

National Park Service  
U.S. Department of the Interior

Sand Creek Massacre National Historic Site  
Colorado



**Sand Creek Massacre National Historic Site General Management Plan /  
Environmental Assessment  
Finding of No Significant Impact**

The National Park Service (NPS) prepared an Environmental Assessment (EA), for a general management plan (GMP), that establishes a management framework to support decision making for the future protection, interpretation, and operations of Sand Creek Massacre National Historic Site (NHS). The *Sand Creek Massacre National Historic Site General Management Plan* establishes a comprehensive vision for the site's future and the management strategies for protecting the site's resources, providing for public understanding of the history of Sand Creek, and preserving for future generations the natural and cultural values of the site. It also provides a framework for managers to use when making decisions about how to best protect park resources, how to provide high-quality visitor experiences, how to manage visitor use, and what types of facilities to develop in or near the park. The approved plan will replace the 2007 interim site management plan the park is currently using as a basis for management decisions.

This new management plan is needed because the authorizing legislation for the site (Public Law 106-465, November 7, 2000), required development of a general management plan within five years of the site's designation. Congress mandated that this general management plan be conducted in consultation with the associated tribes; the State of Colorado; and Kiowa County, Colorado. A general management plan also is needed to meet the requirements of the National Parks and Recreation Act of 1978 and NPS policy, which require a general management plan for each unit of the national park system.

**SELECTED ACTION**

The NPS selected action is alternative E, the preferred alternative as identified in the EA. Under the selected action, park management will place the greatest emphasis on resource preservation by placing sensitive or at-risk resources in the sensitive resource zone. Access to the current monument site will continue. Another contemplative zone will be placed west of the creek and accessed via existing roads from the main administrative zone. A low level of development will support visitor access and interpretation. In addition to interpretation of the

massacre site, information about natural resources and the post-massacre evolution of the site will be provided on-site.

The primary elements of the selected action include the following:

- 92% of the site is placed into one of two preservation zones, the resource preservation zone and the sensitive resource zone.
- The creek bed, the location of the most sacred and sensitive cultural resources, lies within the sensitive resource zone and will remain closed to visitation.
- The trail system will be extended. An interpretive trail will be built along a ridgeline from the visitor contact station to an observation point with expansive views of the site.
- Access will remain to the current monument hill area.
- A contemplative zone to be used for ceremonial purposes and special events will exist east of the administrative area.
- In developing facilities, the park will promote the highest level of accessible design throughout the site.
- An aggregate-surface access road will be established in an area along the western boundary of the site to provide increased access to the observation point and interpretive trail. A small parking area (five to six vehicles) will be developed at this trailhead to facilitate visitor access to this more remote area.
- An aggregate-surface road will be constructed between the main administrative area and the road to the monument overlook.
- An interpretive walking trail will be built from a visitor orientation area to a high point in the park with sweeping views of the landscape.
- A visitor center will be developed in conjunction with a research and learning center in the town of Eads.
- A small visitor contact station with attached restrooms will be developed where the current temporary facility exists.
- A small outdoor interpretive plaza will be developed.
- No overnight use will be allowed on site.
- Consultation with tribes will continue with future management actions.

## **ALTERNATIVES CONSIDERED**

Alternatives for a site management framework were developed as part of an extensive consultation process involving members of the NPS and designated Sand Creek representatives of the Cheyenne and Arapaho tribes, the Colorado State Historic Preservation Office and staff of History Colorado (formerly the Colorado Historical Society), and representatives of Kiowa County, Colorado. The alternatives were grounded in the park's authorizing legislation and used a combination of management zones to define specific desired visitor experience and resource conditions for different areas of the national historic site. Many aspects of the desired future condition of Sand Creek Massacre NHS were defined in the authorizing legislation. The five alternatives reflect the range of concepts proposed by tribal leaders, partners, and the NPS and are based on the park's mission, purpose, and significance.

The EA considered five alternative future directions - alternatives A, B, C, D, and E-for the management and use of Sand Creek Massacre NHS. The "no-action" alternative, alternative A, consists of the existing national historic site management strategy and trends as described in the 2007 interim site management plan. Alternative A serves as a basis for comparison in evaluating the impacts of the other alternatives. The concept for management under alternative B would provide the greatest variety and depth of interpretive media and programs and provides the greatest visitor access to the site. Alternative C would offer limited on-site interpretation and enhanced visitor opportunities for reflection, reverence, and remembrance. Alternative D would offer a balance of interpretation, visitor access, and memorialization. Alternative E will offer the greatest focus on resource preservation, combined with opportunities for contemplation and memorialization, interpretive programs, and visitor access to the site. Alternative E is the NPS preferred alternative and selected action.

