior established a broader goal of restoring bison to their historic, ecological, and cultural places on appropriate landscapes and directed Department of the Interior agencies to explore options for relocating bison to suitable federal and tribal lands where bison historically ranged. Moreover, he specifically directed the NPS to explore developing and operating quarantine facilities for Yellowstone bison.

Statutory Duties

The YELL Protection Act (16 USC 21) set apart a vast expanse of land in Wyoming, Montana, and Idaho "as a public park or pleasuring ground for the benefit and enjoyment of the people." This Act, along with the NPS Organic Act (54 USC 100101 *et seq.)*, directs the Secretary of the Interior and the NPS to preserve "from injury or spoilation" the "wonders" of Yellowstone and to ensure "their retention in their natural condition" by such means as will "leave them unimpaired for the enjoyment of future generations." The Secretary is also required to "provide against the wanton destruction of the fish and game found within the park, and against their capture or destruction for the purposes of merchandise or profit." 16 U.S.C. 22. However, the Secretary also has broad discretion to transfer or otherwise dispose of "surplus" bison and other wildlife, which could include quarantine for Yellowstone bison (54 USC 100101; 54 USC 100752; 16 USC 36). Courts have determined the culling of some Yellowstone bison does not misinterpret or misuse Congressional authority or violate the NPS Organic Act, 16 USC 1-4, or the YELL Protection Act (e.g., *Western Watersheds Project, et al. v. Salazar, et al*., 766 F.Supp.2d 1095 [D. Mont. 2011]; affirmed *Western Watersheds Project et al. v. Salazar, et al*., 2012 U.S. App. LEXIS 18433 [9th Cir. August 30, 2012]).

Native people have aboriginal rights that stem from their original occupation of the land, as well as rights reserved by treaties with the United States government. The Constitution gives the federal government power to regulate affairs with tribes that are recognized as sovereign, or domestic dependent, nations. The federal government is also charged with acting in the best interest (i.e., trust responsibility) of tribes and individual beneficiaries to protect their aboriginal and treaty rights. In 2014, the Secretary of the Interior issued Secretarial Order No. 3335, *Reaffirmation of the Federal Trust Responsibility to Federally Recognized Indian Tribes and Individual Indian Beneficiaries*, to recognize tribal self-determination, reiterate the special government-to-government relationship with tribes, and strengthen the Department's commitment to fulfilling its trust obligations. All bureaus and offices in the Department were directed to abide by the following guiding principles consistent with all applicable laws:

- respect tribal sovereignty and self-determination;
- ensure trust and restricted fee lands, trust resources, and treaty rights are protected;
- be responsive and informative in all communications and interactions with tribes;
- work in partnership with tribes on mutually beneficial projects;
- work with tribes and individual beneficiaries to avoid or resolve conflicts; and
- ensure decisions affecting tribes and individual beneficiaries are consistent with the trust responsibility.

The Secretary of the Interior specifically encouraged collaborative partnerships between federally recognized Indian tribes and Interior agencies, and recognized the value of such partnerships to the Department, tribes, and the public at large in Secretarial Order No. 3342, *Identifying Opportunities for*

Cooperative and Collaborative Partnerships with Federally Recognized Indian Tribes in the Management of Federal Land and Resources (October 21, 2016).

Departmental policies regarding state and federal relationships are set forth at 43 CFR Part 24. Such policies direct agencies to consult with the states and comply with state permit requirements regarding the planned removal of surplus or harmful populations of wildlife and the disposition of these wildlife except in instances where the Secretary of the Interior determines that such compliance would prevent him from carrying out his statutory responsibilities (e.g., 43 C.F.R. 24.4(i)(5)). Though state laws are not applicable in areas of exclusive federal jurisdiction such as YELL, the NPS routinely consults with the State of Montana to coordinate the management of Yellowstone bison and minimize confusion from regulations related to the removal and disposition of culled animals. For example, the NPS, State of Montana, and other partners developed an approved resource management plan for bison (Interagency Bison Management Plan; IBMP) in 2000 and each year management activities and practices are conducted pursuant to a signed adaptive management plan that outlines objectives and a signed memorandum of agreement that outlines the conduct of operations. Also, the NPS provided Yellowstone bison to the State of Montana and the Animal and Plant Health Inspection Service (APHIS) for a quarantine feasibility study during 2005-2010 that was effective at identifying brucellosis-free bison. Based on these results, the NPS worked with the State of Montana and other members of the IBMP to develop roles and responsibilities for quarantine facilities and brucellosis testing, which were included in the EA for this proposed program. In addition, the NPS has let bison numbers and migrations beyond the park boundary increase to support public and tribal hunting in Montana, while working closely with the State of Montana to lessen and resolve conflicts with human safety and property damage. Each year, the NPS notifies the State of Montana before shipments of bison occur from YELL to processing, quarantine, or research facilities.

Furthermore, since 2011 the NPS has conferred numerous times with the State of Montana and APHIS regarding options for a quarantine program at the Fort Peck Reservation to reduce the number of bison being shipped to meat processing facilities, including with the State Veterinarian, Montana Governor's Natural Resource Policy Advisor, the Environmental Quality Council of the Montana Legislature, and representatives of Montana's livestock and wildlife agencies. APHIS representatives were also present at these meetings. Several discussions during 2017 and 2018 included representatives of the Secretaries of Agriculture and/or the Interior. In August 2016, the NPS provided the Montana Governor's Natural Resource Policy Advisor with a draft Finding of No Significant Impact (FONSI) and a draft agreement in principle regarding the transfer of Yellowstone bison to the Fort Peck Reservation for his review and comments. During December 2017, the NPS, APHIS, and the State of Montana signed an agreement in principle to facilitate the movement/release of 24 male bison held in isolation at the proposed quarantine facility in YELL since March 2016, as well as other bison in the future. Unfortunately, these 24 bison, plus another separate cohort of 28 male bison testing negative for brucellosis exposure, were released from the double-fenced isolation pastures on January 15-16, 2018 by unknown persons. The NPS has initiated a criminal investigation of this trespass and tampering incident.

Per the aforementioned agreement in principle, APHIS and NPS staff worked together to develop a risk assessment regarding possible brucellosis transmission from the 24 male bison. The NPS provided a hazard modeling approach, computer code to implement the approach, a spatial analysis of bison and elk calving near Stephens Creek, and other pertinent information and analyses. APHIS prepared a draft of the risk assessment that acknowledged the risk of transmission was "extremely low," but would not consider the risk "negligible" based on the possibility of rare events. The NPS maintained the risk of transmission was negligible based on the analyses mentioned previously and because these bison were test-negative for more than 1 year (11 tests) and males are not known to transmit brucellosis.

Selected Action and Rationale for the Decision

The NPS's Selected Action is to establish a quarantine program for Yellowstone bison using a combination of elements from Alternative 2 (Quarantine Facilities Within the Designated Surveillance Area for Brucellosis [DSA]) and Alternative 3 (Quarantine Facilities Outside the DSA). Combining elements from these alternatives will not result in any synergistic effects that the EA did not analyze. Existing quarantine facilities in YELL (Stephens Creek), north of the park in the State of Montana (Corwin Springs), and on the Fort Peck Reservation (Fort Peck) would be used for the program. The Deputy Administrator of Veterinary Services for APHIS has indicated these facilities meet the structural specifications and biosecurity requirements for the quarantine of bison.

The double-fenced pastures in Corwin Springs, Montana, were leased and used by APHIS and the State of Montana for the quarantine of Yellowstone bison during 2005 to 2010 and fertility control studies thereafter. This facility is located within the DSA and environmental analyses were completed previously by APHIS and the State of Montana (see Bison Quarantine Facility Documents at http://ibmp.info/library.php). APHIS, Colorado State University, and several non-governmental organizations have asked the NPS and the State of Montana to participate in a collaborative quarantine effort beginning with about 62 bison already in the facility.

Quarantine will be accomplished in three phases. During Phase I, bison would be captured at the Stephens Creek facility in YELL or nearby areas of Montana during winter operations pursuant to the IBMP, as adapted. Bison considered suitable for quarantine based on initial negative serology tests (see below) will be uniquely marked with RFID tags, isolated in double-fenced quarantine pastures, and tested for brucellosis exposure at approximately 30 to 45-day intervals until no new test-positive animals in a given test group are identified for at least two successive testing periods (expected to take at least 6 to 8 months for bison captured in February-March). Bison testing positive for *Brucella abortus* antibodies will be removed and shipped to slaughter. During Phase II, test-negative bison remaining in the test group will undergo the appropriate brucellosis testing protocol described in the 2003 Uniform Methods and Rules (e.g., Table 9, page 61, APHIS 91–45–013) for different ages and sexes. This protocol was rigorously tested and proven effective at identifying bison that were brucellosis-free during the feasibility study from 2005 to 2010 and post-quarantine assurance testing for 5 years thereafter (Clarke et al. 2014, Journal American Veterinary Medical Association 244:588-591). During Phase III, bison remaining brucellosis-free through the quarantine testing protocol will be vaccinated with strain RB-51 and transferred to one or more fenced pastures, with additional brucellosis tests conducted about 6 and 12 months later (i.e., post-quarantine assurance testing). These bison will be kept separate from other animals until the 6-month test is completed per page 60 of the Uniform Methods and Rules. Thereafter, the brucellosis-free bison would be released on suitable public and tribal lands for conservation and cultural purposes.

