



SAND CREEK MASSACRE

National Historic Site

Draft General Management Plan / Environmental Assessment

June 2015



1862

“Fellow-citizens,
we cannot escape history.”

A. Lincoln

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June 2015

IN MEMORIAM

To honor those who dedicated themselves to the establishment
and future of the Sand Creek Massacre National Historic Site who are now
with their ancestors.

Luke Brady, Northern Cheyenne
Eugene Ridgley Sr., Northern Arapaho
Colleen Cometsevah, Southern Cheyenne
Chief Laird Cometsevah, Southern Cheyenne
Chief Alonzo Sankey, Southern Arapaho
Lee Pedro, Southern Cheyenne and Southern Arapaho
LaForce "Lee" Lonebear, Northern Cheyenne
Steve Brady, Northern Cheyenne
Theresa Horak, National Park Service
Judy Rosen, National Park Service
Matthew Safford, National Park Service

Draft
General Management Plan / Environmental Assessment
Sand Creek Massacre National Historic Site
Kiowa County, Colorado
June 2015

Sand Creek Massacre National Historic Site was authorized by Congress on November 7, 2000 (Sand Creek Massacre National Historic Site Establishment Act of 2000 [Public Law 106-465]). The authorizing legislation requires the Secretary of the Interior and the National Park Service (NPS) to protect and preserve the site, including: the topographic features, artifacts and other physical remains, and the cultural landscape; interpret the natural and cultural resource values of the site; provide for public understanding of, and preserve for future generations, those values; enhance cultural understanding about the site; and assist in minimizing the chances of similar incidents in the future. The act also directs the Secretary of the Interior, through the National Park Service, to prepare a management plan for the site.

The purpose of the general management plan is to establish a comprehensive vision of the site's purpose, significance, and resource goals. The plan will also define the management strategies for protecting the site's resources, providing for public understanding and enjoyment, ensuring organizational effectiveness, and promoting partnership opportunities that will support and complement all aspects of park unit management. The plan will help the national historic site staff guide programs and set priorities for resource stewardship, visitor use and experience, partnerships, facilities, and operations at Sand Creek Massacre National Historic Site.

This document examines five alternatives for managing Sand Creek Massacre National Historic Site for the next 15 to 20 years. It also analyzes the impacts of implementing each of the alternatives. 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 other alternatives. The concept for management under alternative B would provide the greatest variety and depth of interpretive media and programs and provide 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 would 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 National Park Service preferred alternative.

This *Draft General Management Plan / Environmental Assessment* has been distributed to other agencies and interested organizations and individuals for their review and comment. The public comment period for this document will last for 30 days. Readers are encouraged to submit comments on this plan online at <http://parkplanning.nps.gov>. You may also send written comments to Tom Thomas, Project Manager, National Park Service, Denver Service Center; PO Box 25287; Denver, CO 80225; or contact Superintendent Alexa Roberts at Sand Creek Massacre National Historic Site, PO Box 249, Eads, CO 81036. Please note that National Park Service practice is to make comments, including names and addresses of respondents, available for public review; see the "How to Comment on this Plan" section for further information.

HOW TO COMMENT ON THIS PLAN

Comments on this *Draft General Management Plan / Environmental Assessment* are welcome and will be accepted during the 30-day public review and comment period. During the comment period, comments may be submitted using several methods as noted below.

Online: <http://parkplanning.nps.gov/sand>

We prefer that readers submit comments online through the park planning website identified above, so the comments become incorporated into the National Park Service Planning, Environment, and Public Comment system. An electronic public comment form is provided through this website.

Mail: Sand Creek Massacre National Historic Site – General Management Plan
National Park Service
Denver Service Center
PO Box 25287
Denver, CO 80225

or

Sand Creek Massacre National Historic Site
PO Box 249
Eads, CO 81036

Hand delivery: at public meetings to be announced in the media following the release of this plan.

Before including your address, telephone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you may request in your comment that your personal identifying information be withheld from public review, we cannot guarantee that we will be able to do so.

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CHAPTER 1

INTRODUCTION

Cheyenne Migration and the Louisiana Purchase

You may have horses... but remember this. If you have horses, everything will be changed for you forever. You will have to move around a lot to find pasture for your horses. You will have to give up gardening and live by hunting and gathering, like the Comanches. And you will have to come out of your earth houses and live in tents. I will tell your women how to make them, and how to decorate them.

And there will be other changes. You will have to have fights with other tribes, who will want your pasture land or the places where you hunt. You will have to have real soldiers, who can protect the people. Think before you decide.

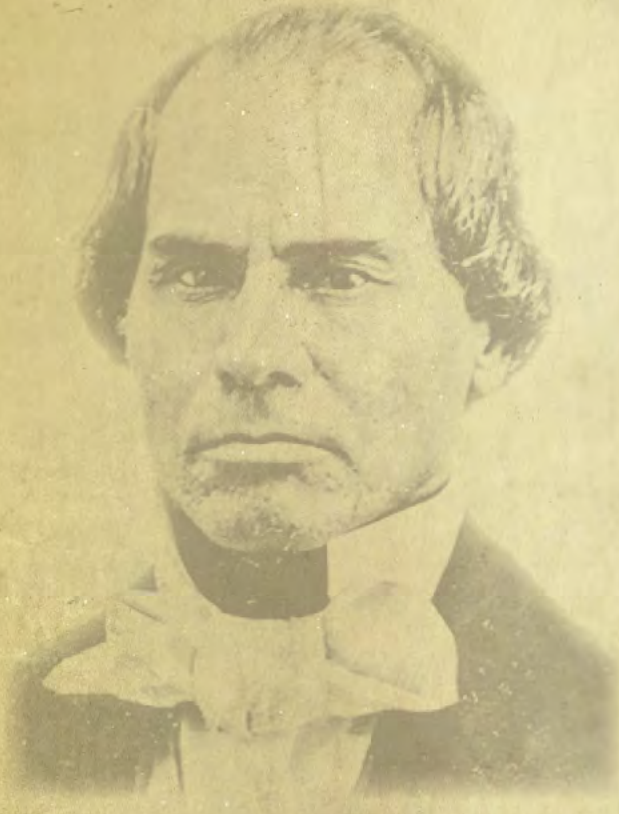
According to Cheyenne tradition, this is the counsel that Maheo, the All Being, gave to the Cheyenne people when they prayed to Him for horses.

You have made a noble bargain for yourselves, and I suppose you will make the most of it.

French Foreign Minister Charles-Maurice Talleyrand to the American negotiators on completion of the Louisiana Purchase

When our party arrived on the hill, they with one accord gave three cheers to the Mexican Mountains.

Lieutenant Zebulon Pike – November 5, 1806



Bent's Old Fort and the Santa Fe Trail

Bent's Old Fort was completed in 1832, and from that time my father lived there and was in command of the post most of the time. About 1835 he married my mother, Owl Woman, daughter of White Thunder, Keeper of the Sacred Arrows, and thus he became a member of the Cheyenne tribe. Part of the Cheyennes and Arapahos moved down from the Platte to live near the Arkansas, and these bands

wintered each year at the Big Timbers, thirty-five miles below the fort. They often camped for long periods right around the fort, coming in each day to trade... In later years two branch forts were established by the Bent and St. Vrain Company: Fort St. Vrain on the Platte... for the Sioux, Cheyenne, and Arapaho trade... and Adobe Fort on the Canadian [River] for the Kiowa, Comanche, and Apache trade... In the 1840s Bent and St. Vrain Company was doing a larger business than any other American company with the exception of [John Jacob] Astor's great fur company.

George Bent, *The Life of George Bent, Written From His Letters.*

George E. Hyde. University of Oklahoma Press, 1968, p. 69.



A GUIDE TO THIS DOCUMENT

This Draft General Management Plan / Environmental Assessment (GMP/EA) is organized in accordance with the Council on Environmental Quality (CEQ) implementing regulations for the National Environmental Policy Act of 1969, as amended (NEPA), and National Park Service (NPS) Director's Order 12: *Conservation Planning, Environmental Impact Analysis, and Decision-making*, NPS *Management Policies 2006* (chapter 2), and NPS *Planning Program Standards*.

Chapter 1: Introduction sets the framework for the entire document. It describes why the plan is being prepared and what needs it must address. It gives guidance for the alternatives that are being considered, which are based on the park's legislated purpose; the significance of its resources, special mandates, and administrative commitments; servicewide mandates and policies; and other planning efforts in the area.

The primary goal of **scoping** is to identify issues and determine the range of alternatives to be addressed. During scoping, the NPS staff provides an overview of the proposed project, including purpose and need and alternatives. The public is asked to submit comments, concerns, and suggestions relating to these goals.

The chapter also details the planning opportunities and issues that were raised during public scoping meetings and initial planning team efforts; the alternatives in the next chapter address these issues and concerns to varying degrees. This chapter concludes with a statement of the scope of the environmental impact analysis—specifically what impact topics were or were not analyzed in detail.

Chapter 2: Alternatives, Including the Preferred Alternative, begins by describing the management prescriptions that will be used to manage the national historic site in the future. It also consists of the continuation of current management practices and trends at the national historic site (alternative A, the no-action alternative). The action alternatives, including the preferred alternative, are presented. Mitigation measures proposed to minimize or eliminate the impacts of some proposed actions are described just before the discussion of future studies and/or implementation plans that will be needed. Evaluation of the environmentally preferred alternative is followed by summary tables of the alternative actions and the environmental consequences of implementing those alternative actions. The chapter concludes with a discussion of alternatives or actions that were dismissed from detailed evaluation.

Chapter 3: The Affected Environment describes those areas and resources that would be affected by implementing actions in the various alternatives—cultural resources, natural resources, visitor use and experience, and socioeconomic environment.

Chapter 4: Environmental Consequences analyzes the impacts anticipated to occur as a result of implementing the alternatives on topics described in the “Affected Environment” chapter. Methods that were used for assessing the impacts in terms of intensity, type, and duration of impacts are also outlined in this chapter.

Chapter 5: Consultation and Coordination describes the history of public and agency coordination during the planning effort. It also includes lists of agencies and organizations that will be receiving copies of the document.

Chapter 6: Appendixes, References, and Preparers presents supporting information for the document, along with references and a list of the planning team and other consultants.

INTRODUCTION

BACKGROUND

The Draft General Management Plan / Environmental Assessment presents five alternative future directions—alternatives A, B, C, D, and E—for the management and use of Sand Creek Massacre National Historic Site (national historic site or site). Alternative E is the NPS preferred alternative. The potential impacts of all the alternatives have been identified and assessed.

General management plans are intended to be long-term documents that establish and articulate a management philosophy and framework for decision making and problem solving in national park system units. General management plans usually provide guidance during a 15- to 20-year period.

The implementation of the approved plan (approval of one of the alternatives in this document) will depend on future funding. The approval of a plan does not guarantee that the funding and staffing needed to implement the plan will be forthcoming. Full implementation of the approved plan could be many years in the future. The national historic site must compete with other units of the national park system for limited implementation funding.

PURPOSE OF AND NEED FOR THE PLAN

The approved general management plan will be the basic document for managing Sand Creek Massacre National Historic Site for the next 15 to 20 years. The purposes of this general plan are as follows:

- Confirm the purpose, significance, and special mandates of Sand Creek Massacre National Historic Site.
- Clearly define resource conditions and visitor experience and uses to be achieved, consistent with the national historic site's purpose and significance statements.
- Provide a framework for NPS managers to use when making decisions about how to best protect national historic site resources, how to provide quality visitor uses and experience, how to manage visitor use, and what kinds of facilities, if any, to develop in or near the national historic site.
- Ensure that this foundation for decision making has been developed in consultation with interested stakeholders and adopted by NPS leadership after an adequate analysis of the benefits, impacts, and economic costs of alternative courses of action.

Legislation establishing the National Park Service as an agency and governing NPS management provides the fundamental direction for the administration of all units and programs of the national park system. This general management plan will build on these laws and the legislation that established Sand Creek Massacre National Historic Site to provide a vision for the future of the site. The "Servicewide Laws and Policies" section calls the reader's attention to topics that are important for understanding management direction at the national historic site. "Table 1. Management Zones" summarizes the topics and the conditions toward which management is striving. The alternatives in this Draft General Management Plan / Environmental Assessment address the desired future conditions that are not mandated by law and policy and must be determined through the planning process.

This new management plan for Sand Creek Massacre National Historic Site 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.

COMMEMORATION OF THE SAND CREEK MASSACRE IN THE NATIONAL PARK SYSTEM

Historical Description of Sand Creek Massacre National Historic Site

At dawn on November 29, 1864, approximately 675 U.S. volunteer soldiers commanded by Colonel John M. Chivington attacked a village of about 700 Southern Cheyenne and Arapaho Indians (only 100 of which were fighting-age men) along Sand Creek in southeastern Colorado Territory. Using small arms and howitzer fire, the troops drove the Indian people out of their camp. While many managed to escape the initial onslaught, others, particularly noncombatant women, children, and the elderly, fled into and up the bottom of the dry creek channel. The soldiers followed, shooting them as they struggled through the sandy ground. At a point several hundred yards above the village, the fleeing people frantically dug pits and trenches along either side of the streambed in a desperate attempt to escape the soldiers' bullets. Some tried to fight back with whatever weapons they had managed to retrieve from camp. At several places along Sand Creek, the soldiers shot from opposite banks in a cross-fire. Finally, the howitzers were brought forward to drive the Indians from their makeshift defenses in the sand. Over the course of 7 hours, the troops killed between 165 and 200 Cheyennes and Arapahos. Among the dead were 13 Cheyenne chiefs and 1 Arapaho chief; severely impacting the traditional governing councils for generations. During that afternoon and the following day, soldiers wandered over the open prairie committing atrocities on the dead, taking human body parts as trophies before departing the scene on December 1 to resume campaigning, taking 600 horses of the slain with them.

Since the day it happened, the Sand Creek Massacre has maintained its significance as one of the most emotionally charged and controversial events in U.S. history; a tragedy reflective of its time and place. The background of the Sand Creek Massacre lay in a whirlwind of events and issues registered by the ongoing Civil War in the East and West; the overreactions by whites on the frontier to the 1862–63 Dakota uprising in Minnesota and its aftermath; the status of the various bands of Southern Cheyenne and Arapaho Indians vis-a-vis each other as well as other plains tribes; the constant undercurrent of threatened Confederate incursions; and the existing state of politics in Colorado. Perhaps most importantly, the causes of the Sand Creek Massacre lay in the irresistible momentum of Manifest Destiny—the United States' objective to establish dominance over the lands between the Mississippi River and the Pacific coast.