### **THE ENVIRONMENTALLY PREFERABLE ALTERNATIVE**

According to Council on Environmental Quality regulations implementing the National Environmental Policy Act (43 CFR 46.30), the environmentally preferable alternative is the alternative "that causes the least damage to the biological and physical environment and best protects, preserves, and enhances historic, cultural, and natural resources. The environmentally preferable alternative is identified upon consideration and weighing by the responsible official of long-term environmental impacts against short-term impacts in evaluating what is the best protection of these resources. In some situations, such as when different alternatives impact different resources to different degrees, there may be more than one environmentally preferable alternative."

After consideration of the alternatives in this GMP and the environmental consequences of implementing them, alternative E was determined to be the environmentally preferable alternative. This alternative places the greatest extent of the national historic site lands (92%), in the two zones (the resource preservation zone and the sensitive resource zone), established to provide the highest level of future resource protection. The resource preservation zone will allow visitor access only in ranger-guided experiences, and the sensitive resource zone will not allow visitor access in the most culturally sensitive area of the site, thus providing a high level of protection of natural and cultural resources throughout the entire site. Alternative E will still support an appropriate range of visitor access that will enable visitors to understand and appreciate the historic and cultural significance of the Sand Creek massacre.

### **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.**

Under the selected action, there will be both beneficial and adverse impacts, but, as described below, none would rise to the level of significance.

New development under the selected action could potentially impact archeological resources, but adverse impacts are expected to be negligible to minor because previous archeological surveys have not revealed the presence of archeological resources and additional archeological investigations will precede any ground-disturbing activities. Closing sensitive park areas to visitor access, providing new trail access to reduce social trailing, and continuing site monitoring and visitor education programs will benefit many of the site's archeological resources by providing additional protection.

The selected action will result in long-term, negligible to minor, adverse impacts on ethnographic resources. Construction of visitor facilities will introduce modern elements, but these will have a minimally adverse impact on the integrity of the 1864 landscape, because development and visitor activities will be limited to less than 5% of the site, will be managed in a way that avoids impacts on the tangible and intangible qualities that are integral to the Cheyenne and Arapaho peoples' associations with the site, and will be low profile on the landscape. The cottonwood groves and wetlands could be more easily accessible from visitor use areas or trails and will continue to be vulnerable to inadvertent damage and vandalism. Continued visitor education programs emphasizing the significance and fragility of such resources and how visitors can reduce their impacts on them will discourage vandalism and inadvertent impacts and thus further minimize adverse impacts.

Under the selected action, there will be long-term, minor to moderate, beneficial impacts on museum collections as they will either be protected in existing facilities or will be stored at a newly built archival facility.

The selected action will have short- and long-term, minor, adverse impacts on water resources due to construction and use of 1.8 miles of new trails, 1.5 miles of access roads, and one small parking area. These areas, however, will all be naturally surfaced, reducing the surface permeability and storm runoff in the national historic site a small amount. Implementation of the sensitive resources zone will provide additional protection for lowlands and will be a long-term, minor, beneficial impact on water resources.

The selected action will have both short-term and long-term, minor, adverse impacts on native soils and vegetation in the national historic site. The impacts will result from construction and the use of 1.8 miles of trails, 1.5 miles of new access roads, and one small parking area proposed in this alternative, totaling about 3.7 acres. Construction will create short-term disruption of soil layering and some possible loss of soil from wind and water erosion during construction, as well as the long-term loss of individual plants in those localized areas. The continued use of the trails and roads will result in long-term trampling and compaction of soils in those features.

Implementation of the sensitive resources zone will provide additional protection for lowlands, a long-term, minor, beneficial impact on soil and vegetation resources.