Serial testing to identify test groups suitable for quarantine (Phase I), and the quarantine testing protocol (Phase II), initially will occur at Stephens Creek and Corwin Springs. Post-quarantine assurance testing (Phase III) may occur at any of the facilities, including Fort Peck. The NPS is negotiating with APHIS and the State of Montana to send test groups of male bison all repeatedly testing negative for brucellosis exposure every 30 to 45 days for about 8 to 9 months (i.e., during Phase I) to the quarantine facility on the Fort Peck Reservation to undergo the quarantine protocol described in 2003 Uniform Methods and Rules (Phase II) and/or post-quarantine testing (Phase III). If agreements are reached, these test-negative male bison (originally captured in February or March) would be transferred from YELL to Fort Peck for quarantine and/or post-quarantine testing; preferably prior to the next potential brucellosis transmission period beginning about January 1st.

The Montana Department of Livestock and/or APHIS have agreed to provide veterinarians to observe or participate in blood collection, documentation of testing, and correlation of animal identification with all blood samples taken for brucellosis testing. This approach was selected because using the existing capture, confinement, and brucellosis surveillance (testing) facilities at Stephens Creek, Corwin Springs,

and Fort Peck will cause minimal impacts to the environment that were already evaluated and do not meaningfully change the conclusions of previous EAs. The risk of brucellosis transmission from bison in these facilities to livestock, people, or other wildlife will be negligible because the protocol described in 2003 Uniform Methods and Rules and the best practices described in the *Quarantine Facility Guidelines* and *Requirements, Roles and Responsibilities* sections of the NPS EA will be followed.

Serum samples collected from bison undergoing testing during Phases I-III will be submitted to the Montana Veterinary Diagnostic Laboratory and/or the National Veterinary Services Laboratory for two screening tests (Buffered Acidified Plate Antigen [BAPA], Rose Bengal Plate or rapid automated presumptive tests [CARD/RAP]) and two confirmatory tests (Fluorescence Polarization Assay [FPA]), Complement Fixation [CF]). Results will be interpreted with input from an APHIS epidemiologist to determine bison disposition, which would include consignment of test-positives on at least one confirmatory test (FPA, CFT) to slaughter. Samples will be collected from bison sent to slaughter, including submandibular, medial and lateral retropharyngeal, mesenteric, hepatic, and internal iliac lymph nodes, along with cross-sections of tonsil and of spleen tissue. These samples will be submitted to the National Veterinary Services Laboratory for culture assays. Appropriate records will be maintained at each facility to allow bison repeatedly testing negative to be certified as brucellosis free, including copies of SV-2A forms and serology and culture results. All quarantine testing data will be shared among the NPS, APHIS, State of Montana, and the Fort Peck tribes. The NPS, APHIS, and the State of Montana have agreed to evaluate available and future serial testing, quarantine, and post-quarantine assurance testing data with regard to the timing of seroconversion, the necessary length and frequency of testing to reliably detect bison infected with *Brucella abortus* bacteria, and the risk of bison of different ages and sex transmitting bacteria to livestock or other wildlife during quarantine.

Mitigation Measures

The NPS will continue to conserve a viable population of wild Yellowstone bison, while implementing management actions in coordination with other members of the IBMP to maintain separation from livestock during the likely transmission period for brucellosis. Human intervention will be necessary at times to manage wild bison conflicting with people in Montana. These management actions will be tempered to avoid unintended consequences to the bison population such as altered gender structure, dampened productivity, and reduced genetic diversity.

Invasive weed species may be detected in some areas following the feeding of hay and/or soil and vegetation disturbance by bison. The NPS will act to prevent the establishment or control of noxious weeds such as spotted knapweed and leafy spurge. Properly prescribed herbicides may be used to suppress noxious weeds and prevent their spread to adjacent areas. Mechanical methods may be used if chemicals are inappropriate. The NPS and bison recipients will monitor the distribution of noxious weeds and, as necessary, coordinate control with adjacent landowners and County Weed Control Boards.

Why the Selected Action Will Not Have a Significant Effect on the Human Environment

As defined in 40 CFR §1508.27, significance is determined by examining the following criteria:

Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.

Implementation of the Selected Action will result in some minor adverse impacts such as potential injuries and trauma to bison, temporary disturbance and displacement of other wildlife, some people being disturbed or offended, occasional accidents involving bison management staff, disturbances to habitat and compaction of soils, and the development of additional water supplies. However, all of these impacts occur under current conditions, with respect to ongoing bison management. The only difference between current management and the Selected Action is an increased likelihood of injury to bison due to

longer confinement of bison in quarantine facilities. Overall, the Selected Action will reduce the number of bison shipped to slaughter, while not fundamentally changing the character or nature of the ongoing adverse impacts related to bison management. Under the Selected Action, quarantine operations will not harm the integrity of cultural or natural resources, or values, in YELL, Montana, or on the Fort Peck Reservation. A bison capture facility, holding pastures, and processing equipment for brucellosis testing already exist at Stephens Creek within the park and the use of this area to conduct brucellosis testing of bison will not restrict migration or other activities of wildlife. The capture and confinement of bison does conflict with the NPS' biological principle of minimizing human intervention. However, their numbers sometimes need to be reduced due to a lack of tolerance for migrating and dispersing bison in surrounding states. Otherwise, high densities of bison could cause significant deterioration to other park resources such as vegetation, soils, geothermal features, and other ungulates as the bison population overshoots the park's capacity to provide adequate forage. Under the IBMP, quarantine provides an option for some bison to eventually be relocated elsewhere rather than sent to meat processing facilities. Bison will only be placed in quarantine when population numbers are above the agreed-upon guideline (currently 3,000) and managers decide to cull bison to limit population growth. The NPS will continue to conserve a viable population of wild, wide-ranging Yellowstone bison and other native species, including the ecosystem processes necessary to sustain them.

In 2011, Montana Fish, Wildlife & Parks concluded brucellosis surveillance operations on the Fort Peck Reservation would not affect neighboring farming and ranching operations, while establishing a herd of brucellosis-free Yellowstone bison could draw visitors to the area and stimulate tourism-based businesses (http://fwp.mt.gov/news/publicNotices/environmentalAssessments/speciesRemovalAndRelocation/pn_0055.html). This action by the State of Montana was upheld against challenge in state court. In 2015, the Bureau of Indian Affairs evaluated the impacts of expanding wild bison herds on the Fort Peck Reservation and concluded an increase in wild bison would not impact land use because the additional bison would graze in range units already being grazed by bison (http://www.nps.gov/yell/learn/nature/upload/FtPeck_PEA_AL-WBM_-Program.pdf).

The degree to which the proposed action affects public health or safety

The Selected Action requires the interaction of humans and bison. In the past, a few federal and state employees have been injured during bison hazing, capture, and processing activities. However, the existing brucellosis surveillance facilities and extensive management experience with Yellowstone bison both within the park and at the Fort Peck Reservation minimize any risks to public health and safety. As discussed in the *Affected Environment and Environmental Consequences* section of the EA, minor, adverse, local impacts such as injuries and infections could result in the short-term from accidents during bison quarantine activities. However, these impacts will not differ in any meaningful way from impacts that occur under current bison management activities. We are not aware of any transmission of brucellosis to humans from handling captured Yellowstone bison. While some adverse, local impacts could result in the short-term from the exposure of individuals to brucellosis during bison quarantine activities, most patients exposed to *Brucella* bacteria respond to antibiotic therapy and eventually recover.

Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas

The Selected Action will not impact unique characteristics of the area including park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas. The Stephens Creek, Corwin Springs, and Fort Peck facilities already exist. No additional infrastructure is needed that will cause adverse effects to these areas.

The degree to which the effects on the quality of the human environment are likely to be highly controversial

Pursuant to the Department of the Interior NEPA regulations, "*controversial* refers to circumstances where a substantial dispute exists as to the environmental consequences of the proposed action and does not refer to the existence of opposition to a proposed action, the effect of which is relatively undisputed" (43 CFR 46.30). The nature of the environmental impacts related to the use of quarantine to identify brucellosis-free bison are not controversial because the protocol has been rigorously tested and proven effective at identifying wild Yellowstone bison that were brucellosis free (Clarke et al. 2014). Bison completing quarantine during 2005 to 2010 were considered brucellosis free by the State Veterinarian of Montana and APHIS, and most of these bison were eventually sent to the Fort Peck Reservation for conservation and management.

The degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risks

As discussed in the *Quarantine Feasibility Study* and *Programmatic Actions Common to All Action Alternatives* sections of the EA, the nature of the environmental impacts related to the use of quarantine to identify brucellosis-free bison are not highly uncertain and do not involve unique or unknown risks because the protocol has been rigorously tested and proven effective at identifying brucellosis free bison (Clarke et al. 2014). Because the Fort Peck tribes have agreed to adhere to this protocol and asked APHIS and the Montana Department of Livestock to participate in testing through completion of the quarantine protocol developed by APHIS, there are no unique or unknown risks.