Site Establishment History

The Sand Creek Massacre National Historic Site was established in 2007, the culmination of a decade-long process. By the time U.S. Senator Ben Nighthorse Campbell initiated efforts to protect the site as a national park system unit, the actual location of the massacre was unknown. Congress mandated that the National Park Service collaborate with the Cheyenne and Arapaho tribes and the State of Colorado to positively identify the site's location. In 1998, a multidisciplinary team began the site location process to identify the location and extent of the massacre. The team focused on oral history, remote imagery, historical documentation, archeology, and aerial photography to locate the site. Along with other research, the group identified several areas along Sand Creek where events related to the massacre occurred.

After completion of the Site Location Study, the Sand Creek Massacre National Historic Site was officially authorized on November 7, 2000. Although discussion continues regarding the specific location of internal features, most researchers agree the current established park boundary (listed with the National Register of Historic Places) contains the location of the Indian village, the point

from which the Colorado regiments first spotted the encampment, the location of the village horse herds, the general path of company and howitzer movement and attacks, positions of the hastily dug Cheyenne and Arapaho protective sand pits, and the military bivouac area of November 29–30.

In 2007, the dedication ceremony for the Sand Creek Massacre National Historic Site was performed and the site was formally opened to the public on April 27. The authorized boundary for the site consists of 12,583 acres, while the established boundary currently consists of 2,385 acres, of which about 920 acres are owned by the National Park Service and 1,465 acres are tribal trust lands owned by the Cheyenne and Arapaho Tribes of Oklahoma and managed by the National Park Service (figure 1). If future investigations reveal a need to protect additional resources within the authorized boundary, park managers can acquire land from willing sellers without additional legislation.

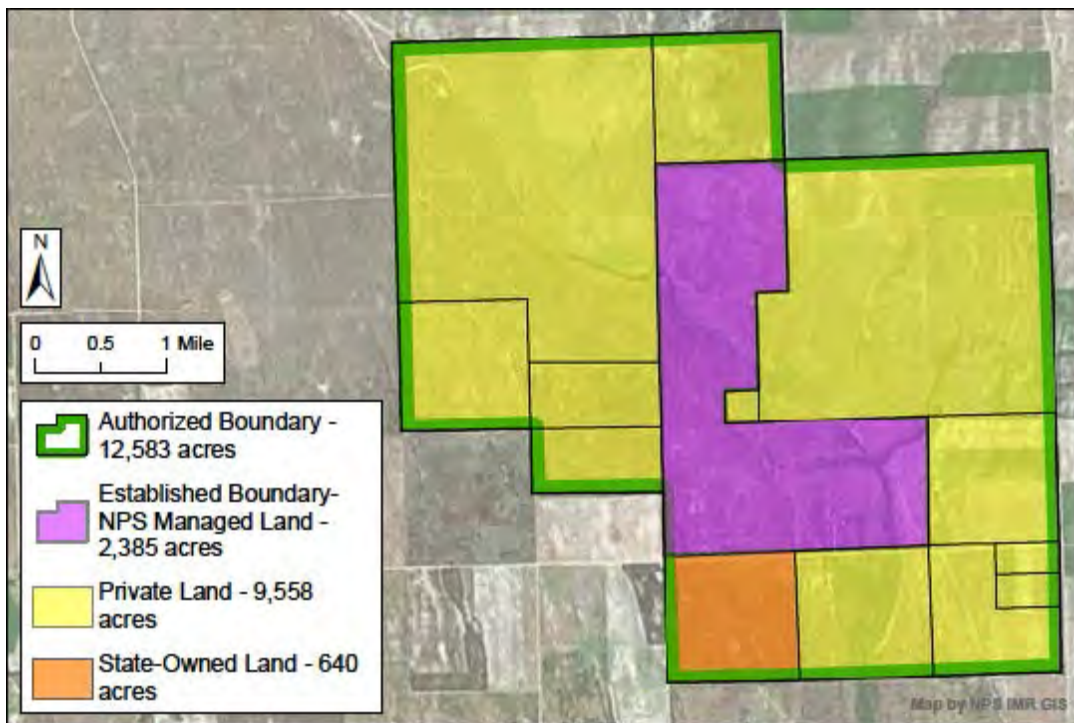


FIGURE 1. SAND CREEK MASSACRE NATIONAL HISTORIC SITE AUTHORIZED AND ESTABLISHED BOUNDARY

Site Location and Context

Sand Creek Massacre National Historic Site is on the grassland plains of southeast Colorado, about 170 miles southeast of Denver (figure 2). The site is within Kiowa County, Colorado, predominately a ranching and farming area. The county seat, Eads, is approximately 28 miles from the site and has a population of approximately 600. Currently, the National Park Service leases an administrative office for the historic site in Eads.

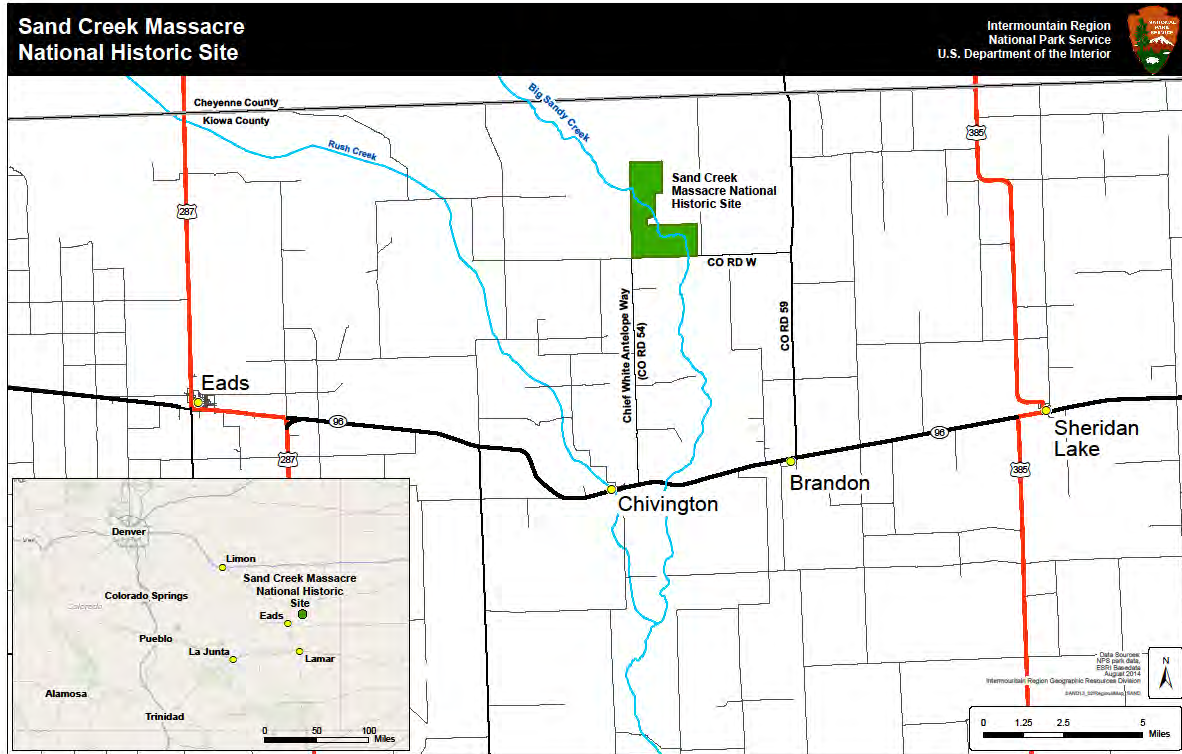


FIGURE 2. REGIONAL CONTEXT MAP

Sand Creek Massacre National Historic Site is rural in nature and currently has a low level of development on-site (figures 3–8). On-site facilities include an existing ranch road, a small parking area, and fencing surrounding the park. On-site structures include a maintenance shed, temporary visitor contact station / office trailer, vault toilets, picnic tables, and a shade structure. Ranching and farming is the predominate land use surrounding the historic site.

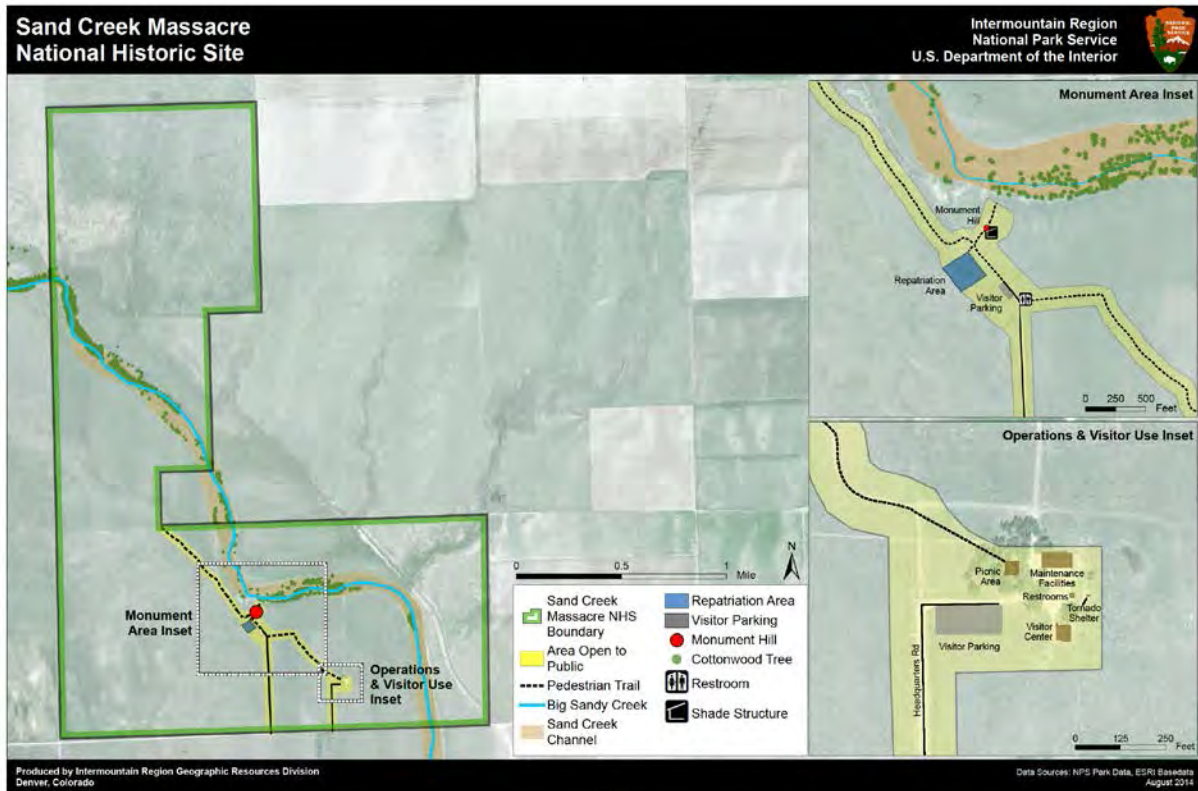


FIGURE 3. EXISTING PARK CONDITIONS



FIGURE 4. LANDSCAPE FROM MONUMENT HILL OVERLOOK



FIGURE 5. MONUMENT HILL



FIGURE 6. 1950 SAND CREEK BATTLEGROUND MONUMENT



FIGURE 7. OPERATIONS AND VISITOR USE AREA



FIGURE 8. VIEW OF OPERATIONS AND VISITOR USE AREA FROM MONUMENT HILL

Other NPS Sites Related to the Historical Context of the Sand Creek Massacre

Historical events connected to the Sand Creek National Historic Site can be directly linked to a number of national park system units within the region (figure 9). These sites include:

- Glorieta Battlefield (part of Pecos National Historical Park) – New Mexico
- Bent’s Old Fort National Historic Site – Colorado
- Fort Larned National Historic Site – Kansas
- Fort Union National Historic Site – New Mexico
- Santa Fe Trail National Historic Trail – many states
- Washita National Battlefield – Oklahoma
- Fort Laramie National Historic Site – Wyoming



FIGURE 9. RELATED NATIONAL PARK SYSTEM UNITS

GENERAL MANAGEMENT PLAN CONSULTATION PROCESS

The development of the general management plan included an extensive consultation process involving members of the National Park Service and the designated Sand Creek representatives of the Cheyenne and Arapaho tribes, the Colorado state historic preservation officer and staff of History Colorado (formerly the Colorado Historical Society), and representatives of Kiowa County, Colorado.

Tribal input has been an essential element of the planning process. Tribal representatives and members have provided input to the management alternatives and the overall plan. Tribal comments have been submitted through the consultation calls and in face-to-face meetings with NPS park staff and planning team members, rather than through formal correspondence. Please see chapter 5 for detailed descriptions of the collaborative planning process.

NEXT STEPS IN THE PLANNING PROCESS

FINALIZING THE GENERAL MANAGEMENT PLAN

After distribution of the general management plan, there will be a 30-day public review and comment period, after which the NPS planning team will evaluate comments from other federal agencies, organizations, businesses, and individuals regarding the general management plan and make revisions as appropriate. After the public review, the plan may be approved with a Finding of No Significant Impact (FONSI) assuming there are no significant impacts identified during the public review. If significant impacts are identified, a notice of intent to initiate an environmental impact statement may be prepared. A Finding of No Significant Impact would document the NPS selection of an alternative for implementation. Once the FONSI is signed, the planning process is complete, and the selected alternative would become the new management plan for Sand Creek Massacre National Historic Site and would be implemented. It is important to note that not all of the actions in the alternative would necessarily be implemented immediately.

IMPLEMENTATION OF THE PLAN

The approval of this general management plan does not guarantee that the funding and staffing needed to implement the plan will be forthcoming. Actions directed by general management plans or in subsequent implementation plans are accomplished over time. Budget restrictions, requirements for additional data or regulatory compliance, and competing national park system priorities may prevent immediate implementation of many actions. An approved general management plan does not guarantee funding for implementation. Funding for individual actions would have to be requested in competition with requests from other park units. Full implementation of the plan could take place many years in the future.

The implementation of the approved plan also could be affected by other factors. Once the general management plan has been approved, additional feasibility studies and more detailed planning and environmental documentation would be completed, as appropriate, before any proposed actions would be implemented. For example:

- Appropriate federal and state agencies would be consulted concerning actions that could affect threatened and endangered species.
- The state historic preservation officer would be consulted during implementation of those actions affecting sites either eligible for or listed in the National Register of Historic Places.