Under the selected action, construction of additional roads and trails will cause short-term, moderate, adverse impacts on wildlife by disrupting habitat and displacing individuals. After construction, use of the roads and trails will cause long-term, minor, adverse impacts by fragmenting habitat and affecting natural wildlife movement. This will cause displacement of individual animals, but will diminish over time as wildlife becomes accustomed to people on the trails. The construction of additional park facilities will occur in developed areas and would have negligible adverse effects. The implementation of the sensitive resources zone will further protection of natural resources,

The selected action will slightly increase the disbursement of people throughout the historic site; therefore, more noise will occur in more places and the overall result will be an intermittent, minor, adverse impact on the acoustic environment and soundscape. The development of new roads will bring noise to new locations in the park and increase the potential for more vehicles on-site. Noise could top the baseline levels more than 10% on busy weekends or special events. Construction of roadways, trails, and buildings will temporarily negatively impact the acoustic environment and soundscape. Mitigation actions could include use of quiet pavement, sound barriers, use of mufflers, timing of equipment use, and selection of quieter equipment. Sounds at the site will remain mostly natural, interrupted only occasionally by human-made noise.

Implementing the selected action will establish two resource protection zones that will either substantially limit visitor access (the resource preservation zone) or not allow visitor access (the sensitive resource zone). Because of these closures, visitors would not have access to the streambed or areas of greatest cultural sensitivity. However, even with limited access, visitors would still have the opportunity to experience the landscape, there would be interpretive media provided on-site to inform them about the historic events, they would have extensive opportunities to overlook the site where the massacre occurred. The development of accessible trails to key vantage points on site will result in minor to moderate, long-term, beneficial impacts on visitor experience by allowing visitors to experience physically and visually a greater proportion of the site than they can now.

Under the selected action, limited development on-site will largely occur in areas previously developed when the site was a working ranch and will likely cause a slight increase in the number of visitors, at least for the period shortly after the implementation of the alternative's actions, resulting in a short-term, minor, beneficial effect on the local economy as additional tourist dollars are spent in the county. For example, every 1% of increased visitation would equate to about \$1,500 of additional visitor spending in the area. Construction contracts for projects under this selected action will create short-term, negligible, beneficial impacts as government expenditures to local contractors and supply firms enter the economy of the area. The length of time of a visit will likely increase slightly under this alternative because there will be more for the visitor to see and do. The average length of stay in the region is unlikely to change under this alternative.

### **Degree of effect on public health or safety**

The elements in the selected action pose no appreciable adverse effect on public health and safety. Messages regarding steps for ensuring visitor safety will be posted along trails and on the park's website. The park staff will continue to inform visitors about the typical risks associated with the arid environment of southeast Colorado. These risks include the potential for extreme weather events (e.g., tornados), dehydration, overexposure to the elements, and injuries resulting from contact with insects, potentially harmful plants (e.g., prickly pear cactus), and wildlife (e.g. rattlesnakes). With these safety measures in place, it is expected that any impacts to public health and safety will be negligible.

### **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**

As described in the EA, impacts to natural and cultural resources will be negligible to moderate. There are no historic structures within the park boundaries. The ethnographic landscape of the park will not be adversely affected by the selected action. Negligible to minor, adverse impacts could occur to archeological resources due to construction of trails or the installations of interpretive signage, but these developments will be limited and archeological surveys will be conducted before any construction is allowed. No lands considered prime or unique farmlands will be affected by the selected action. There are no ecologically critical areas within the park boundaries. Sand Creek is a high plains drainage that experiences intermittent stream flow during the spring and early summer. It does not qualify as a wild or scenic river. Although there are wetlands in the park, they fall within sensitive resource zone and adverse impacts resulting from either visitor use or management actions are not anticipated.

### **Degree to which effects on the quality of the human environment are likely to be highly controversial**

None of the elements proposed in the selected action have the potential to be highly controversial. The developments in the human environment proposed in the selected action, including trail development, a shade structure and seating at Monument Hill, a visitor contact station near the administrative area, interpretive signs, and improvements to park operations facilities are small scale, and pose the potential for negligible to minor adverse impacts on the human environment. The small number and nature of public comments received on the EA indicated no controversy regarding the human environment.

### **Degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risks**

None of the elements proposed in the selected action pose uncertain, unique, or unknown risks. The expansion of visitor access to the site and improvement of park facilities will be straightforward, of small scale, and consistent with NPS management policies and the park's legislated

purpose. Some of the developments to enhance accessibility will reduce risks to visitors. There is no uncertainty about the short- or long-term effects on the human environment, or that the actions pose unique or unknown risks beyond those addressed under public health and safety.

**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 selected action will result in facility improvement and resource restoration that is consistent with NPS policy and Sand Creek Massacre NHS' enabling legislation. There is no potential that the elements in the selected action will set any NPS precedent for future actions with significant effects or represent a decision in principle that will influence future considerations.