The likelihood of brucellosis transmission from bison being transported in sealed trailers on highways to livestock or other wildlife along the route between YELL and the Fort Peck Reservation is miniscule given no detected transmission since 2000 despite the relocation of more than 5,000 bison, primarily to slaughter. In addition, the facility on the Fort Peck Reservation that will be used for quarantine does not involve unique or unknown risks, even though it is located outside the DSA. This double-fenced quarantine facility, within a larger fenced pasture, meets the specifications used by APHIS and the State of Montana during the quarantine feasibility study. The Montana State Veterinarian and representatives from APHIS have inspected the facility and verbally deemed it to be suitable for quarantine. Bison testing negative for brucellosis exposure and placed in quarantine will be segregated behind a double fence from other bison and wildlife on the Fort Peck Reservation to prevent the possibility of brucellosis transmission. In addition, the Fort Peck tribes have agreed to participate in the Montana Brucellosis Eradication Program and, as a precaution, developed a foreign animal disease emergency preparedness plan with the State of Montana to test for, and respond to, the outbreak of any foreign disease on any domestic and wildlife species on the reservation.

The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration

The NPS decision is limited to the specific actions included in the Selected Action. It does not establish any precedent for future actions with significant effects, nor does it represent a decision in principle about future considerations. Any future decision regarding bison management or quarantine will necessarily involve a new and different decision-making and NEPA compliance process.

Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.

Cumulative effects were analyzed in the *Cumulative Impacts Analysis* section of the EA for each impact topic carried forward for detailed analysis. The impacts of past, present, and reasonably foreseeable future actions on Yellowstone bison have been to recover a viable, wild population in YELL from near

extirpation in the late 1800s, but not allow migration and dispersal elsewhere to fully recover the species throughout the Greater Yellowstone Area or elsewhere. Past actions exposed Yellowstone bison to the nonnative disease brucellosis and severed the interdependent relationship between bison and native people, which resulted in Indian tribes being forced to adopt a more sedentary lifestyle and less nutritious diet without bison meat. Other wildlife species were substantially reduced in numbers and distribution, though sustainable populations of many species have been recovered in the ecosystem and other areas of Montana. There has been continual and increasing visitation to the Yellowstone area which, in turn, has increased congestion, wildlife-human interactions, vehicle strikes, and the habituation of wildlife in YELL. Nonnative plant species have already invaded and currently dominate some areas in and near YELL, as well as portions of the Fort Peck Reservation. Likewise, past actions have degraded water quality, altered natural water flows, and severely disrupted native aquatic communities. Collectively, all of these uses and activities have had, and will continue to have, major, long-term, adverse, cumulative impacts on the environment. However, no incremental impacts from implementing a quarantine program that would rise to the level of significance were identified.

The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.

Quarantine operations at Stephens Creek in YELL will not disturb known archeological sites, will involve minimal ground disturbance, and will occur in areas already disturbed by agriculture. In 2008, the University of Montana performed a cultural resources inventory for the area of potential effects for the bison capture and confinement facilities in the Stephens Creek Administrative Area. The survey encompassed the area where quarantine operations could potentially occur. No archeological sites were recorded within the area of potential effects. Archeological sites 24YE170 and 24YE180 are adjacent to, but outside, the area of potential effects and will not be impacted by these activities. The Montana State Historic Preservation Office concurred with this assessment on August 1, 2015. The Bureau of Indian Affairs released a Decision Record and Finding of No Significant Impact on March 17, 2015 indicating there will be no significant impacts to cultural or historical resources from expanding wild bison herds on the Fort Peck Reservation. A letter dated March 17, 2016 from the Montana State Historic Preservation Office concurred with the NPS determination of "no adverse effect" to any historic properties per §106 of the National Historic Preservation Act.

The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

Staff from YELL sent a letter on January 13, 2016 to the U.S. Fish and Wildlife Service requesting concurrence on its determination of "may affect, but not likely to adversely affect" grizzly bear, gray wolf, and Canada lynx. The park also determined that there is "no effect" on lynx critical habitat. A letter dated February 18, 2016 from the U.S. Fish and Wildlife Service concurred with the park's findings listed above on endangered or threatened species and critical habitat per §7 of the Endangered Species Act. Subsequently, gray wolves and grizzly bears have been delisted in the Greater Yellowstone Area. The NPS concurs with the determinations by the Bureau of Indian Affairs that a brucellosis surveillance program at the Fort Peck Reservation may affect, but is not likely to adversely affect, the least tern, pallid sturgeon, and piping plover. The Bureau of Indian Affairs determined that there is no effect on the black-footed ferret. The U.S. Fish and Wildlife Service Office in Helena, Montana concurred with these determinations on February 11, 2015 (Fort Peck Indian Reservation agricultural leasing, permitting, and associated improvements; File M.02 BLM (1); 06E11000-2015-I-0129).

Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

The State of Montana has indicated the shipment of Yellowstone bison through Montana to the Fort Peck Reservation would violate Montana Code Annotated (MCA) 81-2-120, which prohibits such shipments

until bison complete quarantine and are certified as brucellosis-free by the State Veterinarian. However, the provisions of MCA 81-2-120 allow the Montana Department of Livestock considerable discretion and flexibility in making an initial determination as to whether the requirements of MCA 81-2-120(1)(a) through (1)(d) apply in the first instance. Similarly, the Montana Department of Livestock has authority to waive permitting and health certificate requirements based on evidence that no significant danger to the public health will be caused by such a waiver (MCA 81-2-703(3) and (7)). For example, the State of Montana and APHIS have allowed and/or conducted shipments of Yellowstone bison to meat processing, research, and/or surveillance facilities in areas of Montana, Idaho, and Colorado located outside the DSA. Apparently, these bison were not certified as brucellosis free prior to transport.

In addition, APHIS maintains quarantine facilities for Yellowstone bison must be established in the DSA and approved by federal and state animal health officials per the 2003 Brucellosis Eradication: Uniform Methods and Rules. However, these rules were not promulgated into regulations pursuant to rulemaking procedures under the Administrative Procedures Act. As a result, they do not, by themselves, have the force of law. To our knowledge, the pastures in Corwin Springs, Montana, located north of YELL and used by the State of Montana and APHIS for a quarantine feasibility study with Yellowstone bison during 2005 to 2010 were never formally certified until 2018. Also, we are not aware the bison holding pens at Colorado State University were certified as a quarantine facility, even though APHIS shipped Yellowstone bison testing positive and negative for brucellosis exposure to these holding pens under a "research" umbrella. It is our understanding that 22 bison testing negative for brucellosis exposure were going through a quarantine protocol at this facility during 2017. There were also 11 test-positive bison in this facility, which is located far outside the DSA (Source document: *Implementation Plan to Disband the Wildlife/Livestock Disease Investigations Team*, Office of the Deputy Administrator, Animal and Plant Health Inspection Service, Washington, D.C.).

Moreover, it is doubtful these federal and state and livestock regulations apply to the transfer of wild Yellowstone bison to the Fort Peck Reservation. The Animal Health Protection Act does not give the Secretary of Agriculture or APHIS the authority to manage wildlife populations. Also, the NPS is not proposing to release Yellowstone bison onto lands under the jurisdiction of the State of Montana. Rather, the NPS is proposing to conduct brucellosis testing and quarantine inside YELL, which is an exclusive federal jurisdiction, and on the Fort Peck Reservation, which is a sovereign, domestic dependent, nation of the Assiniboine and Sioux tribes. Bison would necessarily be transported from YELL to the Fort Peck Reservation on highways through the State of Montana, but there has never been an escape of a bison from locked trailers during transport. Also, the likelihood of brucellosis transmission from bison being transported in sealed trailers on highways to livestock or other wildlife along the route is miniscule given no detected transmission since 2000 despite the relocation of more than 5,000 bison, mostly to slaughter.

Although the variety of arguably applicable federal and state authorities and regulations are subject to varying interpretation, the NPS believes there will be no significant adverse impacts to the quality of the human environment as a result of implementing the Selected Action. The Fort Peck tribes and YELL have constructed double-fenced quarantine facilities that meet the specifications used by the State of Montana and APHIS to conduct the quarantine feasibility study in Corwin Springs. APHIS did not prepare an inspection checklist for the approval, or certification, of bison quarantine facilities until June 2017, after the NPS completed structural improvements to the quarantine pastures at Stephens Creek in YELL (based on standards previously provided by APHIS and the State Veterinarian of Montana) and requested certification. Also, the NPS and the Fort Peck tribes have agreed to implement the brucellosis testing protocol in the 2003 Brucellosis Eradication: Uniform Methods and Rules, which were tested during the quarantine feasibility study (Clarke et al. 2014). The Fort Peck tribes have asked the Montana Department of Livestock and APHIS to participate in testing through quarantine completion. Furthermore, the Fort Peck tribes have agreed to participate in the Montana Brucellosis Eradication Program and, as a precaution, developed a foreign animal disease emergency preparedness plan with the State of Montana to

test for, and respond to, the outbreak of any foreign disease on any domestic and wildlife species on the reservation.