The general management plan does not describe how particular programs or projects should be prioritized or implemented. Those decisions would be addressed during the more detailed planning associated with strategic plans and implementation plans. All of those future, more detailed plans would tier from the approved general management plan and would be based on the goals, future conditions, and appropriate types of activities established in the approved general management plan.

Ongoing and future consultation with the Cheyenne and Arapaho tribes, the Colorado state historic preservation officers, Kiowa County, and other concerned parties would occur as

necessary, in accordance with section 106 of the National Historic Preservation Act regarding implementation actions being carried out.

GUIDANCE FOR THE PLANNING EFFORT

PURPOSE AND SIGNIFICANCE OF THE NATIONAL HISTORIC SITE

Purpose

Purpose statements are based on the park's establishing legislation, legislative history, and NPS policies. The statements reaffirm the reasons for which the site was set aside as a unit of the national park system and provide the foundation for park management and use.

The purpose of Sand Creek Massacre National Historic Site is to protect and preserve the landscape of the massacre site and interpret the associated cultural values to enhance public understanding of the massacre and assist in minimizing the chances of similar incidents in the future.

Significance

Significance statements capture the essence of the historic site's importance to our country's natural and cultural heritage. Significance statements do not inventory resources; rather, they describe the site's distinctiveness and help to place it within its regional, national, and international contexts.

Sand Creek Massacre National Historic Site is nationally significant for the following reasons:

- The site of the Sand Creek Massacre has sacred significance to the Cheyenne and Arapaho tribes, particularly those tribal members who are descended from victims and survivors of the massacre.
- The site is a reminder of the tragic extremes of the 500 years of conflict between American Indians and European Americans over land that now comprises the United States.
- The intense distrust resulting from the Sand Creek Massacre influenced virtually all subsequent conflicts between American Indians and the U.S. Army.
- The Sand Creek Massacre is an essential symbol of the struggles of American Indian tribes to maintain their ancestral ways of life.
- The massacre profoundly disrupted the social, political, and economic structures of the Cheyenne and Arapaho tribes.
- By eliminating most Cheyenne advocates for peace, the massacre hardened resistance to white expansion and escalated warfare between the army and the Cheyenne, Arapaho, and Sioux tribes.
- The circumstances of the massacre elicited widespread national outrage, even against the backdrop of the Civil War, which forced substantial changes in U.S. Indian policy.

FUNDAMENTAL AND OTHER IMPORTANT RESOURCES AND VALUES

The planning team, with input from the public, developed the following list of resources and values that warrant consideration during planning and management because they are essential or important to achieving the national historic site's purpose and maintaining its significance.

Fundamental Resources and Values

- topographic features of the ethnographic landscape such as the bluffs; the creek bottom; ephemeral ponds; gently rolling prairie grasslands; extensive viewsheds to the north, east, and south
- artifacts and other physical remains
- the natural and cultural resource values associated with the site including cultural and natural resources encompassed within the 2001 National Register of Historic Places boundary, and culturally significant plant and animal species
- Big Sandy Creek
- the post-massacre camp of Chivington's command
- manuscripts and maps
- oral histories / how discourse about the event is conducted because of its sacred nature
- period trees and large downed cottonwood logs
- repatriation site
- intangible spiritual qualities of the landscape (sense of place)
- remains of individuals still in the ground and those that have been repatriated from museums
- memorialization and commemoration activities such as spiritual healing runs and places that have been blessed or where ceremonies occur/have occurred

Other Important Resources and Values

- 1950 Sand Creek Battleground monument and overlook¹
- historic canals
- wetlands
- cottonwood trees (not present in 1864, but important to associated tribes)
- post-massacre ranching history and associated resources

INTERPRETIVE THEMES

Due to the extreme sensitivity of the historical events of the Sand Creek Massacre and the need to interpret the tribal oral history and the voices of the decedents respectfully, it has been determined

¹ The Sand Creek Battleground marker was placed on-site by the Colorado Historical Society in 1950 and illustrates a persistent mischaracterization of the massacre by the State of Colorado.

that interpretive themes for the Sand Creek Massacre National Historic Site will be developed in a separate consultation process. This process will involve the Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation, Northern Arapaho Tribe of the Wind River Reservation, and the Cheyenne and Arapaho Tribes, Oklahoma. Development of interpretive themes would occur in a workshop scheduled for the fall of 2015. These interpretive themes will be based on the national historic site's purpose, significance, and primary resources. Primary interpretive themes are the key stories, concepts, and ideas of a national park system unit. They are the groundwork that NPS staff will use for educating visitors about the national historic site's resources. With these themes, visitors can form intellectual and emotional connections with national historic site resources and experiences. Subsequent interpretive planning may elaborate on the primary themes developed in the consultation process.

SPECIAL MANDATES

In the bill authorizing Sand Creek Massacre National Historic Site (Public Law 106-465), Congress directed that the Secretary of the Interior shall protect and preserve the site and its resources. It also directed the Secretary of the Interior to

- interpret the natural and cultural resource values associated with the site, provide for public understanding and appreciation of the cultural and natural resource values of the site, and preserve those values for future generations
- memorialize, commemorate, and provide information to visitors to the site; enhance cultural understanding about the site; and assist in minimizing the chances of similar incidents in the future
- grant to any descendant or other member of the Cheyenne and Arapaho tribes reasonable access to federally acquired land within the site for the purpose of carrying out traditional, cultural, or historical observances

SERVICEWIDE LAWS AND POLICIES

This section identifies what actions are required at Sand Creek Massacre National Historic Site to comply with federal laws and policies of the National Park Service. Many national historic site management directives are specified in laws and policies guiding the National Park Service and are therefore not subject to alternative approaches. A general management plan is not needed to decide, for instance, that it is appropriate to protect endangered species, control nonnative species, protect archeological sites, or provide universal access. Laws and policies have already decided those and many other issues. Although attaining some of these conditions set forth in these laws and policies may have been temporarily deferred in the national historic site because of funding or staffing limitations, the National Park Service will continue to strive to implement these requirements with or without a new general management plan.

Some of these laws and executive orders are applicable solely or primarily to units of the national park system. These include the NPS Organic Act of 1916 that created the National Park Service; the General Authorities Act of 1970; the Redwoods Act amendments (March 27, 1978) to the Organic Act, relating to the management of the national park system; and the National Parks Omnibus Management Act (1998). Other laws and executive orders have much broader application such as the Endangered Species Act, the National Historic Preservation Act of 1966, as amended, and Executive Order 11990, "Protection of Wetlands."

The NPS Organic Act of 1916 (16 *United States Code* [USC] 1) provides the fundamental management direction for all units of the national park system:

[P]romote and regulate the use of the Federal areas known as national parks, monuments, and reservations...by such means and measure as conform to the fundamental purpose of the said parks, monuments, and reservations, which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.

The National Park System General Authorities Act (16 USC 1a-1 et seq.) affirms that while all national park system units remain “distinct in character,” they are “united through their interrelated purposes and resources into one national park system as cumulative expressions of a single national heritage.” The act makes it clear that the NPS Organic Act of 1916 and other protective mandates apply equally to all units of the system. Further, amendments state that NPS management of park units should not “derogate[d]...the purposes and values for which these various areas have been established.”

The National Park Service also has established policies for all units under its stewardship. These are identified and explained in a guidance manual entitled *NPS Management Policies 2006*. The alternatives considered in this document incorporate and comply with the provisions of these mandates and policies.

National Park Service mandates and policies are listed along with the management actions described in alternatives below. This table is intended to provide law and policy implications to management actions.

Topic	Current Laws and Policies That Require the following Conditions Be Achieved at Sand Creek Massacre National Historic Site
Relations with Private and Public Organizations, Owners of Adjacent Land, Associated Tribes, and Government Agencies	<p>Good relations are maintained with adjacent landowners, surrounding communities, and private and public groups that affect, and are affected by, the historic site. The historic site is managed proactively to resolve applicable external issues and concerns and ensure that park values are not compromised.</p> <p>Because Sand Creek is an integral part of a larger regional environment, the National Park Service works cooperatively with others to anticipate, avoid, and resolve potential conflicts; protect important resources; and address mutual interests in the quality of life for community residents. Regional cooperation involves federal, state, and local agencies, American Indian tribes, neighboring landowners, and all other concerned parties.</p> <p>Sources: <i>NPS Management Policies 2006</i></p>
Natural Resources	
Air Quality	<p>Air quality at the national historic site meets national ambient air quality standards for specified pollutants. Air quality at Sand Creek is maintained or enhanced with no significant deterioration.</p> <p>Sources: Clean Air Act, NPS Organic Act, <i>NPS Management Policies 2006</i>; <i>Natural Resource Management Reference Manual #77</i></p>

Topic	Current Laws and Policies That Require the following Conditions Be Achieved at Sand Creek Massacre National Historic Site
Ecosystem Management	Sand Creek Massacre National Historic Site is managed holistically, as part of a greater ecological, social, economic, and cultural system. Source: <i>NPS Management Policies 2006</i>
Nonnative Species	The management of populations of nonnative plant and animal species, up to and including eradication, are undertaken wherever such species threaten native resources or public health and when control is prudent and feasible. Sources: <i>NPS Management Policies 2006</i> ; Executive Order 13112, "Invasive Species"; <i>Natural Resource Management Reference Manual #77</i>
Fire Management	NPS fire management programs are designed to meet resource management objectives prescribed for the various areas of the national historic site and to ensure that the safety of firefighters and the public is not compromised. All wildland fires are effectively managed, considering resource values to be protected and firefighter and public safety, using the full range of strategic and tactical operations as described in an approved fire management plan. Sources: <i>NPS Management Policies 2006</i> ; Director's Order 18: <i>Wildland Fire Management</i>
General Natural Resources / Restoration	Native species populations that have been severely reduced in or extirpated from the national historic site are restored where feasible and sustainable. Populations of native plant and animal species function in as natural a condition as possible, except where special considerations are warranted. Sources: <i>NPS Management Policies 2006</i> ; <i>Natural Resource Management Reference Manual #77</i>
Land Protection	Land protection plans are prepared to determine and publicly document what lands, or interests in lands, need to be in public ownership and what means of protection are available to achieve the purposes for which the national historic site was created. Source: <i>NPS Management Policies 2006</i>
Lightscape Management / Night Sky	Excellent opportunities to see the night sky are available. Artificial light sources, both within and outside the historic site, do not degrade and adversely affect opportunities to see the night sky. Source: <i>NPS Management Policies 2006</i>
Native Vegetation and Wildlife	The National Park Service will maintain as part of the natural ecosystem all native plants and animals in the national historic site. Sources: <i>NPS Management Policies 2006</i> ; <i>Natural Resource Management Reference Manual #77</i>
Natural Soundscapes	The acoustic environment is a unique and essential national park resource. An important part of the NPS mission is to preserve and restore the natural and cultural sounds of the parks, which include the soundscapes and acoustic environments associated with national park system units. Park soundscapes and the acoustic environment are inherent components of the scenery and the natural and historic objects and the wildlife of national parks, are vital to the ecological processes, and are integral elements of cultural and historic sites affecting visitors' ability to experience the sites in meaningful and authentic ways. The National Park Service cooperates with partners to minimize or mitigate external impacts on soundscapes resulting from energy exploration, development, recreation, and transportation use. Sources: <i>NPS Management Policies 2006</i> ; Director's Order 47: <i>Soundscape Preservation and Noise Management</i>

Topic	Current Laws and Policies That Require the following Conditions Be Achieved at Sand Creek Massacre National Historic Site
<p>Soils</p>	<p>The National Park Service actively seeks knowledge about and to preserve the soil resources of Sand Creek and to prevent, to the extent possible, the unnatural erosion, physical removal, or contamination of the soil, or its contamination of other resources.</p> <p>Natural soil resources and processes function in as natural a condition as possible, except where special considerations are allowable under policy.</p> <p>Sources: NPS Management Policies 2006; Natural Resource Management Reference Manual #77</p>
<p>Threatened and Endangered Species</p>	<p>Federally listed and state listed threatened and endangered species and their habitats are protected and sustained.</p> <p>Native threatened and endangered species populations that have been severely reduced in or extirpated from the national historic site are restored where feasible and sustainable.</p> <p>Sources: Endangered Species Act; equivalent state protective legislation; Source: NPS Management Policies 2006; Natural Resource Management Reference Manual #77</p>
<p>Water Resources</p>	<p>Surface water and groundwater are protected, and water quality meets or exceeds all applicable water quality standards.</p> <p>The National Park Service and NPS-permitted programs and facilities are maintained and operated to avoid pollution of surface water and groundwater.</p> <p>Sources: Clean Water Act; Executive Order 11514, "Protection and Enhancement of Environmental Quality"; Source: NPS Management Policies 2006; Natural Resource Management Reference Manual #77</p>
<p>Cultural Resources</p>	
<p>Archeological Resources</p>	<p>Archeological sites are identified and inventoried, and their significance is determined and documented. Archeological sites are protected in an undisturbed condition unless it is determined through formal processes that research efforts are appropriate or disturbance or natural deterioration is unavoidable. When disturbance or deterioration is unavoidable, the site is professionally documented and excavated, and the resulting artifacts, materials, and records are curated and conserved in consultation with the Colorado state historic preservation officer and tribal historic preservation officers of the various tribes. Some archeological sites that can be adequately protected may be interpreted to the visitor.</p> <p>Sources: National Historic Preservation Act; Archeological Resources Protection Act; <i>the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation</i>; Programmatic Agreement among the National Park Service, the Advisory Council on Historic Preservation (ACHP), and the National Conference of State Historic Preservation Officers for Compliance with section 106 of the National Historic Preservation Act (2008); NPS Management Policies 2006; Director's Order 28: <i>Cultural Resource Management</i></p>
<p>Ethnographic Resources</p>	<p>Appropriate cultural anthropological research is conducted in cooperation with groups associated with the historic site. The National Park Service accommodates access to and ceremonial use of Indian sacred sites by Indian religious practitioners and avoids adversely affecting the physical integrity of these sites. NPS general regulations on access to and use of natural and cultural resources on National Park Service lands are applied in an informed and balanced manner that is consistent with national park purposes and does not unreasonably interfere with American Indian use of traditional areas or sacred resources and does not result in degradation of resources.</p> <p>American Indians and other individuals and groups linked by ties of kinship or culture to ethnically identifiable human remains, sacred objects, objects of cultural patrimony, and associated funerary objects are consulted when such items might be disturbed or</p>