**Whether the action is related to other actions with individually insignificant but cumulatively significant impacts**

Cumulative effects were analyzed in the EA and no significant cumulative impacts were identified.

**Degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historic resources**

During the Section 106 process, NPS was able to consult with parties who have an interest in historic preservation including the Colorado State Historic Preservation Office (SHPO), the Northern Cheyenne tribe of Montana, the Northern Arapaho tribe of Wyoming, and the Southern Cheyenne/Southern Arapaho tribes of Oklahoma. In consultation with these parties, the NPS was able to identify historic properties listed in or eligible for inclusion in the National Register of Historic Places within the broadly defined area of potential effects for the General Management Plan which encompasses the boundaries for the entire national park unit. However, due to the general nature of the General Management Plan and the relative uncertainty of the nature of federal undertakings which may stem from it, NPS cannot yet assess the potential effects of these undertakings on historic properties. This particular General Management Plan is part of the "nondestructive project planning" for these prospective undertakings, and as such does not "restrict the subsequent consideration of alternatives to avoid, minimize or mitigate [a specific] undertaking's adverse effects on historic properties" in accordance with 36 CR 800.1(c). Accordingly, NPS finds that no historic properties will be affected by the implementation of the General Management Plan in accordance with 36 CFR 800.4(d)(1), and the Colorado SHPO concurred with this finding of effect on November 23, 2015. After reviewing the final GMP, the Colorado SHPO reiterated in a letter dated December 4, 2015, that they have no comments in regards to the final document and look forward to consulting under Section 106 as individual projects with detailed scopes of work tier from the management plan. NPS commits in this decision to complete the Section 106 review process for each undertaking that may stem from the General Management Plan.

**Degree to which the action may adversely affect an endangered or threatened species or its critical habitat**

The NPS received a species list from the U.S. Fish and Wildlife Service (USFWS), on March 31, 2016, stating that there are a total of four threatened, endangered, or candidate species in Kiowa County, an area that includes the park. These species are the least tern (*Sterna antillarum*, endangered), lesser prairie-chicken (*Tympanuchus pallidicinctus*, threatened), piping plover (*Charadrius melodus*, threatened), and Arkansas darter (*Etheostoma cragini*, candidate). The USFWS identified no critical habitat within the project area. Park staff reviewed this list and determined that, based on habitat types found in the park and past surveys, none of these species have been documented as existing in the park. Therefore, there will be "no effect" on endangered or threatened species or designated critical habitat per Section 7 of the Endangered Species Act.

**Whether the action threatens a violation of federal, state or local environmental protection law**

This action violates no federal, state, or local environmental protection laws.

**PUBLIC OUTREACH AND INVOLVEMENT AND AGENCY CONSULTATIONS**

During development of this plan, the NPS consulted with the state of Colorado, the USDA Natural Resource Conservation Service, designated Sand Creek representatives of the Cheyenne and Arapaho tribes (see below for more information), the Colorado State Historic Preservation Office, staff of History Colorado (formerly the Colorado Historical Society), and representatives of Kiowa County, Colorado.

The EA was made available for public review and comment during a 45-day period running from June 12 to July 28, 2015. The public was notified of the document's availability through press releases, email, and on the park's website. The document was also placed on the NPS Planning, Environment and Public Comment (PEPC), web site, and notifications of the EA were mailed to agencies, organizations, and individuals on the park's mailing list. A copy of the EA was delivered to the Kiowa County Public Library in Eads, CO. Six public meetings were held leading up to and during the comment period:

Concho, Oklahoma – 09-09-14  
Boulder, Colorado – 10-07-14  
Eads, Colorado – 06-16-15  
Denver, Colorado – 06-18-15  
Lame Deer, Montana – 06-23-15  
Riverton, Wyoming – 06-30-15



Approximately 120 individuals attended the public meetings and one comment letter was received with recommendations for future park interpretive programs. No substantive comments were received during the process.

#### **Native American and State Historic Preservation Office Coordination**

As part of the general management planning process, the NPS involved representatives of the Northern Cheyenne Tribe, the Northern Arapaho Tribe, and the Southern Cheyenne / Southern Arapaho Tribes of Oklahoma in every aspect of the planning process, including alternatives development and identification of the preferred alternative. The NPS conducted consultation meetings throughout the planning process.