Conclusion

As described above, the Selected Action does not constitute an action meeting the criteria that normally require preparation of an environmental impact statement. The Selected Action will not have a significant effect on the quality of the human environment. Environmental impacts that could occur are limited in context and intensity. There are no significant adverse effects on public health, public safety, threatened or endangered species, sites or districts listed in or eligible for listing in the National Register of Historic Places, or other unique characteristics of the region. No highly uncertain or controversial impacts, unique or unknown risks, significant cumulative effects, or elements of precedence were identified. The NPS does not believe the decision to implement a quarantine program with Yellowstone bison violates any federal, state, or local environmental protection laws. Based on the foregoing, the NPS has determined that an environmental impact statement is not required for this project and, thus, will not be prepared.

Recommended:

Daniel N. Wenk — Date: 5/14/2018

Superintendent, Yellowstone National Park

Approved:

Sue E. Masica — Date: 5/14/18

Regional Director, Intermountain Region, National Park Service

Errata Sheet
The Use of Quarantine to Identify Brucellosis-free
Yellowstone Bison for Relocation Elsewhere
Yellowstone National Park

Generally, corrections or revisions to an environmental assessment (EA) are described in an errata sheet. Revisions can be made in response to substantive comments from the public and agency reviews of the EA. A substantive comment is defined in the National Park Service's (NPS) *Director's Order 12 Handbook* (Section 4.6) as a comment that (1) questions the accuracy of the information in the National Environmental Policy Act (NEPA) document, (2) questions the adequacy of the environmental analysis, (3) presents reasonable alternatives other than those presented in the NEPA document, and/or (4) causes changes or revisions in the proposal. Some substantive comments may result in changes to the text of the EA, in which case they are addressed in the *Text Changes* section of the errata sheet. Other substantive comments may require a more thorough explanatory response in the *Response to Comments* section. The NPS responds to all substantive comments in either or both of these sections.

The 19,500 comments received during public review of the EA focused on the NEPA process, policies, and laws; clarification of the proposal; potential domestication of bison herds; concerns about brucellosis transmission; treaty rights; and questions regarding the adequacy of analysis. These concerns are explained more thoroughly in the *Response to Comments* section.

Text Changes
No text changes to the EA have been identified.

Response to Comments
Comments and Concerns
The NPS received many comments during the public review and comment period for this EA. We crafted general concern statements based on these comments and provided a response to the concerns.

National Environmental Policy Act

Concern Statement: Commenters asserted an environmental impact statement (EIS) should have been prepared rather than an EA for this proposal.

Response: After evaluation of the potential environmental impacts that could result from implementing the Selected Action, the NPS does not believe the potential for significant adverse impacts exists. This is documented in the body of the Finding of No Significant Impact. There is no need to conduct a population viability analysis because the impacts of quarantine on the bison population were evaluated in the Final EIS and Record of Decision for the IBMP (see <http://ibmp.info> website in the Document Library section) and adequately disclosed in the *Affected Environment and Environmental Consequences* section of the EA on pages 46-66. Also, each year the NPS evaluates the demographic status of the bison population and posts this information for public review and consideration on the IBMP website (e.g., http://ibmp.info/Library/OpsPlans/2017_StatusYellowstoneBisonPopulation_Sep2017_Final.pdf). In addition, a peer-reviewed, scientific journal article on the genetic status of the bison population found it was genetically diverse and healthy (Forgacs et al. 2016, PLoS ONE 11:e0166081, doi:10.1371/journal.pone.0166081). The NPS is continuing demographic and genetic monitoring of the population.

Concern Statement: Commenters asserted quarantine should be evaluated as part of the new bison management plan EIS process, rather than in a stand-alone EA.

Response: The NPS does not agree with commenters' assertions that consideration of a quarantine program must only be evaluated in the context of a new, revised Bison Management Plan/EIS. That EIS is not expected to be completed for some time, if at all, and until it is complete the NPS will continue to manage bison under the 2000 IBMP as modified through adaptive adjustments. The consideration of a quarantine program is directly related to ongoing management under the IBMP. The quarantine of bison was a management tool analyzed in the 2000 EIS prepared for the IBMP. The EIS stated that follow-up NEPA would be completed prior to implementation of a quarantine program.

Laws and Jurisdiction

Concern Statement: Commenters suggested the EA is non-compliant with the Organic Act and NPS policies.

Response: The implementation of a quarantine program would involve the capture and culling of some wild bison from the population. The 9th Circuit Court of Appeals affirmed the culling of some Yellowstone bison from the population under existing authorities does not violate the NPS Organic Act, 16 USC 1-4, or the YELL Protection Act, 28 Stat. 73, May 7, 1894 (*Western Watersheds Project et al. v. Secretary of the Interior Salazar et al.*, 766 F.Supp.2d 1095 [2009], affirmed No. 11-35135 [9th Cir. 2011]).

Concern Statement: Commenters suggested YELL is misusing Congressional authority to get rid of surplus bison.

Response: The following authorities provide the Secretary of the Interior with broad discretion to transfer Yellowstone bison or otherwise dispose of them, which could include quarantine: 54 USC 100101; 54 USC 100752; and 16 USC 36.

Concern Statement: Commenters indicated Montana law prohibits transporting live bison before quarantine and certification.

Response: The Montana Department of Livestock has used discretion and flexibility in making determinations as to whether the requirements of MCA 81-2-120(1) apply in a given situation. The Montana Department of Livestock also has authority under MCA 81-2-703(3) and (7) to waive otherwise applicable permitting and heath certificate requirements based on evidence that no significant danger to the public health will be caused by such a waiver.

Concern Statement: Commenters indicated the State Veterinarian of Montana has no jurisdiction within YELL or the Fort Peck Reservation and, as a result, cannot ensure the quarantine protocol is implemented.

Response: It is correct that the State Veterinarian of Montana does not have jurisdiction within YELL or tribal boundaries. The Assiniboine and Sioux tribes on the Fort Peck Reservation (Fort Peck tribes) are a sovereign, domestic-dependent nation and will have sole jurisdiction for the management of bison and quarantine operations on the reservation. However, the risk of brucellosis transmission from bison in the quarantine facility to livestock will be negligible because of the double-fenced quarantine facility, which is located within a larger fenced pasture, and the criteria and best practices described in the *Quarantine Facility Guidelines* and *Requirements, Roles and Responsibilities* sections of the EA. Prior to transferring bison from YELL to the Reservation, the NPS along with APHIS and the State of Montana will develop a memorandum of agreement with the Fort Peck tribes that stipulates the quarantine testing protocol in the 2003 Uniform Methods and Rules and best management practices in the *Quarantine Facility Guidelines* and *Requirements, Roles and Responsibilities* sections of the EA will be implemented. The Fort Peck

tribes have already agreed to these provisions and asked the Montana Department of Livestock and APHIS to participate in testing through quarantine completion. As a precaution, the tribes have developed a mitigation strategy (i.e., Foreign Animal Disease Emergency Preparedness and Response Plan) in conjunction with the State of Montana to provide quick response and adequate testing in the event of an outbreak of any foreign disease in any domestic and wildlife species on the reservation. Also, the tribes have agreed to participate in the Montana Brucellosis Eradication Program and develop other memorandums of agreement, as necessary, with the State of Montana for carrying out a brucellosis testing program for bison sent to quarantine.

The quarantine facility on the Fort Peck Reservation has been inspected by representatives from APHIS and the Montana Department of Livestock and found to meet required structural and security standards. If bison did escape the double-fenced facility, they would still be contained within a pasture enclosed by a high, sturdy fence. If bison escaped this second pasture, the Fort Peck tribes would have responsibility for immediately capturing them and returning them to the quarantine facility. As indicated on page 28 of the EA, the Fort Peck tribes also will be responsible for addressing any brucellosis outbreak in livestock or wildlife pursuant to their Foreign Animal Disease Emergency Preparedness and Response Plan, which was prepared with the State of Montana. In addition, the tribes will be solely responsible for any damage to persons or properties caused by bison, and have purchased liability insurance to cover any claims at their own expense.

Treaty Rights and Hunts

Concern Statement: Commenters asserted the culling bison for quarantine would violate treaty rights and impact treaty hunts of Yellowstone bison.

Response: Yellowstone bison are not defined in any formal, legal, property-based manner as a resource held in trust by the United States government for the benefit of one or more tribes or individual tribal members. Rather, Yellowstone bison are considered a public resource managed for all people in the United States. Thus, the disposition of bison culled from the population inside YELL has no relationship to the treaty rights of tribes to hunt bison on open and unclaimed lands outside YELL. However, the NPS allows bison to migrate into Montana during autumn and winter to support restoration on their native landscape and tribal hunting before any capture operations commence inside YELL and while such operations are ongoing. Also, the IBMP was recently adjusted to provide year-round tolerance for bison in some areas of Montana located north and west of YELL, which could enhance bison restoration to these historically occupied areas and increase treaty hunting opportunities while decreasing the frequency and extent of hazing and captures. Furthermore, the NPS has agreements with some tribes to provide them with bison culled from the population for direct transfer to processing facilities and subsequent distribution of meat and other bison parts to support tribal nutrition and culture.