Topic	Current Laws and Policies That Require the following Conditions Be Achieved at Sand Creek Massacre National Historic Site
	<p>are encountered on national historic site lands.</p> <p>All ethnographic resources determined eligible for listing or listed in the National Register of Historic Places are protected. If disturbance of such resources is unavoidable, formal consultation with the state or tribal historic preservation officer(s), the Advisory Council on Historic Preservation, and American Indian tribes as appropriate, is conducted.</p> <p>The National Park Service will conduct government-to-government consultation with federally recognized tribes before taking actions that affect cultural resources of importance to the tribes. These consultations are to be open and candid so that all interested parties may evaluate for themselves the potential impact of relevant proposals.</p> <p>Access to sacred sites and resources by American Indians continues to be provided when the use is consistent with national historic site purposes and the protection of resources. The identities of community consultants and information about sacred and other culturally sensitive places and practices are kept confidential when research agreements or other circumstances warrant.</p> <p>Sources: National Historic Preservation Act; Executive Order 13007, "Indian Sacred Sites"; Advisory Council on Historic Preservation regulations for implementing section 106 of the National Historic Preservation Act; NPS <i>Management Policies 2006</i>; Director's Order 28: <i>Cultural Resource Management</i></p>
Museum Collections	<p>All museum collections (prehistoric and historic objects, artifacts, works of art, archival material and natural history specimens) are identified and inventoried, catalogued, documented, preserved, and protected. Provision is made for access to them and for their use in exhibits, research, and interpretation.</p> <p>The qualities that contribute to the significance of collections are protected in accordance with established standards.</p> <p>Sources: Archeological and Historic Preservation Act; Archeological Resources Protection Act; Native American Graves Protection and Repatriation Act; NPS <i>Management Policies 2006</i>; Director's Order 28: <i>Cultural Resource Management</i>; Management of Museum Properties Act of 1955 (the "Museum Act"), 16 USC 18f; Historic Sites Act of 1935; NPS <i>Museum Handbook</i>; NPS <i>Museum Collection Facilities Strategy, Intermountain Region, 2005</i>; 36 CFR 79</p>
Visitor Use and Experience	
Visitor Use and Experience	<p>The natural and cultural resources of Sand Creek are conserved "unimpaired" for the enjoyment of future generations. Visitors have opportunities for forms of enjoyment that are uniquely suited and appropriate to the superlative natural and cultural resources found at the historic site. No activities occur that would cause derogation of the values and purposes for which the national historic site has been established.</p> <p>For all zones within Sand Creek Massacre National Historic Site, the types and levels of visitor use are consistent with the desired resource and visitor experience conditions prescribed for those areas.</p> <p>Visitors to Sand Creek Massacre National Historic Site will have opportunities to learn about and appreciate the significance of the national historic site and its resources and to develop a personal stewardship ethic.</p> <p>To the extent feasible, programs, services, and facilities of the national historic site are accessible to and usable by all people, including those with disabilities.</p> <p>Sources: NPS Organic Act; NPS <i>Management Policies 2006</i></p>

Topic	Current Laws and Policies That Require the following Conditions Be Achieved at Sand Creek Massacre National Historic Site
<p>Public Health and Safety</p>	<p>NPS <i>Management Policies 2006</i> states that saving human life will take precedence over all other management actions as the National Park Service strives to protect human life and provide for injury-free park visits.</p> <p>Sources: NPS <i>Management Policies 2006</i>; Director’s Order 50B and RM-50: <i>Occupational Safety and Health</i>, Director’s Order 83 and RM-83: <i>Public Health</i>, Director’s Order 51 and RM-51: <i>Emergency Medical Services</i>; OSHA 29 <i>Code of Federal Regulations</i> (CFR)</p>
<p>Other Topics</p>	
<p>Sustainable Design / Development</p>	<p>NPS visitor management facilities are harmonious with Sand Creek Massacre National Historic Site resources, compatible with natural processes, aesthetically pleasing, functional, as accessible as possible to all segments of the population, energy efficient, and cost effective.</p> <p>All decisions regarding park operations, facilities management, and development—from the initial concept through design and construction—reflect principles of resource conservation. Thus, all park developments and operations are sustainable to the maximum degree possible and practical. New developments and existing facilities are sited, built, and modified according to the <i>Guiding Principles of Sustainable Design</i> (NPS 1993) or other similar guidelines.</p> <p>Management decision making and activities throughout the national park system should use value analysis, which is mandatory for all Department of the Interior bureaus, to help achieve this goal. Value planning, which may be used interchangeably with value analysis / value engineering / value management, is most often used when value methods are applied on general management or similar planning activities.</p> <p>Sources: NPS <i>Management Policies 2006</i>; Executive Order 13123, “Greening the Environment through Efficient Energy Management”; Executive Order 13101, “Greening the Government through Waste Prevention, Recycling, and Federal Acquisition”; NPS <i>Guiding Principles of Sustainable Design</i>; Executive Order 13514, “<i>Environmental Leadership</i>”; Director’s Order 90: <i>Value Analysis</i></p>
<p>Utilities and Communication Facilities</p>	<p>Sand Creek Massacre National Historic Site’s mission, resources, or public enjoyment are not denigrated by nonconforming uses. No new nonconforming use or rights-of-way are permitted through the national historic site without specific statutory authority and approval by the director of the National Park Service or his representative and are permitted only if there is no practicable alternative to such use of NPS lands.</p> <p>Sources: Telecommunications Act; 16 USC 79; 23 USC 317; 36 CFR 14; NPS <i>Management Policies 2006</i>; Director’s Order 53A: <i>Wireless Telecommunications, Reference Manual 53, Special Park Uses</i></p>
<p>Energy Development</p>	<p>Subsurface mineral rights on the historic site are currently held by individual landowners. Private mineral ownership and a possibility that undeveloped oil and gas resources occur beneath the park creates the potential for additional drilling inside the park. Owners of nonfederal oil and gas rights within units of the national park system may exercise those rights subject to NPS regulations under 36 CFR 9, subpart B (9B regulations). The regulations require oil and gas operators in national parks to submit a plan of operations for NPS approval. The plan details all activities of the oil and gas development, describes how reclamation will be completed, and provides the basis for performance bonds. The National Park Service uses the information to determine the effects of proposed operations and alternatives on the environment and park management and visitor values. Once approved, the plan serves as the operator’s permit. The 9B regulations do not apply if operations are conducted wholly on non-federally owned or controlled lands or waters.</p> <p>In the event that damage is caused to park resources from activities outside park</p>

Topic	Current Laws and Policies That Require the following Conditions Be Achieved at Sand Creek Massacre National Historic Site
	<p>boundaries, the National Park Service has authority to recover up to treble damages from the company under the Park System Resources Protection Act, 16 USC 19jj. This is a strict liability statute that authorizes the National Park Service to recover response costs and damages from a person who destroys, causes the loss of, or injures national park system resources.</p> <p>Sources: 16 USC 19jj; 36 CFR 9</p>
<p>Climate Change</p>	<p>Each bureau and office of the Department of the Interior must consider and analyze potential climate change impacts when undertaking long-range planning exercises, setting priorities for scientific research and investigations, developing multiyear management plans, and making major decisions regarding potential use of resources. The department must adapt its water management strategies to address the possibility of shrinking water supplies and more frequent and extended droughts, conserve and manage fish and wildlife resources, protect cultural and archeological resources, address impacts on American Indians, develop science-based adaptive management strategies for natural and cultural resource managers, and continue to develop ways to reduce the department’s carbon footprint.</p> <p>Sources: Secretarial Order 3289</p>

RELATIONSHIP OF OTHER PLANNING EFFORTS TO THIS GENERAL MANAGEMENT PLAN

Sand Creek Massacre National Historic Site is in Kiowa County in southeastern Colorado. Adjacent properties are privately owned and primarily used for agricultural purposes. The lack of structures and utilities in the area contributes to viewsheds with historic authenticity. Development of adjacent lands could impact park resources. As a result, the National Park Service needs to work cooperatively with surrounding private and public partners to protect site resources and scenic values.

National Park Service Plans

Prior to and following the establishment of the site, NPS staff at the national, regional, and Washington support offices have been actively engaged in a variety of research efforts, scientific and historic studies, and planning processes relating to the Sand Creek Massacre National Historic Site. A list of studies completed to date is included in this document as appendix E. The knowledge gained from these studies informs park management and priorities. Additionally, the implementation of the general management plan will be consistent with overarching National Park Service planning initiatives such as *A Call to Action* and the *Green Parks Plan*.

Local Plans

The Southeast Colorado Heritage Tourism Strategy: A Plan to Promote and Protect the Heritage Resources and Economy of Southeast Colorado, 2008. Facilities and activities that promote and protect the history of the region is one of four goal areas in the plan, and Sand Creek Massacre National Historic Site is one of 11 heritage and tourism sites called out in the plan. Sand Creek

Massacre National Historic Site is one of the only sites in the region providing opportunities for residents and visitors to access its history.

State Plans

The Power of Heritage & Place: A 2020 Action Plan to Advance Preservation in Colorado (State Preservation Plan 2010). This statewide plan identifies a variety of historic resources and monitors the progress of many local preservation efforts across Colorado. The State Preservation Plan is updated every 10 years to document historic resource needs, demonstrate progress toward preservation goals, and identify local action strategies that cumulatively, will help address critical challenges across the state.

Colorado Statewide Comprehensive Outdoor Recreation Plan (SCORP 2008). This statewide plan gathered information on how Colorado residents recreate in the outdoors and identified goals for how the state, counties, and communities can meet future trends. National park system units were identified within the plan as a substantial tourism engine for the state. Management decisions for Sand Creek Massacre National Historic Site affect local economies as well as statewide recreational opportunities.

Multiagency Activities

The protection of resources such as water, wildlife, and scenery require cooperative actions among many public and private entities. Coordinated planning and management for these regional-type resources could include designing structures and other energy infrastructure such as powerlines or wind turbines to be compatible with ongoing efforts to preserve historic landscapes, views, and vistas.

PLANNING ISSUES

During the initial stages of planning for Sand Creek, the National Park Service solicited federal, state, local, and tribal officials; tribal members; and the public for ideas, suggestions, and concerns about Sand Creek Massacre National Historic Site. The National Park Service received many comments identifying issues and management concerns that could affect the future of the site. These included the following:

- What is the appropriate level of development at the site?
- What is the appropriate level of visitor access?
- How can the National Park Service best provide tribal access for traditional, cultural, or historical observances?
- What are the best ways to inform visitors about the history and significance of the site?

The alternatives described in chapter 2 of this plan address these issues and concerns to varying degrees while staying within the boundaries set by laws and policies. The ways in which these questions are addressed help define the differences in the alternatives.

IMPACT TOPICS: RESOURCES AND VALUES CONSIDERED IN THE PLANNING PROCESS

An important part of planning is seeking to evaluate the consequences of making one decision over another. To this end, NPS general management plans are accompanied by full environmental assessments. Environmental assessments identify the anticipated impacts of possible actions on resources and on national historic site visitors and neighbors.

Impact topics serve to focus the environmental analysis and to ensure the relevance of impact evaluation. The impact topics identified for this general management plan are outlined in this section; they were identified based on federal laws and other legal requirements, CEQ guidelines, *NPS Management Policies 2006*, staff subject matter expertise, and issues and concerns expressed by the public, associated tribes, and other agencies early in the planning process (see previous section). Also included is a discussion of some impact topics that are commonly addressed, but that are not addressed in this plan for the reasons given.

IMPACT TOPICS TO BE CONSIDERED

Cultural Resources

Archeological Resources. These would include archeological sites, artifacts, and associated documentation related to the massacre and to the agricultural period dating to the 1950s.

Ethnographic Resources. All the lands currently under NPS jurisdiction comprise a discrete ethnographic landscape. This ethnographic landscape would include landscape features such as topographical features, the stream channel, springs and wetlands, viewsheds, campsites, lodgepole trails, and other landscape features associated with Cheyenne and Arapaho occupation of the site. Tribal trust lands will be included under this topic.

Museum Collections. These collections include artifacts recovered from the massacre site as well as archival records associated with the massacre and the history of southeastern Colorado before and after the massacre.

Natural Resources

Soils. The soils at Sand Creek Massacre National Historic Site could be measurably affected by road, trail, and facility construction, landscape preservation, and vehicular and visitor use. The NPS Organic Act of 1916 and *NPS Management Policies 2006* require the protection and conservation of soil resources that could be affected by actions that would change human use and development patterns in the national historic site. Alternatives presented in this plan could have adverse or beneficial moderate impacts on soils, so this topic is retained for analysis.

Vegetation. *NPS Management Policies 2006* require the protection of vegetation resources that could be affected by management actions. Undeveloped portions of the national historic site are home to a wide variety of vegetation representative of a high plains ecosystem. There is also

concern regarding the spread of nonnative plants and the resultant impact on native species. Changes in livestock grazing, climate (precipitation), nearby tillage, and the ongoing spread of certain nonnative species may change the face of the landscape and the supported plant and animal communities.

Alternatives presented in this plan could affect native and nonnative vegetation, so this topic is retained for analysis.

Water Resources (including floodplains). Surface and subsurface streams provide nutrient transport and habitat components in addition to supporting diverse riparian areas for a wide variety of wildlife. Water resources in the national historic site are protected and managed under the Clean Water Act of 1977 and NPS *Management Policies 2006*.

Executive Order 11988, “Floodplain Management,” requires federal agencies to evaluate the potential effects of actions they may take to avoid, to the extent possible, adverse effects associated with direct and indirect development within a floodplain. NPS staff must determine whether an action would take place in or would affect a floodplain. If so, the responsible official shall prepare a floodplain assessment (statement of findings) that will become part of this General Management Plan / Environmental Assessment.

National Park Service *Management Policies 2006* state that parks will perpetuate surface waters and groundwaters as integral components of park aquatic and terrestrial ecosystems (NPS 2006a). Actions included in the alternatives in this plan have the potential to affect one or more components of water resources in the national historic site, so this topic is retained for analysis.

Wildlife. Sand Creek Massacre National Historic Site provides habitat for a variety of birds and other wildlife. Wildlife concerns at the national historic site include preserving natural habitats in undeveloped areas and maintaining healthy populations. According to NPS *Management Policies 2006*, the National Park Service will strive to recognize, maintain, restore, and protect the inherent integrity of the natural resources, processes, systems, and values of park units, while providing meaningful and appropriate opportunities to enjoy them. The action alternatives in this plan have the potential to affect wildlife populations by changing the level of development and use, so this topic is retained for analysis.