#### **CONCLUSION**

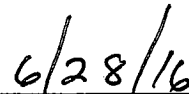
As described above, the selected action for Sand Creek Massacre NHS does not constitute an action meeting the criteria that normally require preparation of an environmental impact statement (EIS). The selected action will not have a significant effect on the human environment. Environmental impacts that could occur are limited in context and intensity, with generally adverse impacts that range from localized to widespread, short- to long-term, and negligible to moderate. There are no unmitigated 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. Implementation of the selected action will not violate any federal, state, or local environmental protection law.

Based on the foregoing, it has been determined that an EIS is not required for this project and thus will not be prepared.

Approved:



Sue E. Masica  
Director, Intermountain Region, National Park Service



Date

## MITIGATION MEASURES

As described in the general management plan, the following mitigation measures will be applied to avoid or minimize potential impacts from implementation of the selected action.

### Cultural Resources

The NPS will employ a number of measures to reduce the impact on cultural resources within the park. These measures include:

- The NPS will continue to develop inventories for and oversee research about archeological, historic, and ethnographic resources to better understand and manage the resources. Conduct any needed archeological or other resource-specific surveys and national register evaluations, and identify recommended treatments. Incorporate the results of these efforts into site-specific planning and environmental analysis documents.
- The NPS will continue its partnership with tribal fire crews to conduct periodic fuel removal to reduce the risk of fire and the potential of damage to the cultural landscape, including the cottonwood gallery and archeological sites. Slash from thinning areas will be moved to designated locations for off-site disposal. The use of tribal fire crews familiar with the site will minimize the potential of inadvertent impacts on cultural resources.
- The NPS will conduct site-specific planning and environmental analysis procedures projects with the potential for ground disturbance. For archeological resources, The NPS will accomplish this by siting projects and designing facilities in previously disturbed or existing developed areas and make efforts to avoid resources and thus adverse impacts through use of *The Secretary of the Interior's Standards for Archeology and Historic Preservation*. Use screening and/or sensitive design that will be compatible with historic resources and ethnographic landscapes and not adjacent to ethnographic resources. If adverse impacts could not be avoided, mitigate these impacts through consultation with all interested parties.
- The NPS will perform archeological surveys before ground-disturbing undertakings. Archeological resources will be avoided to the greatest extent possible during construction. If such resources could not be avoided, an appropriate mitigation strategy and memorandum of agreement will be developed in consultation with the Colorado State Historic Preservation Office, the Advisory Council on Historic Preservation, and associated tribes. If, during construction, previously unknown archeological resources were discovered, all work in the immediate vicinity of the discovery will be halted until the resources can be identified and documented and, if the resources cannot be preserved in situ, an appropriate mitigation strategy will be developed. In the event that human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act of 1990 (25 USC 3001) will be followed.

- The NPS will adhere to NPS standards and guidelines on the display and care of artifacts. This will include artifacts used in exhibits in the visitor center. Irreplaceable items will be kept outside the 500-year floodplain.
- The NPS will continue its practice of conducting consultations with culturally associated American Indian tribes. Protect sensitive traditional use areas to the extent feasible by avoiding or mitigating impacts on ethnographic resources and continuing to provide access to traditional use and spiritual areas. Mitigation could include identification of and assistance in accessing alternative resource gathering areas and screening new development from traditional use areas.
- The NPS will develop interpretive and educational programs to encourage visitors to respect and leave undisturbed any inadvertently encountered archeological resources and to respect and leave undisturbed any offerings placed by American Indians.

## **Natural Resources**

### **Nonnative Species**

The NPS will implement a noxious weed control program. Standard measures could include the following elements: ensure that construction-related equipment arrives on-site free of mud or seed-bearing material, certify all seeds and straw material as weed-free, identify areas of noxious weeds before construction, treat noxious weeds or noxious weed topsoil before construction (e.g., topsoil segregation, storage, herbicide treatment), and revegetate with appropriate native species.

### **Soils**

The NPS will build new facilities on soils suitable for development. Minimize soil erosion by limiting the time that soil is left exposed and by applying other erosion-control measures, such as erosion matting, silt fencing, and sedimentation basins, in construction areas to reduce erosion, surface scouring, and discharge to water bodies. Once work is completed, revegetate disturbed areas with native plants in a timely manner.