The initiation of a quarantine program with Yellowstone bison will not significantly affect treaty hunting opportunities. The effects of hazing and removing several hundred bison from the Yellowstone population in a given year for quarantine or through other methods (e.g., hunting or shipments to research or meat processing facilities) were evaluated in the Final EIS and Record of Decision for the IBMP (see <http://ibmp.info> website in the Document Library section) and incorporated by reference in the EA on pages 49 and 51-53. As described in the EA, removals of bison for quarantine will be in lieu of captured bison being shipped to meat processing or research facilities. Bison will only be placed in quarantine when population numbers are above the agreed-upon guideline (currently 3,000) and managers decide to cull bison to limit population growth. As a result, the placement of some bison in quarantine will not affect bison migration outside YELL beyond what is already occurring during current management. The capture and removal of bison from the population has occurred during about one-half of the winters under the IBMP and, during these winters, other groups of bison continued to move or remain outside YELL.

Before initiating capture operations, the NPS intentionally lets many bison move beyond the capture facility and leave the park, where they can be harvested by public and tribal hunters. However, the NPS cannot control the fact that many of these bison return to the refuge of the park after being engaged by hunters congregated near the park boundary. The State of Montana and the treaty tribes regulate their own hunts with their own regulations.

Concern Statement: Commenters asserted all tribes with cultural ties to the Yellowstone area should have equal access to Yellowstone bison.

Response: Only the Fort Peck tribes have developed a quarantine facility to conduct rigorous brucellosis testing pursuant to the protocol described in the 2003 Brucellosis Eradication: Uniform Methods and Rules. The Fort Peck tribes have committed in their Turtle Mound Bison Ranch Management and Business Plan for 2014 through 2019 to distribute up to 70% of bison successfully completing quarantine to other tribes, public agencies, or organizations to establish or augment other conservation and cultural herds. Tribes interested in receiving brucellosis-free bison should coordinate with the Fort Peck tribes who will make these decisions. Also, nothing prohibits other tribes from seeking to participate in the quarantine of wild Yellowstone bison. In fact, the programmatic aspect of the EA provides the foundation for the NPS to tier additional analyses and decision documents pursuant to NEPA if other tribes decide they are ready to participate in the quarantine of wild Yellowstone bison.

Concern Statement: Commenters suggested preserving Yellowstone bison genetics through assisted reproductive technology, instead of quarantine.

Response: Artificial insemination and embryo transfer have been used to establish a small herd of bison from the Yellowstone lineage in Colorado that is brucellosis free. However, this technique would not reduce shipments of bison from YELL to meat processing facilities, which is an objective of the quarantine program. Also, Yellowstone bison move across a vast landscape where they are exposed to natural selection through competition for food and breeding opportunities, predation, and survival under challenging environmental conditions. As a result, even young Yellowstone bison placed in quarantine likely have adaptive capabilities that are absent or reduced in bison created through artificial insemination and embryo transfer and subsequently managed like livestock in fenced pastures with no predators and the removal of older bulls to simplify management.

<u>Brucellosis Testing Protocol</u>

Concern Statement: Commenters asserted the EA did not provide enough information about the quarantine or relocation processes, facilities, procedures, and testing protocols.

Response: The NPS disagrees with the commenters and believes adequate information regarding quarantine facilities and capacity, animal handling procedures testing protocols, and the relocation process were provided in the *Alternatives* section of the EA on pages 17-37. The sizes of the facilities and the forecast numbers of bison entering quarantine were based on management experience and the successful quarantine feasibility study conducted by APHIS and the State of Montana during 2005 to 2010. The NPS and the Fort Peck tribes will use the testing protocols in the Uniform Methods and Rules, which were tested by Clarke et al. (2014) and found to be effective at identifying brucellosis-free bison. Representatives from APHIS and the State of Montana have inspected the quarantine facilities in YELL and on the Fort Peck Reservation and verbally indicated they met the requirements for structural standards for quarantine facilities. Information on the number of bison and capacity for quarantine is provided in the EA on page 31 and in Appendix B.

Concern Statement: Commenters asked for more information regarding the cost and funding of quarantine operations.

Response: The costs of conducting portions of the quarantine testing process in YELL could be about $150,000 annually depending on the number of bison and the length of testing before they are transferred to Corwin Springs, Montana or the Fort Peck Reservation. These costs will be paid with funds collected from taxpayers and allocated to the NPS by Congress. The costs of conducting quarantine at the Fort Peck Reservation will be covered by the tribes, potentially with some grants from the federal government.

Concern Statement: Commenters indicated the NPS should work with veterinarians from non-governmental organizations to conduct brucellosis training to create better transparency in the program.

Response: NPS biologists are tested and certified for conducting brucellosis tests at the Montana Veterinary Diagnostic Laboratory in Bozeman, Montana, and are quite experienced and proficient. The NPS will conduct two screening tests (BAPA, CARD) and one confirmatory test (FPA) on blood samples collected from each bison during each testing occasion at Stephens Creek in YELL. Also, duplicate samples will be delivered to the Montana Veterinary Diagnostic Laboratory and/or the National Veterinary Services Laboratory for two screening tests (BAPA, CARD/RAP) and two confirmatory tests (FPA, CFT). The NPS will interpret these results with an APHIS epidemiologist and determine bison disposition, which would include consignment of test-positives on at least one confirmatory test (FPA, CFT) to slaughter. The Fort Peck tribes have asked the Montana Department of Livestock and APHIS to participate in testing throughout the completion of the quarantine testing protocol.

Concern Statement: Commenters asserted the plan must require brucellosis testing for the duration of quarantine.

Response: Brucellosis testing will occur throughout the duration of quarantine based on the protocol in the 2003 Uniform Methods and Rules for various age, pregnancy, and sex categories of bison.

Concern Statement: Commenters asserted quarantine should only last 8 months based on best available science.

Response: It is correct that no bison in the quarantine feasibility study conducted by Montana Fish, Wildlife and Parks and APHIS during 2005 to 2010 (Clark et al. 2014) converted from test-negative to test-positive after 205 days (~7 months). Also, no latent infections were detected in test-negative bison, and no calves born to any of the bred females tested positive for brucellosis exposure. However, these results were based on a single study of two cohorts of bison and additional data was needed on more groups of female bison before these minimum time periods and testing requirements to release bison from quarantine could be adjusted. During December 2017, APHIS and the NPS agreed to evaluate all available and future serial testing data with regard to the timing of seroconversion and the necessary length and frequency of testing to reliably detect bison infected with *Brucella abortus* bacteria. This research and evaluation has been initiated. In the interim, the NPS and the Fort Peck tribes have decided to use the protocol in the Uniform Methods and Rules, which was tested by Clarke et al. (2014) to ensure bison completing quarantine are brucellosis free.

Concern Statement: Commenters asserted inventory control at Fort Peck with Yellowstone bison from the quarantine feasibility study has not been at 100%.

Response: The Fort Peck tribes dispute the assertion that inventory control with the post-quarantine assurance testing of Yellowstone bison from the quarantine feasibility study at the Fort Peck Reservation has been inadequate. Four bison undergoing assurance testing for brucellosis perished in a 15,000-acre

fire during September 2012, but the other bison have continued the testing protocol as agreed upon with Montana Fish, Wildlife & Parks. The tribes sent quarterly reports to the Region 6 supervisor of Montana Fish, Wildlife & Parks and did not receive any return correspondence indicating inventory control problems.

Risk of Brucellosis Transmission

Concern Statement: Commenters suggested the quarantine program would increase risk to Montana's livestock industry because quarantine would occur outside the DSA.

Response: Conducting quarantine on the Fort Peck Reservation would not increase risk to Montana's livestock industry, result in the need for additional livestock surveillance, or create a costly burden to livestock industries. No seropositive, pregnant, female bison will be moved across the State of Montana. It is highly unlikely any bison will escape during transport, or that there will be transmission of brucellosis from transported bison to nearby livestock given no detected transmission since 2000 despite the shipment of thousands of bison testing positive for brucellosis exposure to slaughter. In addition, the risk of brucellosis transmission to livestock on or near the Fort Peck Reservation is minute because the bison will be contained within a double-fenced quarantine facility, within a larger fenced pasture, that meets or exceeds the specifications used by the State of Montana and APHIS to conduct quarantine with bison. The Montana State Veterinarian and representatives from APHIS have inspected the facility and verbally deemed it to meet the structural standards for quarantine. Since bison would be securely confined in this facility, there would be no reason for livestock and other wildlife to be subjected to additional brucellosis testing requirements. Also, the tribes have agreed to implement the brucellosis testing requirements in the Uniform Methods and Rules developed by APHIS and asked the Montana Department of Livestock and APHIS to participate in testing to discover any subsequent conversions from test negative to test positive and kill these animals. In addition, the tribes have agreed to participate in the Montana Brucellosis Eradication Program and, as a precaution, developed a foreign animal disease emergency preparedness plan with the State of Montana to test for, and respond to, the outbreak of any foreign disease on any domestic and wildlife species on the reservation.