Special Status Species and Critical Habitat. Analysis of the potential impacts on special status species (federal or state endangered, threatened, candidate, or species of concern) is required by the Endangered Species Act, NPS *Management Policies 2006*, the National Environmental Policy Act, and other regulations. Twenty species have been detected at Sand Creek Massacre National Historic Site that are listed in federal or state special status species or candidate species lists. The complete list of species known to occur on the site is listed in appendix C. Because historic site management actions can affect these sensitive populations, this topic is retained for further analysis.

The Endangered Species Act requires designation of “critical habitat” for listed species when it is judged to be prudent and determinable. Critical habitat includes geographic areas that contain the physical or biological features essential to the conservation of the species and that may need special management or protection. Critical habitat designations affect only federal agency actions or federally funded or permitted activities. Federal agencies are required to avoid “adverse modification” of designated critical habitat.

Critical habitat may include areas not occupied by the species at the time of listing, but that are essential to its conservation. The U.S. Fish and Wildlife Service recently listed the lesser prairie-chicken as threatened under the Endangered Species Act of 1973. 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 southeast boundary of the park. For these reasons, critical habitat for the lesser prairie-chicken and other species of concern is retained for further analysis.

Acoustic Environment and Soundscapes. NPS *Management Policies 2006* (sections 4.9 and 5.3.1.7) require NPS managers to strive to preserve the natural condition of the soundscape of a national park system unit. It also requires that noise be managed in order not to create unacceptable impacts on park resources. NPS Director's Order 47: *Soundscape Preservation and Noise Management* describes the resources and management directives further. It distinguishes between the acoustic environment (combination of all the physical resources in a given area) and the soundscape (a component of the acoustic environment that can be perceived and comprehended by humans). Director's Order 47 also provides guidance on how to measure, assess, and minimize noise impacts in national parks.

At Sand Creek Massacre National Historic Site, acoustic environment and soundscapes may be associated with physical, biological, and cultural resources.

The acoustic environment and natural soundscape are important characteristics of the historic site, particularly for the solitude and intrinsic spiritual aspects of the historic site. Development that is proposed in the plan, particularly construction activities, may adversely affect acoustic environment and soundscapes, so this topic is retained for analysis.

Visitor Use and Experience. The NPS Organic Act of 1916 and NPS *Management Policies 2006* require the National Park Service to provide opportunities for the enjoyment of a park unit's resources and values. This enjoyment comes from activities that are appropriate for each park unit. Scenic and historic viewsheds are considered an important contributing factor to a positive visitor experience. Impact topics in this category include visitor experience of national historic site resources, orientation and information, education, and interpretation.

The National Park Service anticipates the expansion of interpretation and educational use of resources at the site and the future research and learning center in Eads. There will likely be an increase of visitors wanting to see this unit. How to protect and interpret the landscape to instill a sense of place reflective of the environment reminiscent of the Sand Creek Massacre needs to be addressed in this general management plan.

This plan identifies appropriate development at the national historic site, increased interpretation of site significance, and new ways of experiencing site resources. Each of these would affect the amount of time visitors spend at the national historic site and their perception of the resources and therefore affect visitor experience, so this topic is retained for analysis.

Socioeconomics. The National Environmental Policy Act requires examination of social and economic impacts caused by federal actions. Management of the Sand Creek Massacre National Historic Site can affect the local and regional economy, so this topic is retained for analysis.

NPS Operations. The alternatives proposed in this plan could affect national historic site operations and facilities. Topics could include staffing, maintenance, commercial services, facilities, emergency response time, ability to enforce NPS regulations and protect national historic site

values, employee and visitor health and safety, management of collections and other resources, or administrative access, so this topic is retained for analysis.

TOPICS DISMISSED FROM FURTHER CONSIDERATION

Cultural Landscapes

Cultural landscapes reveal aspects of our country's origins and development through their form, features, and the ways they were used. Cultural landscapes also reveal much about our evolving relationship with the natural world. There is neither a cultural landscape inventory nor a cultural landscape report for Sand Creek Massacre National Historic Site. In the absence of these reports, potential impacts to the cultural landscape cannot be assessed. The site has been identified as an ethnographic landscape that has profound associations with the Cheyenne and Arapaho peoples. Potential impacts will be assessed under "Ethnographic Resources." The planning team recommends the development of a cultural landscape and ethnographic landscape inventory and report in partnership with representatives of the Cheyenne and Arapaho tribes. Given that under all alternatives, 90% or more of the site falls within one or more resource protection zones, it is anticipated that any potential impacts to the site will be negligible. Therefore, this topic has been dismissed from further consideration.

Historic Structures

There are few historic structures at the site, including building foundations dating from the historic ranching period and the physical remains of Chivington Canal. None of the actions analyzed in the general management plan pose impacts to these resources as the limited development as described in the plan occurs in zones that do not include historic structures. Therefore, this topic has been dismissed from further consideration.

Air Quality

The 1963 Clean Air Act, as amended (42 USC 7401 et seq.), requires federal land managers to protect air quality, and *NPS Management Policies 2006* addresses the need to analyze air quality during planning.

Sand Creek Massacre National Historic Site and the Kiowa County area have generally excellent air quality and meet the "attainment" status for all required air pollutants monitored in the National Ambient Air Quality Standards. The historic site is designated a class II airshed under the 1977 amendments to the Clean Air Act. Under class II, modest increases in air pollution are allowed beyond baseline levels for particulate matter (sulfur dioxide, nitrogen, and nitrogen dioxide) provided that the National Ambient Air Quality Standards established by the U.S. Environmental Protection Agency are not exceeded.

There are no major air pollution sources in or around the national historic site. Principal sources of air pollutants in the area are particulates (dust) and combustion engine emissions from NPS and public vehicles. Two county roads near the site may temporarily increase vehicle emissions into the park unit; however, these emissions quickly dissipate. Driving on the existing unpaved ranch roads within the historic site may also increase fugitive dust in the area, but again, this dust would quickly dissipate. Outside the national historic site, farming equipment and vehicles would continue to stir

up dust on the unpaved roads increasing airborne particulate matter, which would occur at the same levels under any alternative, including the no-action alternative.

Should any of the action alternatives be selected, local air quality might be temporarily and minimally affected by construction-related activities. Hauling material and operating construction equipment would result in increased vehicle emissions in a localized area. Volatile organic compounds, nitrogen compounds, carbon monoxide, and sulfur dioxide emissions would generally disperse fairly quickly from the construction area. This degradation would last only as long as construction activities occurred and would most likely have a negligible effect on regional pollution levels. Fugitive dust from construction could intermittently increase airborne particulate concentrations in the area near the project site, but mitigating measures would reduce potential adverse effects to a negligible level. No long-term impacts on air quality would be expected to occur from implementing any action alternative.

In summary, if any action alternative is implemented, local air quality would be temporarily degraded by dust and emissions from construction equipment and vehicles. Regional air quality would not be more than negligibly affected. For these reasons, air quality is dismissed from further analysis in this document.

Migratory Birds

The Migratory Bird Treaty Act makes it unlawful to pursue, hunt, kill, capture, possess, buy, sell, purchase, or barter for any migratory bird, including its feathers or other parts, nests, eggs, or migratory bird products. In addition, this act serves to protect environmental conditions for migratory birds from pollution or other ecosystem degradation.

According to the *Sand Creek Massacre National Historic Site (Bird) Inventory and Monitoring Final Report*, Sand Creek Massacre National Historic Site is composed of a diversity of habitats in various conditions within the shortgrass prairie that support the life history requirements of species in various seasons. The site is composed of two main habitats: riparian and upland shortgrass prairie. During spring, the riparian area provides necessary stopover habitat for migrating birds allowing them to replenish reserves essential for the flight to their breeding grounds. The report documents several species using the riparian areas at Sand Creek Massacre National Historic Site, including the chestnut-sided warbler, indigo bunting, Swainson's thrush, hermit thrush, clay-colored sparrow, and Lincoln's sparrow, but did not find these species breeding in the area. Stopover locations are limited in the shortgrass prairie and vital to long- and short-distance migratory bird populations. The value of riparian habitat along Big Sandy Creek is important on a local and regional level for bird migration, especially within the shortgrass prairie where stopover habitats are limited and where sound land management decisions can be implemented for the benefit of wildlife (NPS 2005a).

Construction-related noise and activity could potentially disturb transient bird species, but these adverse impacts would be (1) temporary, lasting only as long as construction and (2) negligible because suitable habitat for transient birds is found throughout the region. Additionally, impacts can be further reduced by timing operations, both seasonal and diurnal, to minimize disturbance. Therefore, migratory birds are not expected to be affected by the plan more than negligibly, so this topic is dismissed from further analysis in this document.

Energy Requirements and Conservation Potential

Action alternatives could result in new facilities with inherent energy requirements. In all alternatives, new facilities would be designed with long-term sustainability in mind. The National Park Service has adopted the concept of sustainable design as a guiding principle of facility planning and development (NPS *Management Policies 2006* [9.1.1.7]). The objectives of sustainability are to design facilities to minimize adverse effects on natural and cultural values, to reflect their environmental setting, and to require the least amount of nonrenewable fuels or energy.

Action alternatives could result in an increased energy requirement, but this is expected to be negligible when seen in a regional context. Thus, this topic is dismissed from further analysis in this document.

Environmental Justice

Executive Order 12898, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,” requires all federal agencies to incorporate environmental justice into their mission by identifying and addressing disproportionately high and adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities.

Kiowa County contains both minority and low-income populations; however, environmental justice is dismissed as an impact topic for the following reasons:

- The NPS staff and planning team actively solicited public participation as part of the planning process and gave equal consideration to all input from persons regardless of age, race, income status, or other socioeconomic or demographic factors.
- Implementation of the preferred alternative would not result in any identifiable adverse human health effects. Therefore, there would be no direct or indirect adverse effects on any minority or low-income population.
- The impacts associated with implementation of the preferred alternative would not disproportionately affect any minority or low-income population or community.
- Implementation of the preferred alternative would not result in any identified effects that would be specific to any minority or low-income community.
- The impacts to the socioeconomic environment resulting from implementation of any of the action alternatives would be beneficial. In addition, the NPS staff and planning team do not anticipate the impacts on the socioeconomic environment to appreciably alter the physical and social structure of nearby communities.

Oil, Gas, and Other Subsurface Minerals

Geologically, Sand Creek Massacre National Historic Site lies on an oil and gas play (positive investment) known as the Las Animas Arch. The long history of oil and gas activity includes sporadic discoveries and development of traditional sandstone and limestone reservoirs. Several wells have been drilled, produced, and eventually capped in what is now Sand Creek Massacre National Historic Site. Further exploration and production of these conventional resource plays

will most likely continue. Prediction of the level of development of the shale formations that are present in the Las Animas Arch is more difficult. Shales containing oil and gas have been the subject of intense development across the country including the Niobrara Shale in northeastern Colorado. Horizontal drilling and hydraulic fracturing have made many shale formations economic to develop. The Atoka and Cherokee shales in Kiowa County and neighboring counties are geologically less attractive, but have sparked leasing interest—improving economics and technologies could make the shale plays here viable.

Gas produced in the area has an unusually high percentage of helium (as high as 3% compared to most other gas holding less than 1.5%). Helium is being produced and marketed from a refinery northeast of the site in Cheyenne Wells, Colorado. There are no known mineral extraction operations in the vicinity of the historic site other than several oil/gas wells.

Subsurface mineral rights on the historic site are currently held by individual landowners. Private mineral ownership and a possibility that undeveloped oil and gas resources occur beneath the historic site creates the potential for additional drilling inside the historic site. Owners of nonfederal oil and gas rights within units of the national park system may exercise those rights subject to NPS regulations in Title 36 CFR, part 9, subpart B (9B regulations). The regulations require oil and gas operators in park units to submit a plan of operations for NPS approval. The plan details all activities of the oil and gas development, describes how reclamation will be completed, and provides the basis for performance bonds. The National Park Service uses the information to determine the effects of proposed operations and alternatives on the environment and park management and visitor values. Once approved, the plan serves as the operator's permit. The 9B regulations do not apply if operations are conducted wholly on nonfederally owned or controlled lands or waters.

The National Park Service is currently in the process of revising its 9B regulations. An alternative being considered is to expand the scope of the regulations by making all operations within a unit subject to the regulations. If an operation on nonfederal surface had no reasonable expectation of impacting the federal interest, it would not be subject to NPS operational or reclamation requirements. If it were determined the operation did have a reasonable expectation of impacting federally owned or controlled lands or waters and resources, then it would be regulated to the extent necessary to mitigate such impacts.

Drilling outside the park is occurring and is likely to continue in the future. Potential impacts on cultural and natural resources from drilling and production activities adjacent to the historic site would likely consist of visual and sound intrusions on the cultural landscape and visitor experience. The National Park Service would work with stakeholders to help ensure that any future drilling and/or resource extraction surrounding the historic site would be done in concert with management goals and objectives, and to minimize impacts on park resources and visitor experience. In the event that damage is caused to park resources from activities outside park boundaries, the National Park Service has authority to recover up to treble damages from the company under the Park System Resources Protection Act, 16 USC 19jj. This statute is a strict liability statute that authorizes the National Park Service to recover response costs and damages from a person who destroys, causes the loss of, or injures national park system resources.

The proposed interim site management plan does not alter the manner in which private landowners or lessees could exercise their rights to nonfederal oil and gas resources. Also, future proposals that involve a federal permit would include separate compliance under the National Environmental Policy Act. Because this proposed plan would not affect potential development of oil, gas, and minerals, this topic is dismissed from further analysis in this document.

Utility Rights-of-Way

The individual properties within the site have a variety of easements and rights-of-way for electrical power and telephone service. Only one major underground natural gas pipeline crosses the site in a southwest-northeast heading. Provisions for normal access for periodic monitoring, repairs, and certain future improvements would accompany such a right-of-way. However, site management has no proposals to affect these rights-of-way.

A 3-mile-long electrical powerline also crosses the site. The park proposes to remove the above ground line and power poles and bury the powerline to remove the visual intrusion on the landscape. The park received funding to implement this project, including environmental compliance, in 2013. The park has completed consultation on this project with the Cheyenne and Arapaho tribes and History Colorado (formerly the Colorado Historical Society.) The project will begin in 2014; therefore, the topic of utility rights-of-way is dismissed from further analysis in this document.