### **Threatened and Endangered Species and Species of Concern**

There are currently no endangered or threatened species or species of concern within the boundaries of Sand Creek Massacre NHS. However, measures to protect vegetation and wildlife will also help to preserve habitat for rare, threatened, and endangered species. Mitigation actions specific to rare, threatened, and endangered species will include the following:

- The NPS will conduct surveys for rare, threatened, and endangered species and their habitat, as warranted.
- The NPS will position and design facilities/actions to avoid adverse effects on potential habitat of rare, threatened, and endangered species. If avoidance is infeasible, minimize and compensate for adverse effects on rare, threatened, and

endangered species as appropriate and in consultation with the appropriate resource agencies. Conduct work outside critical periods for the specific species.

- The NPS will develop and implement restoration and/or monitoring plans, as warranted. Plans will include methods for implementation, performance standards, monitoring criteria, and adaptive management techniques.
- The NPS will implement measures to reduce adverse effects of nonnative plants and wildlife on rare, threatened, and endangered species, should they be found in the project area.

### **Vegetation**

The NPS will employ a number of measures to reduce the impact on vegetation and soil.

These measures include:

- Vehicles will be parked in designated areas and crews will work to project sites where appropriate to avoid resource damage.
- The NPS will monitor areas used by visitors (e.g., trails) for signs of undue native vegetation disturbance. Use public education, revegetation of disturbed areas with native plants, erosion-control measures, and barriers to control potential impacts on plants from trail erosion or social trails.
- The NPS will develop revegetation plans for the disturbed area and require the use of native species. Revegetation plans should specify seed/plant source, seed/plant mixes, soil preparation, etc. Salvage vegetation should be used to the extent possible.
- The NPS will remove invasive and exotic species in the vicinity of historic and archeological resources in such a way as to minimize ground disturbance and threats to remaining vegetation. Removal of exotic vegetation will only occur after remaining resources and landscape features and systems are protected.
- The NPS will monitor for occurrences of invasive vegetation following fuels treatment and fire suppression activities, and develop responses as needed.
- The NPS will schedule prescribed burns based on the priority of the resource objectives. Factors to consider include soil productivity and potential, desired plant community composition, and site preparation and treatment costs.
- The NPS will scatter native seed-bearing plants cut along firelines as mulch to provide a source of indigenous seeds for bare soil areas.

### **Water Resources**

- To prevent water pollution during construction, The NPS will use erosion-control measures, minimize discharge to water bodies, and regularly inspect construction equipment for leaks of fuel and other chemicals. The NPS will minimize or eliminate the use of heavy equipment in Sand Creek.

### **Wetlands**

- The NPS will delineate existing wetlands and apply protection measures during construction. Wetlands will be delineated by qualified NPS staff or certified wetland specialists and clearly marked before construction work begins. Perform construction activities in a cautious manner to prevent damage caused by equipment, erosion, siltation, etc.

### **Acoustic Environment and Soundscapes**

- The NPS will apply mitigating measures to protect natural sounds in the national historic site and surrounding high plains environment. Specific mitigating measures include the following:
- The NPS will implement standard noise abatement measures during site operations. Standard noise abatement measures could include the following elements: a schedule that minimizes impacts on adjacent noise-sensitive uses, use of the best available noise control techniques wherever feasible, use of hydraulically or electrically powered impact tools when feasible, and place stationary noise sources as far from sensitive uses as possible. Locate and design facilities to minimize objectionable noise.

### **Visitor Safety and Experiences**

- Implement measures, such as scheduling construction activities and use of construction barriers, to reduce adverse effects of construction on visitor safety and experience.
- Directional signs and education programs will be used to promote understanding among visitors.
- Management strategies such as visitor education, site management, visitor use regulations, rationing or reallocation of visitor use, and enforcement, will be employed as appropriate.

### **Scenic Resources**

- Where appropriate, informational signs will be used to route people away from sensitive natural and cultural resources while still permitting access to important viewpoints.
- Facilities will be designed, sited, and built to avoid or minimize adverse effects on natural and cultural resources and visual intrusion into the natural viewshed and/or landscape.
- Vegetative screening will be provided where appropriate.