The implementation of quarantine will likely have negligible impacts on state and local economies because the risk of brucellosis transmission to livestock will be minute. In 2011, Montana Fish, Wildlife & Parks concluded the impacts to communities and economies from testing bison for brucellosis and releasing them on the Fort Peck Reservation will be neutral and negligible to positive, respectively. The agency concluded these actions will not affect neighboring ranching operations (http://fwp.mt.gov/news/publicNotices/environmentalAssessments/speciesRemovalAndRelocation/pn_0055.html). There have never been any detected transmissions of brucellosis from Yellowstone bison to cattle and the NPS is not aware of any incidents with bison that have resulted in additional restrictions by Montana's trading partners. This conclusion was reiterated on page 17 in the Montana Governor's Decision Notice for Year-round Habitat for Yellowstone Bison: "Restrictions placed by the Texas Animal Health Commission on cattle imports from the DSA are the result of repeated findings of brucellosis in livestock which have been linked to exposure with brucellosis infected elk. The proposed alternative [year-round tolerance for bison in some areas of Montana near YELL] will not increase the risk of transmission of brucellosis from bison to livestock. There are no suggestions that more states intend to place additional restrictions on Montana's cattle exports." There have been dozens of outbreaks of brucellosis in cattle from wild elk in the Greater Yellowstone Area since 1998, as well as increases in the area encompassed by the DSA to accommodate the disease spreading in wild elk. However, we note that elk testing positive for brucellosis exposure have been found outside the DSA in Wyoming since 2012, with no subsequent adjustment of the boundary. Cattle residing in these outlying areas may mingle with infected elk and, as a result, constitute an at-risk population (Source document: *National Academies of Sciences, Engineering, and Medicine, 2017, Revisiting Brucellosis in the Greater Yellowstone Area, National Academies Press, Washington, D.C.*). However, this situation has not resulted in significant

additional testing, created a costly burden to livestock industries, or resulted in sanctions by other states or APHIS taking additional regulatory actions.

Concern Statement: Commenters indicated the Fort Peck tribes' Foreign Animal Disease Emergency Preparedness and Response Plan was not provided in the EA or available for review.

Response: The Foreign Animal Disease Emergency Preparedness and Response Plan prepared by the Fort Peck tribes with the State of Montana is a substantial document and is available from the Fort Peck Tribes Fish and Game Department, P.O. Box 1027, Poplar, Montana 59255, phone: 406/768-5305, FAX: 406/768-5606.

Effects to Bison and Other Wildlife

Concern Statement: Commenters asserted the NPS did not consider the effects of culling bison for quarantine on genetic diversity and differences between subpopulations of Yellowstone bison.

Response: In 2015, the Fish and Wildlife Service concluded Yellowstone bison may qualify as a DPS. Also, Halbert et al. (2012; Journal of Heredity 103:360-370) concluded there were at least two subpopulations (central, northern) of Yellowstone bison based on an analysis of microsatellite gene patterns (inherited from both parents). However, a more recent analysis of mitochondrial DNA (mtDNA; inherited only through the maternal lineage did not detect geographic (central, northern) subdivision, but rather detected two historic lineages representing descendants from the indigenous bison remaining in central YELL circa 1900 and the bison introduced to northern YELL from the Pablo-Allard herd (Confederated Salish and Kootenai tribes) in northwestern Montana (Forgacs et al. 2016, PLoS ONE 11:e0166081, doi:10.1371/journal.pone.0166081). The NPS is continuing studies with these geneticists at Texas A&M University to provide more clarity on genetic diversity and gene flow between bison in YELL.

Forgacs et al. (2016) found high genetic diversity (10 haplotypes) in Yellowstone bison, which is indicative of high population health and fitness of animals. They concluded "[t]he status of the Yellowstone bison population based on our findings of high haplotype diversity and lack of population subdivision appears to be genetically healthy, especially for a population with a history of intensive management that included periods of extreme reductions in size. In recent years, as the number of bison has grown exponentially and more bison leave the park during the winter, culling of animals to control their abundance and distribution has become necessary. Our finding that there is no subdivision based on mtDNA support that Yellowstone bison can be managed–for mitochondrial haplotype diversity–as a single population with multiple breeding segments" (page 10). Thus, the episodic removal of dozens to hundreds of bison for quarantine, animals that would have been sent to slaughter otherwise, should not significantly affect genetic diversity in Yellowstone bison. The NPS is continuing studies with prominent bison geneticist Dr. James Derr and colleagues at Texas A&M University to increase the number of sampled bison and further evaluate the distributions of the historic bison lineages in YELL.

Concern Statement: Commenters asserted analyses should be conducted to understand the cumulative impacts of bison management on the viability of Yellowstone bison and the potential for impairment.

Response: The direct, indirect, and cumulative effects of removing several hundred bison from the Yellowstone population in a given year for quarantine or through other methods (e.g., hunting; shipments to research or meat processing facilities) were evaluated in the Final EIS and Record of Decision for the IBMP (see <http://ibmp.info> website in the Document Library section). Modeling forecasts suggested the population would average about 3,700 bison and range between 3,100 and 4,215 bison under the IBMP and were incorporated by reference in the EA on pages 51-53. In reality, the population has

averaged about 4,200 bison and ranged between about 2,900 and 5,500 bison since 2001. There is no need to conduct a population viability analysis because the impacts of quarantine on the bison population (including reproduction, genetic diversity, and natural selection) were evaluated in the Final EIS and Record of Decision for the IBMP (see <http://ibmp.info> website in the Document Library section) and adequately disclosed in the *Affected Environment and Environmental Consequences* section of the EA on pages 46-66. Cumulative impacts to the bison population were evaluated and disclosed on pages 79-84 of the EA. Also, each year the NPS evaluates the demographic status of the bison population and posts this information for public review and consideration on the IBMP website (e.g., http://ibmp.info/Library/OpsPlans/2017_StatusYellowstoneBisonPopulation_Sep2017_Final.pdf). Pursuant to the *NPS Guidance for Non-Impairment Determinations and the NEPA Process (2011),* a written non-impairment determination for the Selected Action is appended to this Finding of No Significant Impact.

Concern Statement: Commenters suggested Yellowstone bison are wildlife, but quarantine will result in commercializing and domesticating bison.

Response: Quarantine will not lead to commercialization. Judicial evaluations have concluded that Yellowstone bison completing quarantine are wild animals under Montana law (*Citizens for Balanced Use et al. v. Director Maurier, Montana Department of Fish, Wildlife & Parks et a*l.; Montana Seventeenth Judicial District, Blaine County; Cause No. DV–2012-1 [2012, 2014], overturned No. DA 12-0306 [Montana Supreme Court 2012]). The Fort Peck tribes indicate in their Turtle Mound Bison Ranch Management and Business Plan for 2014 through 2019 that they will manage brucellosis-free Yellowstone bison as wildlife to maintain their wild character and genetic diversity, and increase the size of their conservation/cultural herd over time. Up to 70% of bison successfully completing quarantine will be distributed to other tribes, public agencies, or organizations to establish or augment other conservation and cultural herds. Montana Fish, Wildlife & Parks has an agreement with the tribes to obtain up to 25% of the progeny from Yellowstone bison that previously completed quarantine and were sent to the reservation.

Quarantine will not lead to domestication similar to private livestock. Bison in northern Yellowstone were confined, fed, herded, and protected for about five decades during the early 1900s to proliferate their numbers before managers decided they should live in a more natural state. Thereafter, these bison have been wild, wide-ranging, and subject to forces of natural selection and, today, their descendants are considered an excellent example of wild bison. This successful restoration suggests there is no reason bison completing quarantine in a few years or less would not retain or redevelop their wild behaviors, and no reason they should not be used to augment or establish wild herds of bison in appropriate areas. Managers at the Fort Peck Reservation can attest that Yellowstone bison previously released after quarantine are not docile or habituated, and can be quite difficult to capture (see EA on page 56).

Concern Statement: Commenters asserted quarantine would negatively impact bison and other wildlife.

Response: Occasionally capturing several hundred bison from the Yellowstone population and sending them to quarantine instead of meat processing facilities will have negligible to minor effects on population demographics and genetic diversity. The population is reproductively prolific and has rapidly recovered from previous decreases in abundance due to culling or natural mortality—including the removal of more than 500 bison during several winters and more than 8,300 bison from the population since 1985 (see EA on pages 49 and 53). Forgacs et al. (2016:10, PLoS ONE 11:e0166081, doi:10.1371/journal.pone.0166081) concluded "[t]he status of the Yellowstone bison population based on our findings of high haplotype diversity and lack of population subdivision appears to be genetically healthy, especially for a population with a history of intensive management that included periods of extreme reductions in size." Quarantine activities and facilities will affect a minute portion of the

landscape, but could disturb and displace some wildlife when bison are captured, tested, and shipped as described in the *Affected Environment and Environmental Consequences* section of the EA on pages 57-65.

Concern Statement: Commenters asserted culling for the quarantine program would render the Yellowstone bison population more susceptible to brucellosis.

Response: The implementation of a quarantine program will not make Yellowstone bison more susceptible to brucellosis. To lessen the chances of artificially allowing brucellosis to act as a key selective force, approximately equal numbers of test-negative and test-positive bison will be removed from the population. Bison testing negative for brucellosis exposure could be sent to quarantine, while bison testing positive could be sent to meat processing or research facilities. The quarantine facility on the Fort Peck Reservation is designed to exclude other animals, including cattle and elk.