Natural or Depletable Resource Requirements and Conservation Potential

Consideration of these topics is required by 40 CFR 1502.16. The National Park Service has adopted the concept of sustainable design as a guiding principle of facility planning and development (NPS *Management Policies 2006* [9.1.1.7]). The objectives of sustainability are to design facilities to minimize adverse effects on natural and cultural values, to reflect their environmental setting and to maintain and encourage biodiversity, to operate and maintain facilities to promote their sustainability, and to illustrate and promote conservation principles and practices through sustainable design and ecologically sensitive use. Essentially, sustainability is the concept of living within the environment with the least impact on the environment.

Through sustainable design concepts and other resource management principles, all of the alternatives analyzed in this document would conserve natural resources and would not result in an appreciable loss of natural or depletable resources. Thus, this topic is dismissed from further analysis in this document.

Night Sky (Lightscapes)

NPS policy requires the National Park Service to preserve, to the extent possible, the natural lightscapes and to seek to minimize the intrusion of artificial light (light pollution) into the night scene (NPS 2006, 4.10). The clarity of night skies can be important to visitor experience as well as being ecologically important. Artificial light sources, both within and outside the national historic site, have the potential to diminish the clarity of night skies.

Following NPS policy, outdoor lighting that is contributing to nighttime light pollution will be replaced with fixtures that do not. In addition, any new outdoor lighting installed as a result of implementing any of the alternatives in this document would be the minimum necessary for safety or security and of a design that prevents light from spreading upward into the sky (best lighting practices). NPS staff would work with surrounding communities on ways to decrease light pollution in the region under any alternative.

In accordance with NPS *Management Policies 2006*, the National Park Service will preserve, to the greatest extent possible, the natural lightscapes of park units, which are natural resources and

values that exist in the absence of human-caused light (NPS 2006a). Improper outdoor lighting can impede the view and visitor enjoyment of a naturally dark night sky. Recognizing the roles that light and dark periods and darkness play in natural resource processes and the evolution of species, the National Park Service will protect natural darkness and other components of the natural lightscape in parks.

To prevent the loss of dark conditions and of natural night skies, the National Park Service will (1) restrict the use of artificial lighting in parks to those areas where security, basic human safety, and specific cultural resource requirements must be met; (2) use minimal-impact lighting techniques; and (3) shield the use of artificial lighting where necessary to prevent disruption of the night sky, the physiological processes of living organisms, and similar natural processes.

With these policies and standard operating procedures in place, none of the actions in this plan would affect natural lightscapes more than negligibly so this topic is dismissed from further analysis in this document.

Prime or Unique Farmlands

In 1980, the Council on Environmental Quality directed that federal agencies must assess the effects of their actions on farmland soils classified by the U.S. Department of Agriculture, Natural Resource Conservation Service, as prime or unique. Prime or unique farmland is defined as soil that particularly produces general crops such as common foods, forage, fiber, and oil seed; unique farmland produces specialty crops such as fruits, vegetables, and nuts.

The Natural Resource Conservation Service lists the following soils as prime farmland if irrigated: Baca-Wiley Complex, Fort Collins sandy loam, Goshen silt loam, Haverson clay loam, and Kim-Harvey-Stoneham loams. While these soils are present on the national historic site, they are not irrigated. According to the Natural Resource Conservation Service, none of the soils in the project area are classified as prime and unique farmlands. Along the east side of Sand Creek there are soils that have high potential as dry cropland and would also be considered “prime” if they were irrigated. Irrigation of these soils is considered unlikely due to the difficulty and expense of obtaining and applying water, and some poor water quality concerns. Some of the areas were irrigated in the 1950s but were taken out of agricultural production following that period and before the lands were acquired by the National Park Service.

Because no areas classified as prime or unique farmlands would be affected by actions in this plan, this topic is dismissed from further analysis in this document.

Urban Quality and Design of the Built Environment

Consideration of this topic is required by 40 CFR 1502.16. The quality of urban areas is not a significant factor in planning for the national historic site because of its rural location. Nonetheless, vernacular architecture would be taken into consideration for any building rehabilitation or new structures built under the action alternatives. Emphasis would be placed on designs, materials, and colors that do not detract from the natural and built environment. Given these considerations, this topic is dismissed from further analysis in this document.

Wilderness and Wild and Scenic Rivers

Wilderness and wild and scenic rivers are congressional designations. There are no such designations in or near the national historic site, and no areas or rivers that would be potentially eligible for designation. Thus, this topic is dismissed from further analysis in this document.

Wetlands

Executive Order 11990, "Protection of Wetlands," requires federal agencies conducting certain activities to avoid, to the extent possible, the adverse impacts associated with destruction or loss of wetlands and to avoid new construction in wetlands if a practicable alternative exists. Wetlands are identified by hydrophytic plants, hydric soils, and flooding frequency. In eastern Colorado, wetlands are usually associated with springs, streams, or surface depressions that collect moisture.

A narrow strip of wetlands (shown on *National Wetlands Inventory* maps) borders Sand Creek throughout the length of the site, consisting of two Palustrine wetland types: Palustrine Emergent Intermittently Flooded / Temporary and Palustrine Forested Intermittently Flooded / Temporary. A third type of wetland classification is found along the creekbed where more flow character is maintained: Riverine Intermittent Streambed Intermittently Flooded. Four small pockets or strips of wetland are also indicated on spring areas within sections 19, 20, and 30, known as Palustrine Emergent Intermittently Flooded. All four wetland classifications were determined by use of the *Classification of Wetlands and Deepwater Habitats of the United States* by Cowardin et al., the system the National Park Service has adopted for wetland determination.

None of the actions proposed in the alternatives pose potential impacts on wetlands at the site. Therefore, this topic has been dismissed from further consideration.

Hazardous Materials

There is no known contamination of soil or water on-site that would meet current state or federal requirements for a cleanup, nor has any contamination been observed through several archeological on-site surveys. The current agricultural uses adjacent to the site normally would not include the use of hazardous materials; therefore, there is no risk of contamination. Should these lands become available for acquisition by the National Park Service, an environmental site assessment would be conducted. Therefore, this topic is dismissed from further analysis in this document.

Climate Change

The ongoing change to global climate patterns is perhaps the most far reaching and irreversible threat the national park system has ever faced. Climate change in this context refers to a suite of changes occurring in the earth's atmospheric, hydrologic, and oceanic systems.

Although climate change is a global phenomenon, it manifests itself differently in different places. One of the effects of global warming is the change in habitat suitability caused by increased temperatures or changes to the precipitation regime affecting the growth or health of plants and animals. Climate change is a long-term phenomenon, and the likelihood that substantial effects will be seen in the next 25 years is fairly certain.

The NPS response to climate change revolves around (1) science, (2) mitigation, (3) adaptation, and (4) communication. At the park level, managers are primarily concerned with mitigation, adaptation, and communication. Mitigation involves reducing the park unit contribution to the causes of climate change. Reduction of the carbon footprint could include replacing current vehicles and motorized equipment with more fuel-efficient or alternative fuel models, adding insulation and weather-proofing to buildings, employing solar panels to generate electricity, etc. Adaptation is the ability of the park to identify and implement effective actions in anticipation of climate change effects, which may determine the continued existence of cultural and natural resources and infrastructure on both a local and regional basis. Communication involves the park's responsibility to provide accurate information about climate change impacts on the public and to underscore the role of the National Park Service and the park as leaders by example.

Effects of Climate Change. Climate change will have some level of impact on both cultural and natural resources at Sand Creek Massacre National Historic Site, along with potential impacts to visitor use patterns and park operations and facilities. The National Park Service recognizes that the major drivers of climate change are outside the control of the agency. However, climate change is included in this document to recognize its role in the changing environment of the national historic site and provide an understanding of its impact.

As stated earlier, an important aspect of this chapter is a description of the resource conditions of the national historic site to better understand the effects of the alternatives. As relevant to each resource topic, this chapter includes a description of past, present, and future trends in resource conditions. Because climate change is an important factor that could influence future trends in resource conditions, it is included as part of the description of the affected environment.

According to the United States Global Change Research Program, the average summer temperature in this area of Colorado will increase about 6 degrees Fahrenheit (°F) by the end of the 21st century using a lower emissions scenario model. Relatively cold days will become less frequent and relatively hot days more frequent.

Projected increases in temperature, evaporation, and drought frequency add to concerns about the region's declining water resources. Because of this, agriculture, ranching, and natural lands, already under pressure due to an increasingly limited water supply, are very likely to also be stressed by rising temperatures.

NPS Guidance related to Climate Change. In a March 2012 memorandum, the NPS director provided specific guidance on applying NPS *Management Policies 2006* in the context of climate change. In this memorandum the director identified the following:

Our management policies are clear that managers cannot be held accountable for impairment from external sources—particularly those of global dimensions—over which managers have no control. However, managers can be held accountable for engaging partners and using the best available science, including climate change science, to inform park planning and implementation of cooperative solutions.

This memorandum further advises that the National Park Service must continue to work to preserve resources unimpaired from activities within the park and to engage fully in cooperative conservation and civic engagement to mitigate impacts arising from external forces, including those of climate change.

The NPS Environmental Quality Division also provides draft interim guidance on considering climate change in NEPA analysis. There are two key questions to consider with respect to climate change: (1) what is the contribution of the proposed action to climate change such as greenhouse gas emissions and the “carbon footprint,” and (2) what are the anticipated effects of climate change on park resources and visitors that are affected by management alternatives? As later described in chapter 2, the proposed actions in all of the alternatives will have negligible impacts to the carbon footprint of Sand Creek Massacre National Historic Site and can therefore be dismissed. Regarding the second question, climate change will affect park resources, with the largest measureable impacts to water resources, vegetation, and wildlife. These impacts are described further in chapter 3.

Department of the Interior Guidance Related to Climate Change. In February 2010, the Department of the Interior Secretarial Order 3289, “Addressing the Impacts of Climate Change on America’s Water, Land, and Other Natural and Cultural Resources,” was issued to ensure that potential climate change impacts are considered and analyzed when undertaking departmental long-range planning exercises.

Contribution to Climate Change. Implementing any of the alternatives described in this plan would have little effect on the cumulative level of greenhouse gas emissions or other climate change factors (e.g., carbon footprint) in the region. Therefore, this topic is dismissed from further analysis. However, there are several management directions that the National Park Service has identified to reduce the site’s contribution to climate change factors such as seeking alternative, renewable energy sources to operate the site. One example is the use of electric and hybrid vehicles to reduce fossil fuel needs and the emission of greenhouse gases. As part of a servicewide initiative, the public would receive educational messages about reducing their impact on the climate. These programs and others would be implemented under any of the alternatives and contribute to national and international efforts to decrease the effects of human-caused climate change.

The uncertainties created by climate change will also make it increasingly difficult to characterize desired conditions related to park resources. As such, the park will need to undertake additional planning activities to identify key conservation targets, identify vulnerabilities to climate change of these key resources, and to develop appropriate adaptation strategies to minimize adverse climate change-related impacts to park resources. It will be essential to use management strategies to build or maintain the resilience of park resources to climate change while collaborating with partners and stakeholders across many jurisdictions to ensure effective resource management and mitigation of the effects of climate change.

In addition, as part of a servicewide climate change communication initiative, the public would receive educational/interpretive messages about the park unit’s response to the effects of climate change and how the public can reduce their impact on the climate. These programs and others would be implemented under any of the alternatives and contribute to national and international efforts to decrease the effects of human-caused climate change.

THE ROAD TO SAND CREEK



ca. 1700–1750

Cheyenne and Arapaho Migration

By 1700, domesticated horses have spread across the West from Mexico to Canada.

The Cheyenne and Arapaho peoples acquire horses around 1750 and begin their migration south and west from the forests and lake country of Minnesota toward the Great Plains and the Rocky Mountains, from a life as sedentary farmers to a new life as buffalo hunting nomads. Between 1815 and 1830, they arrive in what is now Colorado and quickly become the dominant tribes between the Platte and Arkansas Rivers.



1803

The United States and France Conclude the Louisiana Purchase

This vast land deal adds all of French Louisiana to the United States, from the Mississippi and Missouri Rivers to the Rocky Mountains and the Continental Divide.

The Foreign Minister Charles-Maurice Talleyrand tells his American counterparts that, “You have made a noble bargain for yourselves, and I suppose you will make the most of it.” With this agreement, the United States effectively doubles in size, including nearly half of the future state of Colorado.

THE ROAD TO SAND CREEK



1806-1825

The United States Explores its New Territory

The United States launches a series of military expeditions to explore its new territories. Two of these expeditions, led by Lieutenant Zebulon Pike and Major Stephen Long, probe the land that will become Colorado. Pike wanders south of the Arkansas River and is arrested by Spanish troops wary of American trespassers. While detained, he learns about the potential fortunes to be made in the Rocky Mountain fur trade. Major Long, in 1821, writes off the plains of Colorado as the “Great American Desert.” The Cheyennes sign the 1825 Friendship Treaty, the first of many treaties with the United States government.



1821-1871

The Santa Fe Trail

Mexico wins its independence from the Empire of Spain, reverses the ban on trade with the United States, and opens the markets of New Mexico. American traders gamble that they can convey goods over 900 miles of the “Great American Desert.” The Arkansas and Purgatory river valleys provide a trail corridor with a reliable water supply. This mountain route of the Santa Fe Trail becomes part of an international trade network. The partners of Bent, St. Vrain, and Company build a massive fort near the confluence of the two rivers. The Cheyennes and Arapahos assist the company in positioning their “castle on the plains” and engage in years of peaceful trade with their friend William Bent. Bent marries into the Cheyenne tribe and becomes the Cheyenne people’s most trusted counselor. The Comanche, Kiowa, Apache, and other tribes of the southern plains benefit in trade at Bent’s Fort.

THE ROAD TO SAND CREEK



1845-1848

Manifest Destiny, Conquest, and the Mexican-American War

The festering dispute over Texas brings the United States and the Republic of Mexico to the brink of war. The U.S. "Manifest Destiny" doctrine to expand throughout and dominate North America heightens tensions with Mexico. U.S. and Mexican troops in Texas clash on disputed ground in the spring of 1846. The war ends disastrously for Mexico. Texas, California, Arizona, Nevada, Utah, and other areas of the Southwest are lost to the United States. General Stephen Kearny and his Army of the West depart from Bent's Fort to invade and conquer New Mexico. The trading company is now a leader of Manifest Destiny and the claim of divine guidance that justifies conquest of the West.



1848-1851

The California Gold Rush, Westward Expansion, and the 1851 Treaty of Fort Laramie

With the victory over Mexico and the discovery of gold in California, the steady stream of Americans migrating to the West becomes a flood tide that brings with it devastating environmental changes. American officials convene a great peace council in 1851 with over 10,000 Indians from at least eight Plains nations at Fort Laramie. Tribal leaders agree to allow safe passage for the emigrant trains in exchange for treaty lands protected from American encroachment. The treaty recognizes nearly 75,000 square miles (including approximately 40,000 square miles in Colorado from the front range of the Rocky Mountains to eastern Wyoming, Nebraska, and Kansas, and from the North Platte River to south of the Arkansas River) as the domain of the Cheyenne and Arapaho tribes.