Errata Sheet  
General Management Plan/Environmental Assessment  
Sand Creek Massacre National Historic Site

Text Changes

**Page 29- Special Status Species and Critical Habitat** - Replace “While the lesser prairie chicken is not currently present on-site, most of the Sand Creek Massacre National Historic Site is considered excellent habitat (classified as F1 crucial habitat) for the species and two leks (breeding areas were occupied in 2003 near the southern boundary of the park. For these reasons, critical habitat for the lesser prairie chicken and other species of concern is retained for further analysis.” with the following text, “The NPS received a species list from the U.S. Fish and Wildlife Service (USFWS), on March 31, 2016, stating that there are a total of four threatened, endangered, or candidate species in Kiowa County, an area that includes the park. These species are the least tern (*Sterna antillarum*, endangered), lesser prairie-chicken (*Tympanuchus pallidicinctus*, threatened), piping plover (*Charadrius melodus*, threatened), and Arkansas darter (*Etheostoma cragini*, candidate). The USFWS identified no critical habitat within the project area. Park staff reviewed this list and determined that, based on habitat types found in the park and past surveys, none of these species have been documented as existing in the park. Therefore, there will be “no effect” on endangered or threatened species or designated critical habitat per Section 7 of the Endangered Species Act.

## Appendix A – Non-Impairment Finding

National Park Service's *Management Policies, 2006* require analysis of potential effects to determine whether or not actions will impair park resources. The fundamental purpose of the national park system, established by the Organic Act and reaffirmed by the General Authorities Act, as amended, begins with a mandate to conserve park resources and values. National Park Service managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adversely impacting park resources and values.

However, the laws do give the National Park Service the management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of a park, as long as the impact does not constitute impairment of the affected resources and values. Although Congress has given the National Park Service the management discretion to allow certain impacts within park, that discretion is limited by the statutory requirement that the National Park Service must leave park resources and values unimpaired, unless a particular law directly and specifically provides otherwise. The prohibited impairment is an impact that, in the professional judgment of the responsible National Park Service manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values. An impact to any park resource or value may, but does not necessarily, constitute an impairment. 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
- identified as a goal in the park's general management plan or other relevant NPS planning documents.

An impact would be less likely to constitute an impairment if it is an unavoidable result of an action necessary to pursue or restore the integrity of park resources or values and it cannot be further mitigated.

The park resources and values that are subject to the non-impairment standard include:

- appropriate opportunities to experience enjoyment of the above resources, to the extent that can be done without impairing them;
- the park's role in contributing to the national dignity, the high public value and integrity, and the superlative environmental quality of the national park system, and the benefit and inspiration provided to the American people by the national park system; and
- any additional attributes encompassed by the specific values and purposes for which the park was established.

Impairment may result from National Park Service activities in managing the park, visitor activities, or contractors, and others operating in the park. The NPS's threshold for considering whether there could be an impairment is based on whether an action will have significant effects.

Impairment findings are not necessary for visitor use and experience, socioeconomic, public health and safety, environmental justice, land use, and park operations, because impairment findings relate back to park resources and values, and these impact areas are not generally

considered park resources or values according to the Organic Act, and cannot be impaired in the same way that an action can impair park resources and values. After dismissing the above topics, topics remaining to be evaluated for impairment include: archeological resources and ethnographic resources. Ethnographic resources include the landscape features, the streambed and valley of the Big Sandy Creek, and the intangible spiritual qualities of the site.

Fundamental resources and values for Sand Creek Massacre National Historic Site are identified in the General Management Plan. According to that document, of the impact topics carried forward in this EA, only archeological resources, and ethnographic resources 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 the park's General Management Plan or other relevant NPS planning document.

- **Ethnographic Resources** – The selected action will have a negligible to minor, adverse impact on ethnographic resources as a result of the construction of new facilities, including a road on the western boundary, a trail on the bluff above the Big Sandy Creek, and limited, small-scale new facilities in the administrative area. These actions will be limited to a very small area (less than 2%) of the overall site. Therefore, these negligible to minor adverse impacts will not result in impairment of the ethnographic resources.
- **Archeological Resources** – The selected action will have permanent negligible to minor, adverse impacts on archeological resources. Adverse impacts could result from the construction of a new road on the site's western boundary and the development of a trail on the bluff line above the valley of the Big Sandy Creek. These impacts would be limited to a very small area (less than 2%) within the overall site. Therefore, these negligible to minor adverse impacts will not result in impairment of the site's archeological resources.

In conclusion, as guided by this analysis, good science and scholarship, advice from subject matter experts and others who have relevant knowledge and experience, and the results of public involvement activities, it is the Superintendent's professional judgment that there will be no impairment of park resources and values from implementation of the NPS selected action.