Concern Statement: Commenters indicated bison have died at the Fort Peck and Fort Belknap Reservations in the past and, as a result, the EA should include requirements for personnel qualifications, training, management practices, and oversight and monitoring.

Response: It is correct that some brucellosis-free Yellowstone bison that had previously completed the quarantine feasibility study during 2005 to 2010 were sent to the Fort Peck and Fort Belknap Reservations by the State of Montana. Some of these bison apparently died during a wildfire on the Fort Peck Reservation and, possibly, due to salt toxicosis on the Fort Belknap Reservation, though the latter diagnosis is contested by the Fort Belknap tribes. The NPS has not proposed to send bison to the Fort Belknap Reservation for quarantine. The *Alternatives* section of the EA provided requirements for personnel qualifications, training, management practices, and oversight and monitoring on pages 17-37.

<u>Relocation of Bison Completing Quarantine</u>

Concern Statement: Commenters suggested the quarantine program provide Yellowstone bison for public conservation herds and to support Native American cultural herds; not for any other uses.

Response: The proposed quarantine program at the Fort Peck Reservation will maintain the wild status of bison completing quarantine and does not preclude the future relocation of some of these wild bison to other public and tribal lands. Montana Fish, Wildlife & Parks already has an agreement with the Fort Peck tribes to acquire Yellowstone bison from them in the future to establish one or more wild bison herds on public lands in Montana. In addition, the Fort Peck tribes have committed in their Turtle Mound Bison Ranch Management and Business Plan for 2014 through 2019 to distributing up to 70% of bison successfully completing quarantine to other tribes, public agencies, or organizations to establish or augment other conservation and cultural herds. When the Fort Peck tribes propose to relocate these bison to other non-Reservation lands in the future, they would need to comply with applicable laws. That decision would be made by the tribes and would be outside the decision-making authority of the NPS.

During 2014 to 2017, the NPS received numerous requests for live Yellowstone bison from various tribes, which suggests there is sufficient demand for at least several decades to justify the implementation of a quarantine program. Also, 27 locations managed by the Bureau of Land Management, NPS, and Fish and Wildlife Service were identified as potentially suitable for bison restoration in 2014 (DOI Bison Report, Looking Forward, Natural Resource Report NPS/NRSS/BRMD/NRR—2014/821). In addition, leaders of 11 tribes from Montana and Alberta, Canada signed an alliance to restore bison to areas of the Rocky Mountains and Great Plains.

Concern Statement: Commenters asked for more information regarding who will manage bison through quarantine and where bison will be relocated after quarantine.

Response: Any bison management inside YELL, including activities such as capture and testing for brucellosis, will be under the jurisdiction of the NPS, while management and operations on the Fort Peck Reservation will be under the jurisdiction of the Assiniboine and Sioux tribes. If another quarantine facility is constructed elsewhere in the future, all compliance with existing federal and state laws will need to be completed by the operating agency for that facility, including any additional NEPA or state processes and public involvement.

Prior to the transfer of any bison from YELL to the Fort Peck Reservation, a quarantine and brucellosis testing agreement will be signed by the NPS and the Fort Peck tribes, as well as APHIS and the State of Montana, that sets forth the roles and responsibilities of the parties for subsequent testing of these wild bison for brucellosis exposure based on the protocol described in the 2003 Brucellosis Eradication: Uniform Methods and Rules. The Fort Peck tribes have committed to prioritizing bison completing quarantine for conservation and cultural purposes on public and tribal lands. For example, they have an agreement with Montana Fish, Wildlife & Parks to provide them with Yellowstone bison in the future to establish one or more wild bison herds on public lands in Montana. Also, the tribes' Turtle Mound Bison Ranch Management and Business Plan for 2014 through 2019 indicates brucellosis-free bison completing quarantine will initially be retained on the Fort Peck Reservation to augment their cultural/conservation herd from the Yellowstone bison lineage. Thereafter, quarantine will be used to propagate bison primarily for relocation to other public and tribal lands within the historic range of plains bison for conservation and cultural purposes. The Fort Peck tribes will make these decisions and comply with applicable laws prior to relocating bison to other non-Reservation lands. The NPS will work with the tribes to identify potential post-quarantine bison recipients.

Concern Statement: Commenters asserted support from the State of Montana is important to achieving the goal of free-ranging bison, and suggested bison should be relocated to the upper Gallatin drainage.

Response: The State of Montana has worked on a state-wide plan for plains bison (see http://fwp.mt.gov/fishAndWildlife/management/bison/future.html) and Montana Fish, Wildlife & Parks already has an agreement with the Fort Peck tribes to acquire bison from them in the future to establish one or more wild bison herds on public lands in Montana. The relocation of bison to the upper Gallatin watershed has been discussed as part of the existing IBMP and could be conducted regardless of whether a quarantine program is implemented. The Governor of Montana issued a decision in 2015 that, in part, will allow Yellowstone bison to have access year-round to certain areas, including the Taylor Fork drainage in the upper Gallatin watershed. However, the decision notice indicates the "[t]ranslocation of YELL bison to new habitats under consideration was dismissed because it conflicted with the intent of the proposed action: to provide opportunities for the natural migration of bison to occur. If artificial methods were used to assist in the dispersal of bison to new year-round habitats, such as movement of bison by trucks, the requirements of §87-1-216 MCA will need to be met before the project was initiated."

Appendix A – Non-Impairment Determination

By enacting the NPS Organic Act of 1916 (Organic Act), Congress directed the U.S. Department of the Interior and the National Park Service (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 U.S.C. 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 resource or value may constitute impairment, but an impact would be 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;
- 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).

Fundamental resources and values for Yellowstone National Park (YELL) are identified in the enabling legislation for the park, the Foundation for Planning and Management Statement, and the Long Range Interpretive Plan. Based on a review of these documents, the fundamental resources and values for YELL come from the park's geologic wonders, the abundant and diverse wildlife, the 11,000-year-old continuum of human history, and providing for the benefit, enjoyment, education, and inspiration of this and future generations. Resources that were carried forward for detailed analysis in the EA and are considered necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park; are key to the natural or cultural integrity of the park; and/or are identified as a goal in relevant NPS planning documents include: Yellowstone bison; other wildlife; special status species; ethnographic resources; vegetation; and water/aquatic resources. Accordingly, a non-impairment determination is made for each of these resources. Non-impairment determinations are not necessary for human health and safety or visitor use and experience because impairment findings relate back to park resources and values, and these impact topics are not generally considered park resources or values according to the Organic Act.

This non-impairment determination has been prepared for the Selected Action, as described in the Finding of No Significant Impact for the Use of Quarantine to Identify Brucellosis-free Yellowstone Bison for Relocation Elsewhere Environmental Assessment (EA).

Yellowstone Bison

Yellowstone bison roam relatively freely over an expansive landscape, exhibiting wild behaviors

reminiscent of prehistoric populations. They are managed as wildlife and the population contains two important genetic lineages of plains bison, with high diversity and no evidence of interbreeding with cattle. As discussed in the EA on pages 47-49, hundreds to thousands of bison migrate outside the boundary of YELL during about one-third to one-half of winters. Due to a lack of tolerance for bison migrating outside YELL, substantial numbers are culled and harvested when abundance is above 3,000 bison. The primary tools for culling and harvesting for the past 17 years under the Interagency Bison Management Plan (IBMP) have been hunting outside of the park and capture within the park, with most captured bison shipped to slaughter facilities.

Under the Selected Action, bison management will continue to be carried out under the terms of the IBMP. Limited numbers of individual bison will continue to experience adverse impacts that have occurred under the IBMP for the past 17 years from hazing, capture, transport, confinement, physical restraint, and testing. As described on pages 50-57 of the EA, these adverse impacts could include short-term energetic and other physiological costs on bison; disruption of group cohesion and some mother-calf pairs; flight behavior; and injuries such as breaking horns on hard structures or being gored by other bison. There could also be stress and injuries to some bison during loading or transport in trailers due to crowding, fighting, or panic. Due to the increased time in captivity and higher densities associated with quarantine under the Selected Action, there is a somewhat higher risk of injuries occurring, compared to what has occurred under the IBMP since 2001. However, even with this higher risk, only a few localized individuals or groups of bison that are quarantined will experience these types of impacts; the vast majority of the bison population will not be affected by quarantine activities and, therefore, will not experience these types of impacts.

While there is a higher chance of disease exposure for quarantined bison due to the increased length of captivity required for quarantine in comparison to the length of captivity associated with the shipment of bison to meat processing facilities, disease outbreaks are expected to be rare and confined to a few localized individuals or groups of bison that are quarantined. The vast majority of Yellowstone bison will not be quarantined and, therefore, the Selected Action will not affect the risk of disease transmission in any meaningful way with regard to the overall bison population. The Selected Action includes a number of measures to minimize the risk of disease transmission during quarantine. Bison will continue to be culled from the population in an unselective manner with regard to brucellosis exposure, with some test-negative bison going to quarantine and test-positive bison being killed. Bison testing negative for brucellosis exposure and placed in quarantine will be segregated from other bison in the capture facility. Quarantined bison will be observed daily and individuals showing clinical signs of disease will be segregated while biologists consult with veterinarians and, if necessary, test and treat or cull the affected bison.