THE ROAD TO SAND CREEK



1858-1861

The Colorado Gold Rush and the 1861 Treaty of Fort Wise

The 1859 "Pike's Peak gold rush" brings 100,000 emigrant "59ers" and more environmental trauma to the Front Range of Colorado. Most of the new arrivals are squatters on Cheyenne and Arapaho lands that were recognized in the Fort Laramie Treaty. American officials in the soon to be established Colorado Territory invite the tribes back to the treaty table at a site near Bent's New Fort in an attempt to formalize the theft of these tribal lands. The 1861 Fort Wise Treaty reduces the tribes' holdings to less than one-tenth of what they had been granted at Fort Laramie. The tribes' more militant factions reject the treaty for the cynical land grab that it is. The continued arrival of settlers heightens tensions, distrust, and fear.

← THE ROAD TO SAND CREEK →

ATTENTION!
INDIAN
FIGHTERS

Having been authorized by the Governor to raise a
Company of 100 day

U. S. VOL CAVALRY!

For immediate service against hostile Indians. I call upon all who wish to engage in such
service to call at my office and enroll their names immediately.

**Pay and Rations the same as other U. S.
Volunteer Cavalry.**

Parties furnishing their own horses will receive 40c per day, and rations for the same,
while in the service.
The Company will also be entitled to all horses and other plunder taken from the Indians.

Office first door East of Recorder's Office.
HAL SAYRE.

Central City, Aug. 13, '64.

1861-1864

The Civil War, Railroads, and Dreams of Glory

The Civil War erupts and Colorado territorial officials raise troops for service without clear federal authorization to do so. The "Pikes Peakers" of the 1st Colorado Regiment play a pivotal role in turning back a Confederate invasion of New Mexico. Recently obscure figures like the Methodist minister John Chivington become war heroes with political aspirations. The territory's political and business elite conclude that railroads are essential to Colorado's future and the Cheyenne and Arapaho tribes are impediments to that future; relics of a past that is rapidly disappearing.

← THE ROAD TO SAND CREEK →



1864

An Army in Search of a War—The Camp Weld Conference and the Prelude to a Massacre

Rumors spread that the plains tribes are now “Red Rebels” allied with the Confederacy to drive the whites off the plains of Colorado. Territorial Governor John Evans issues orders that Indians who do not place themselves under the protection of the military are to be shot on sight. After a white family is killed by Indians outside Denver, John Evans alerts Washington that a bloody Indian war is imminent. He receives authority to raise a new regiment—the 3rd Colorado, U.S. Volunteer Cavalry. Major Edward Wynkoop, commander at Fort Lyon, receives a letter dictated by Chief Black Kettle to George Bent and Edmond Guerrier requesting peace talks in the Smoky Hill country of Kansas. Wynkoop escorts Cheyenne and Arapaho chiefs to Denver for a conference with Evans and Chivington. The chiefs are met with harsh questions and veiled threats before they are dismissed and sent back to the Arkansas Valley. They depart, believing they will be safe if they come in to Major Wynkoop at Fort Lyon. By November, bands of the two tribes are camped at Sand Creek. John Chivington deploys the new 3rd Colorado Cavalry for a winter campaign against “hostile Indians.”

HISTORICAL OVERVIEW

“I long to be wading in gore.”

Colonel John M. Chivington
Commander, Military District of Colorado

After the Camp Weld Conference (on the outskirts of Denver) in September 1864, Arapaho chiefs Little Raven and Spotted Wolf, with about 550 Arapahos (and a few lodges of Cheyennes) who had moved to within a couple miles of Fort Lyon, were in dire circumstances. The two or three issues of “prisoners’ rations” from the military and their annual annuity goods did not begin to make up for the lack of fuel, game, and forage on the barren stretches north of Fort Lyon. After councils with Major Scott Anthony and Major Edward Wynkoop in mid-November, most of the Arapahos under Chief Little Raven left Fort Lyon to move about 60 miles downstream on the Arkansas River. They hoped to find game nearer the buffalo range and forage for their starving animals. Other bands moved north to Sand Creek camp on Sand Creek to camp at a traditional spot on the lodgepole trail that led from the Big Timbers north to the Smoky Hill River. This camping ground was within the reservation defined in the Camp Wise treaty. The Indians trusted Major Wynkoop, whom they called the “Tall Chief.” He had proved himself a brave man when he went to the Smoky Hill River in September, as Chief Black Kettle said, “as if through a strong fire,” to meet with the tribes when they requested a council. The Cheyenne and Arapaho people respected courage, and Wynkoop had kept his word when he took the chiefs to Denver for the unsettling talks at Camp Weld.

The people on Sand Creek and those with Little Raven were under no illusion that a lasting peace was imminent, but they had been assured that, until a decision was made for war or peace by Major General Samuel Curtis, Commander of the Department of Kansas, they would be under the protection of the military. They were hopeful of Governor John Evans’s guarantee that they would have peace if they obeyed the soldier chiefs at Fort Lyon. As the territory’s ex-officio Superintendent of Indian Affairs, Evans’s authority exerted substantial influence on all matters related to Indian policy in the territory. The tribe’s chiefs followed the instructions that Governor Evans and Colonel John M. Chivington had given them at the Camp Weld Conference in September.

On November 26, 1864, Major Wynkoop departed Fort Lyon, Colorado Territory, for his new command at Fort Riley, Kansas. He left with some assurance that a truce had been secured, at least temporarily, along the Arkansas River. The officers, who until recently had served under his command, and over two dozen Arkansas Valley ranchers and farmers commended the major for his achievements in quieting tensions on the Colorado plains. Wynkoop left his former post confident that he had established some level of equilibrium between Colorado officials and Cheyenne and Arapaho leaders and that peace could be maintained for the foreseeable future. He trusted that his former commanding officer and mentor, Colonel John M. Chivington, would be an advocate for his policies.

Two days later, Captain Silas Soule led a company of the 1st Colorado on patrol from Fort Lyon to investigate the source of campfires that Captain Soule and another officer had spotted the night before. Soule was told by a man on the trail that a column of soldiers was not far behind him. Captain Soule was shocked to discover that the column included nearly 700 troops led by Colonel Chivington. The troops were equipped for a major engagement, including two pieces of artillery. The colonel brusquely turned aside questions from Captain Soule and instead questioned the captain about whether word of his column's advance had reached Fort Lyon. He seemed pleased to hear that his arrival was unknown among the fort's personnel. Soule was caught off balance by the colonel's tone and wondered why Chivington was so intent on maintaining secrecy about the march.

Several companies in the column belonged to the 3rd Colorado Cavalry Regiment, 100-day volunteers recruited for service during the perceived emergency of an Indian war in the summer. The recruits were drawn from Denver and nearly two dozen towns and mining camps along the Front Range. The men were farmers, miners, laborers, teamsters, merchants, craftsmen, and professionals who represented the territory's diverse population. Many residents of Denver who watched their half-hearted training at Camp Evans mocked them as "the Bloodless Third." As the end of their enlistments grew nearer, the troops hoped for an opportunity to establish a new identity in the territory.

Soule learned the answer to Chivington's secret march at Fort Lyon shortly after the colonel met with Major Scott Anthony, Major Wynkoop's successor at Fort Lyon. Colonel Chivington announced his plans for a sharp, vigorous action against the Indians in the vicinity, which included the camp at Sand Creek. According to later testimony, Major Anthony exhibited all the resolve of driftwood, first resisting, then endorsing an attack at Sand Creek. He eventually caught up with the current generated by Chivington's large force and shortly announced to some officers of the 3rd Regiment that he, too, had planned to move against the people on Sand Creek and "clean them out."

The officers at the fort, veterans of the 1st Colorado, had other ideas about the march. Many of them had been members of the Smoky Hill expedition in September and firmly believed that Black Kettle had prevented a bloody battle with the Dog Soldiers and probably saved their lives in the bargain. They had all come to know the people who had camped around the fort that autumn. They wanted no part of an expedition to Sand Creek that in their minds was nothing more than premeditated murder. One officer presented his discharge papers rather than participate. When Lieutenant Joe Cramer expressed the concerns of the officers to Colonel Chivington and Major Jacob Downing, Chivington became enraged and proclaimed that it was "right and honorable to use any means to kill Indians that would kill women and children," and concluded by saying, "damn any man who is in sympathy with Indians."

Silas Soule was so outraged that other officers made sure he and Chivington did not meet face to face. When Chivington heard of Soule's criticism of the plan, he threatened his arrest. Major Anthony eventually persuaded Captain Soule that the real intent of the campaign was an attack on the Dog Soldier camps farther north and an offensive against the Kiowas and Comanches. With this assurance, Soule reluctantly agreed to participate.

A few hours after nightfall, the imposing force of about 675 United States Volunteers, made up of detachments of the 1st Colorado Cavalry (nearly 250 men) and 425 troops of the newly formed 3rd Colorado Cavalry Regiment commanded by Colonel George Laird Shoup,¹ moved out from Fort Lyon heading northeast toward the big southern bend on Sand Creek. They were guided by former mountain man James Beckwourth, a living legend in the West, and about a dozen other scouts. Robert Bent, the mixed-blood oldest son of William Bent whom Chivington had compelled into service, either as a guide or to enable the troops to keep an eye on his whereabouts. Bent was likely unaware that he was escorting an armed force to attack his mother's people at Sand Creek. After a wearying ride through a frigid November night, the troops arrived just before sunrise about a mile south of the big camp of about 140 to 150 lodges in a bend of Sand Creek. In the camp were an estimated 700 to 750 people led by 20 chiefs or headmen. As many as 2,000 horses ranged in herds outside the camp.

As Tuesday morning approached, the people in the camps began rising and going about their chores in the dark just before dawn. Women revived fires with the diminishing supply of driftwood and buffalo chips and prepared meals, while the teenagers, including Tomahawk, Little Bear, and Kingfisher, started out to tend their horse herds. Some women carried fresh water in from springs north and east of their camps. George Bent and Ed Guerrier remained covered up under their blankets and buffalo robes.

As the column prepared to deploy, Chivington called an officers' council. He admonished them not to forget the "women and children killed on the Platte River that year," an emotional appeal to soldiers who had feared that the conflicts in Kansas and Nebraska would spill over into Colorado. According to testimony, Colonel Chivington instructed the troops to take no prisoners. From here, the cavalry split almost in half, either going up the creek valley or west to the left flank after the horse herds. Two howitzer batteries briefly followed the 1st Regiment up the stream's floodplain, but lagged behind. Several detachments of the less disciplined and poorly mounted 3rd Regiment were detailed to capture pony herds on the rolling plains a mile or two west of the village, above the low bluffs. It appeared that they would remain "bloodless" even after the day's events.

¹ George Shoup went on to become Governor of Idaho and then U.S. Senator for the state. His statue is in Statuary Hall in the United States Capitol. His biography on the Architect of the Capitol's website states that as colonel of the 3rd Colorado Cavalry, he took part in the "battle" of Sand Creek.

In and near the village, the women and some teenage boys out with the herds noticed the clamor raised by over 600 horses and four artillery pieces. At first, the light was so dim that the troops were mistaken as buffalo. But horse herd tenders and women gathering fuel issued a new alarm. Soldiers were coming. Black Kettle raised an American flag given to him by the U.S. Indian agent to the Cheyennes a few years before and a small white flag on a lodge pole as instructed. The men in the camp, conditioned by training and instinct, went for their weapons and horses. Some women and children with the same lifetime of experience began moving upstream, away from the camps. Others in the village gathered around Black Kettle's lodge and his flags. As the troops came closer, a delegation of chiefs including the Cheyennes' Black Kettle, White Antelope, Stands-in-the-Water (or Standing Water), and Arapaho Left Hand proceeded out to meet the oncoming cavalymen. They had been waiting for terms from General Curtis. Perhaps these were the general's messengers.

For Cheyenne warrior Big Head, a cavalry column approaching a sleeping village conveyed all the messages he needed. He mustered 20 to 30 men west of the bluffs in an attempt to capture ponies but was unable to do so. They then moved to disrupt the deployment of troops on the soldiers' left flank. Cheyenne warriors were at least as good fighting on foot as mounted. George Bent and his party of "middle-aged men" ran into overwhelming forces, turned, and fled upstream.

Black Kettle drew fire at the beginning of the attack and throughout the day, but was not hit. He turned and retreated from the firing. Left Hand was mortally wounded and reportedly died about three days later in the camps on the Smoky Hill River. George Bent reported years later that White Antelope began singing his death song, "Nothing lives long only the earth and the mountains," and continued until he was shot down. The artillery began firing over the village, increasing the level of terror. The Indians panicked and ran faster up the creekbed. Some soldiers recalled that the creekbed appeared to "crawl with humanity."

The 1st Colorado veterans under Captain Soule and Lieutenant Cramer did their best to keep clear of the slaughter. Some of them later claimed that they fired high deliberately and the artillerymen for 1st Lieutenant Baldwin's Battery apparently fired their howitzers with "little or no effect" and it may have been their shells that prematurely exploded in the air. For these men and their officers, it was clear that their honor and word to these Indians had been broken by those in command that day.

The troops declared the village cleared an hour or so after the attack began. The action now moved upstream to the sand pits that the retreating Cheyennes had dug in desperation. Soldiers surrounded the dug pits, then fired into them with pistols, rifles, muskets, and carbines.

Howitzers were brought up and fired into the pits at almost point-blank range in what one soldier later called a "carnival of carnage." Over 100 men, women, and children were killed. In the vicinity of the village a dozen or more elders had died, including White Antelope, Stands in the Water, Lone Bear, and his wife. Another 20 to 30 had been killed with Big Head in the desperate holding action west of the village. By the time the bloody fight had ended, command and control of the poorly trained and inexperienced 3rd Regiment evaporated. The 3rd Regiment degenerated into a mob, and the attack into a riot. Now, the 3rd Colorado had what they hoped for, the chance to get bloody. In the chaos soldiers were caught in cross-fire as they pursued fleeing groups and individuals.

George Bent, Black Kettle, Little Bear, and about 100 others had run upstream when the attack began and dug in about 1 to 2 miles farther than the first two groups. There they withstood siege all day from about 200 troops, holding off the attacking soldiers with their few firearms and bows and arrows. They likely survived because the artillery had run out of ammunition. Bent was shot through the hip but kept on fighting. Black Kettle and Little Bear miraculously remained unscathed. Everyone else in the pit was wounded.