Although there is no evidence that confinement and feeding of bison for weeks or a few months has led to domestication, the length of captivity under the Selected Action will be longer than that and, therefore, there is a greater chance of bison becoming food-conditioned and habituated to people. A small number of young bison in quarantine without adult leadership may require more time than usual to develop natural behaviors. However, all quarantined bison are expected to retain or redevelop their wild behaviors.

Population demographics and dynamics will not be affected under the Selected Action. There could be some chance loss of genetic variation when animals are chosen for quarantine; however, the Selected Action will not affect genetic diversity of the bison population in any meaningful way because it will not cause any different impacts than those that have occurred under the IBMP since 2001 or that are expected under the IBMP in future years. Genetic diversity is expected to be maintained for centuries based on the population numbers currently in place under the IBMP, and evaluations of genetic diversity in Yellowstone bison selected for the quarantine feasibility study during 2005 to 2010 indicated these bison

retained high genetic diversity similar to the overall population.

The number of bison that are removed from YELL each year will not be affected under the Selected Action. That decision is outside the scope of the Selected Action and will continue to be governed by the terms of the IBMP until a new bison management plan is completed. Any bison that are quarantined will be a subset of the overall number of bison removed from the park under the terms of the IBMP. Under the IBMP, the bison population is expected to continue at numbers similar to those observed over the past 17 years. Since implementation of the IBMP in 2001, the bison population has recovered from removals (harvests plus culls) of more than 500 bison during several winters and more than 8,300 bison total. The overall abundance of Yellowstone bison during the IBMP period (2001 to 2018), based on summer counts, has been between about 2,900 and 5,500 (average $\simeq$ 4,200).

Overall, implementation of the Selected Action will result in fewer bison being shipped to meat processing facilities. The NPS will continue to conserve a viable population of wild Yellowstone bison, while implementing management actions in coordination with other IBMP members to maintain separation between wild bison and livestock during the likely transmission period for brucellosis. Any adverse impacts will be limited to a few localized individuals or groups of bison, and will not affect population trends. Yellowstone bison will retain their ecological role because they will continue to be managed as wildlife in multiple large herds moving across extensive portions of the landscape within and near YELL. Thousands of bison will continue to exist on the landscape in a manner similar to the conditions observed over the past 17 years. Current and future generations will continue to have many opportunities to enjoy Yellowstone bison. Therefore, implementation of the Selected Action will not result in impairment to Yellowstone bison.

Other Wildlife

YELL has a diverse fauna, with at least 10 species of reptiles, 11 species of amphibians, 19 species of fishes, 81 species of mammals, and 337 species of birds. Seven ungulate species other than bison use YELL and nearby areas seasonally or year-round. As disclosed in the EA on pages 59-61, implementation of the Selected Action will continue to result in short-term disturbance and displacement of individuals near the Stephens Creek area of YELL due to the hazing, capture, and shipping of bison. These impacts will be similar to those observed since 2001 during implementation of the IBMP.

Fencing and maintenance activities (described on pages 30-31 of the EA) on less than 200 acres of habitat are likely to cause disturbance and displacement to wildlife in the Stephens Creek area. This habitat constitutes only a minute portion of the landscape available to wildlife in and near YELL. To minimize impacts, facility development and maintenance activities will primarily take place during the summer and autumn, when deer, elk, and many other migratory species are more likely to be occupying habitats at higher-elevations. However, maintenance and operation of the facility will occur year-round. Wildlife species in the Stephens Creek area are familiar with existing facility operations. They routinely feed near, and move by, the capture facility at Stephens Creek and have already adjusted their behaviors, distributions, and movements to account for the low to moderate intensity, day-to-day activities of humans; though human activities often cause short-term displacement of wildlife. Disturbance and displacement of wildlife from operations and maintenance will be limited to a few localized individuals or groups that use the area on a regular basis.

While adverse impacts will occur to a few localized individuals or groups of animals, the Selected Action will not affect population trends. The same species that are currently present in the Stevens Creek area of YELL will continue to exist in a manner that can be enjoyed by current and future generations. Therefore, there will be no impairment to wildlife species in YELL as a result of implementing the Selected Action.

Special Status Species

Within YELL, quarantine activities associated with the Selected Action will be limited to the Stephens Creek area, which constitutes a minute portion of the YELL landscape. Canada lynx could be present in the area for short periods of time. If any lynx are present during times when quarantine activities are taking place, they could be disturbed by those activities. However, as described on page 65 of the EA, lynx are unlikely to use the area. In the unlikely event a lynx encounters quarantine activities in Stephens Creek area, they would likely move quickly around or through the area and not attempt to enter the pastures. Any disturbance to lynx will be limited to individuals and is expected to be undetectable. If impacts are detected, they will be slight and short-term. While portions of YELL are designated critical habitat for lynx, there is no designated critical habitat in the Gardiner basin where the Stephens Creek area is located. The U.S. Fish and Wildlife Service has concurred with a finding of "no effect" on lynx critical habitat, and "may affect, but not likely to adversely affect" Canada lynx. Because impacts to Canada lynx will be limited to individuals and will be slight to undetectable, this species will remain present in YELL in a manner similar to current conditions. Current and future generations will continue to be able to enjoy these species. Therefore, the implementation of the Selected Action will not result in impairment to these special status species.

Ethnographic Resources
Many tribes consider Yellowstone bison the last living link to the indigenous herds of bison that once roamed across North America. As a result, they view these bison as inextricably linked to their existence and survival as indigenous peoples. Bison capture facilities and the manner in which bison are confined and handled is an issue of concern for several tribes. Temporarily confining wild bison under the Selected Action will result in a perceptible adverse impact to ethnographic resources with regard to tribes that oppose confinement or contend captures reduce the number of bison available for treaty hunts in Montana. However, the temporary confinement of some bison will not appreciably alter resource conditions, access to resources by tribal members, or traditional practices and beliefs.

Several tribes support the Selected Action because quarantine will enable the establishment of tribal herds and allow their members to reconnect with an animal core to their culture. Other tribes support the Selected Action because it will initiate a return to a more traditional, bison-based diet. If bison completing quarantine are distributed to public and tribal lands to provide communal, spiritual, and conservation benefits, as envisioned, the Selected Action will result in beneficial impacts with respect to these tribes.

As discussed under the "Yellowstone Bison" section, under the Selected Action thousands of bison will continue to exist on the landscape in a manner similar to the conditions observed over the past 17 years and will be managed as wildlife. The Yellowstone bison population will continue to exist as an ethnographic resource in a manner that can be enjoyed by current and future generations. Therefore, ethnographic resources will not be impaired by implementation of the Selected Action.

Vegetation
Within YELL, quarantine activities associated with the Selected Action will be limited to the Stephens Creek area, which constitutes a minute portion of the YELL landscape. The Gardiner basin, where the Stephens Creek area is located, has had relatively sparse vegetation since at least the 1870s due to relatively poor soils on active mud flows, low annual precipitation, high winds, and heavy use by native ungulates and livestock. The area is infested with invasive nonnative plant species and has sparse native vegetation due to historical uses and, more recently, from the horse corrals, bison capture facility, equipment storage, barn and associated buildings, and nursery operations.

Implementation of the Selected Action will result in additional small-scale impacts primarily to nonnative vegetation and soils due to the use of equipment to construct fences, as well as grazing and trampling by confined bison. However, these impacts will not affect vegetation in the area in any meaningful way because nonnative plant species have already invaded, and currently dominate, the Stephens Creek area.

Under the Selected Action, no rare plants will be affected because none exist in the area. Vegetation in the Stevens Creek area will remain in a condition similar to what has been observed over the past 100 years, and overall impacts will be localized to the immediate vicinity of the capture and processing facility, affecting only a minute portion (less than 200 acres) of the approximately 70,000 acres available to bison in the Gardiner basin. The vast majority of the 70,000 acres will remain unaffected, and will continue to provide habitat and forage for bison and other wildlife. Vegetation in the Stevens Creek area, Gardiner basin, and YELL will be continue to exist in a manner that can be enjoyed by current and future generations. Therefore, no impairment to vegetation will occur as a result of implementing the Selected Action.

Water/Aquatic Resources
Three sources of water, the Yellowstone River, Reese Creek, and Wilson Springs, exist near the Stevens Creek area, where actions related to quarantine will take place under the Selected Action. Neither the Yellowstone River nor Reese Creek will be affected by implementation of the Selected Action.

Wilson Springs has supplied water for bison management activities carried out under the IBMP for the past 17 years, and will continue to supply water for activities under the Selected Action. The existing water source is sufficient to provide year-round water for existing uses and hundreds of additional bison held for weeks or months in a capture facility. Any impacts to Wilson Springs under the Selected Action will be barely perceptible. Current and future generations will continue to have the opportunity to enjoy these resources. Therefore, no impairment to water resources will occur as a result of implementing the Selected Action.

Conclusion
The NPS has determined that implementation of the Selected Action will not constitute an impairment of the resources or values of YELL. This conclusion is based on consideration of the park's purpose and significance, a thorough analysis of the environmental impacts described in the EA, comments provided by the public and others, and the professional judgment of the decision maker guided by the direction of NPS *Management Policies 2006*.