Soldiers chased Cheyennes and Arapahos across the prairies to the northeast, up the creek, and to the west well into the afternoon. Captain Jay J. Johnson noticed that warriors and others were hiding in the sand above the village and started looking for disturbed sand and shooting into the buried people as if it were a game. On the plains to the northeast, soldiers chased individual Indians and pony herds for 8 to 10 miles. One warrior killed Private McFarland, Company D, 3rd Regiment, in hand-to-hand combat by stabbing him in the chest with a handful of arrows. The warrior, in turn, was killed immediately by troops coming to McFarland's aid. These troops also found women wounded or feigning death out on the prairie and shot them where they lay.

A group of soldiers gathered up two or three women and their children and were bringing them in as prisoners when they were met by Lieutenant Harry Richmond who stopped them and asked what they were doing. When they explained their actions, the lieutenant said that no prisoners were to be taken, then drew his pistol and shot each of the women and children point blank. The soldiers stood frozen, shell-shocked in disbelief.

The mutilations of the Cheyenne and Arapaho bodies stopped with nightfall but resumed the next day. Many of the dead had several "scalplocks" taken from their heads. Ears and sexual body parts of men and women were excised. Jewelry was cut from their fingers and hair. Officers and soldiers alike committed the atrocities. One scalplock was displayed in Denver City Hall for many years until turned over to the Colorado Historical Society and eventually returned to tribal representatives.

Survivors in the pit with George Bent and Black Kettle began either going back down the creek under cover of darkness to find dead and wounded relatives or trudging to the northeast and camps on Smoky Hill River. Black Kettle found his wife. She'd been shot or wounded by fragmentation nine times, but survived to reveal her wounds to the Little Arkansas treaty commissioners in 1865.

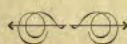
George Bent, wounded in the hip and without adequate clothing, reported later that it was the most miserable night of his life as they made their way north. As the night wore on, help arrived from the Smoky Hill camps and some of the rescued horses were brought for the survivors to ride.

The next day, Wednesday, November 30, Colonel Chivington assigned several officers and the trader John Smith to identify and count the dead. Chivington later reported hundreds of warriors had been killed among a population of over a thousand in the village. His staff would concur, reporting numbers from 300 to 800 killed. Other soldiers counted only a hundred to as many as 150 bodies. Reports ignored, downplayed, or denied that women, children, and elderly noncombatants had also been killed. Some soldiers rationalized that it was impossible to tell the difference between male and female in the heat of battle. Some further excused killing women as an afterthought, saying they fought the soldiers with firearms or whatever weapon was available. Some witnesses reported that the women exposed their breasts so the soldiers would know they were women, but were killed anyway. The largest number of Cheyenne and Arapaho killed were noncombatants—murdered in the pits upstream from the village.

The number of soldier casualties varies. Records show at least 16 were killed and/or died of their wounds and as many as 78 were wounded. Several of the wounded or killed may have been shot by their own men in the cross-fire that followed the mayhem after the initial attack.

Chivington made a faint gesture of leading the column down the Arkansas to find Little Raven's band before breaking off the march and returning to Denver. The "Bloody Third" rode in triumph through the streets of Denver, displaying scalps and other body parts. A string of scalps was displayed in a Denver theater to thunderous applause. Shortly after, however, whispers reported a different version of the attack that Colonel Chivington claimed had killed 500 warriors and broken the back of the Cheyenne nation. The word "massacre" was uttered guardedly as some veterans reported the horrors they had witnessed. Captain Silas Soule reported in a letter to Edward "Ned" Wynkoop that "the massacre lasted six to eight hours" and predicted that "I expect we will have a hell of a time with Indians this winter." By the end of December, the Black Hawk - Daily Mining Journal reported, "A good many of the Third Regiment boys are returning to their old haunts. Some of them do not scruple to say that the big battle of Sand Creek was a cold-blooded massacre. "... Many stories are told and incidents related by the actors in the bloody scene, which are too sickening to repeat."

Despite the catastrophe that had befallen the people at Sand Creek, the Cheyenne and Arapaho nations survived. The stunned survivors related the nightmare that occurred along what they called the Little Dry River to their stunned audience in the camps on the Smoky Hill River. All the people in the camps, like Silas Soule, knew something that Chivington, Evans, and most of the white population of Colorado did not. The war on the Colorado plains had not ended that night. It really had just begun on that day of horror in the shallow valley of Sand Creek.



← SAND CREEK LEGACY →



1864-1865

“We have raised the Battle Ax until Death”

War erupts on the Great Plains in the wake of the Sand Creek Massacre.

An enormous force of Cheyenne, Arapaho, and Sioux warriors obliterate a detachment of U.S. troops, then attack and destroy the railroad town of Julesburg in northeastern Colorado. Denver is temporarily cut off from the outside world. Congress and the U.S. Army investigate Sand Creek and issue damning indictments of Chivington’s conduct. Territorial Governor Evans is allowed to resign. Silas Soule reveals details of the massacre during his testimony.

He is gunned down near his home in Denver a few months later. Many in Colorado concluded that he was killed in revenge for his testimony against Chivington.

SAND CREEK LEGACY

TREATY WITH THE CHEYENNE AND ARAPAHO, 1865.

889

ARTICLE 6. The United States being desirous to express its condemnation of, and, as far as may be, repudiate the gross and wanton outrages perpetrated against certain bands of Cheyenne and Arrapahoe Indians, on the twenty-ninth day of November, A. D. 1864, at Sand Creek, in Colorado Territory, while the said Indians were at peace with the United States, and under its flag, whose protection they had by lawful authority been promised and induced to seek, and the Government being desirous to make some suitable reparation for the injuries then done, will grant three hundred and twenty acres of land by patent to each of the following-named chiefs of said bands, viz: Moke-

Grants of lands in reparation for outrages against certain bands, to certain chiefs of bands.

890

TREATY WITH THE CHEYENNE AND ARAPAHO, 1865.

Conditions of grants.

Lands, how to be selected.

Further compensation for property lost.

ta-ve-to, or Black Kettle; Oh-tah-ha-ne-so-weel, or Seven Bulls; Alike-home-ma, or Little Robe; Moke-tah-vo-ve-hoe, or Black White Man; and will in like manner grant to each other person of said bands made a widow, or who lost a parent upon that occasion, one hundred and sixty acres of land, the names of such persons to be ascertained under the direction of the Secretary of the Interior: *Provided*, That said grants shall be conditioned that all devises, grants, alienations, leases, and contracts relative to said lands, made or entered into during the period of fifty years from the date of such patents, shall be unlawful and void. Said lands shall be selected under the direction of the Secretary of the Interior within the limits of country hereby set apart as a reservation for the Indians parties to this treaty, and shall be free from assessment and taxation so long as they remain inalienable. The United States will also pay in United States securities, animals, goods, provisions, or such other useful articles as may, in the discretion of the Secretary of the Interior, be deemed best adapted to the respective wants and conditions of the persons named in the schedule hereto annexed, they being present and members of the bands who suffered at Sand Creek, upon the occasion aforesaid, the sums set opposite their names, respectively, as a compensation for property belonging to them, and then and there destroyed or taken from them by the United States troops aforesaid.

1865

“Being Desirous to Express Its Condemnation of Gross and Wanton Outrages”

United States officials persuade a handful of Cheyenne and Arapaho chiefs to meet on the Little Arkansas River in Kansas and negotiate and sign a new treaty in October 1865.

Under the terms of the Treaty of the Little Arkansas, the U.S. condemns and repudiates “the gross and wanton outrages perpetrated against certain bands of Cheyenne and Arapahoe Indians” at Sand Creek. In Article 6 of the treaty, the government effectively assumes responsibility for the massacre by committing to compensate those who lost property at Sand Creek. Bent family members were granted lands south of the Arkansas River.

The reparations to most other descendants have never been paid.

← SAND CREEK LEGACY →



1865-1867

Railroads and Buffalo Hides

Despite the new treaty, fighting continues sporadically on the plains of Colorado, Oklahoma, Kansas, Nebraska, and Wyoming over the next several years. The Cheyenne Dog Soldiers and their allies fight desperately to prevent railroad construction from destroying their hunting grounds along the Smoky Hill River. Buffalo are slaughtered by the millions for the next two decades, their hides in demand as machinery belts. Yet another treaty with the peace factions of the tribes is signed on Medicine Lodge Creek in Kansas in 1867. Under the terms of this treaty, the Cheyenne and Arapaho tribes relinquish claims to lands within Kansas, including their traditional Smoky Hill hunting territory. The tribes' warrior factions refuse to recognize the treaty.

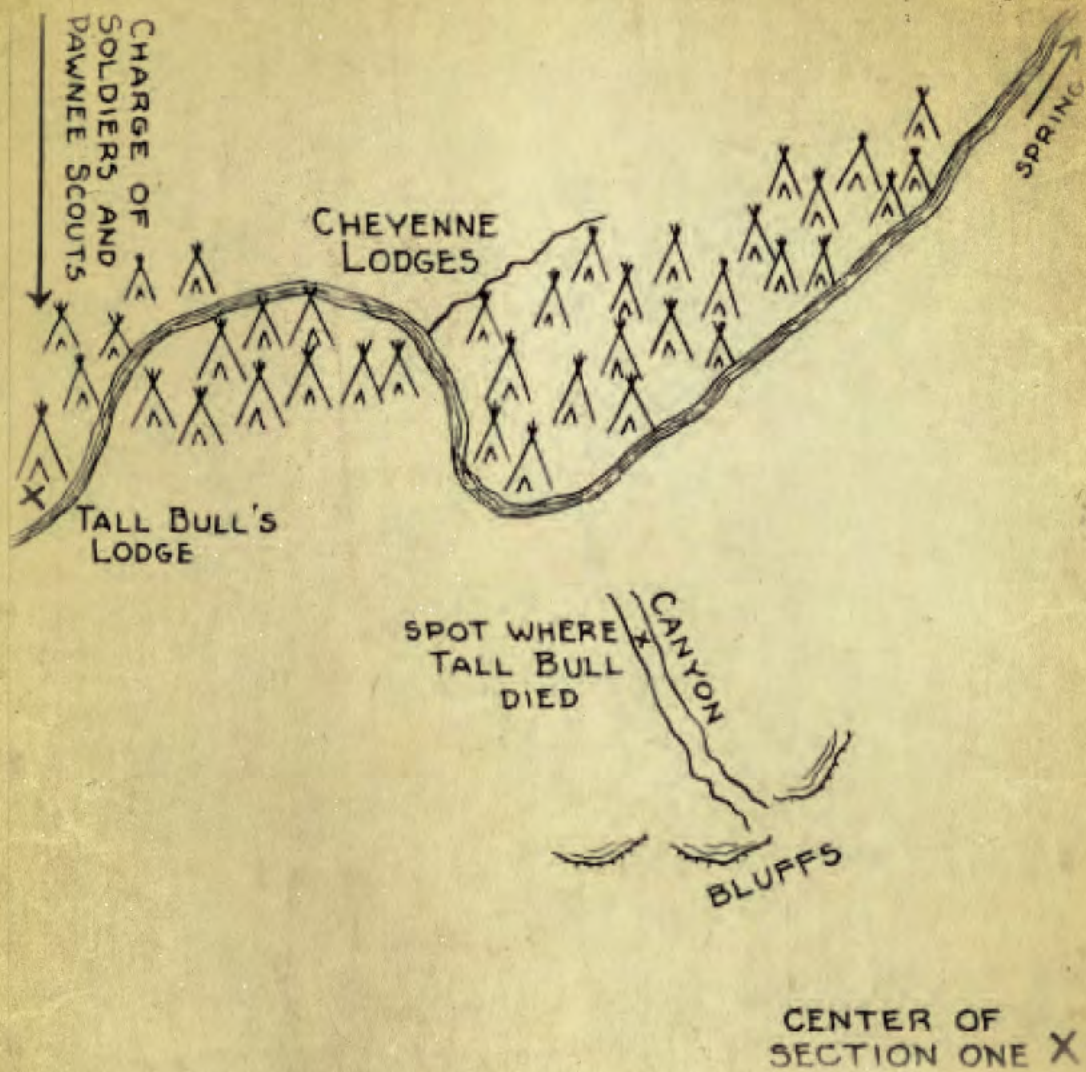


1868

Death of Black Kettle

The Dog Soldiers and their allies nearly obliterate a force of U.S. Army scouts, but the charismatic warrior, Roman Nose, is slain in a battle on a tributary of the Republican River in northeastern Colorado in late summer of 1868. A few months later, on November 27, nearly four years to the day after Sand Creek, the 7th U.S. Cavalry under Lt. Col. George A. Custer launches a surprise attack on Chief Black Kettle's village on Washita Creek in what is now Oklahoma. The village is destroyed. Black Kettle, a staunch peace advocate to the end, is killed, along with his wife and over 100 other Cheyenne men, women, and children. General Phillip Sheridan reportedly remarks on hearing of Black Kettle's death, "So the old scoundrel is dead at last." The Comanche, Kiowa, Cheyenne, and Arapaho tribes continue the fight to save the last buffalo herds on the southern plains.

SAND CREEK LEGACY



1869

Dog Soldier Exile

The remaining bands of Dog Soldiers under their headman Tall Bull retreat from Colorado toward Wyoming to join their Northern Cheyenne kinsmen. A powerful column of U.S. Cavalry supported by Pawnee scouts intercepts them at Summit Springs in northeastern Colorado. Dozens of Dog Soldiers and family members are killed in the fighting. William F. "Buffalo Bill" Cody builds a national reputation based in part on his claim that he slew Tall Bull in the fighting, but tribal tradition remembers that the legendary Dog Soldier survived the battle. Eighteen years have passed since the 1851 Fort Laramie Treaty granted the tribes nearly half of what later became the state of Colorado. After Summit Springs, no Cheyennes or Arapahos live within the territory. The tribes' claims to Colorado have been extinguished by the irresistible forces of conquest.

← SAND CREEK LEGACY →



1869-1880

Resistance and Resilience

The Cheyennes and Arapahos fight on with the Sioux in Wyoming, Dakota, and Montana in an effort to maintain their freedom on the western plains. The insatiable hunger for land and gold pushes the tribes into new conflicts with U.S. troops. The tribes win a major victory over their old enemy Lt. Col. George A. Custer at the Battle of the Little Bighorn, but are soon overwhelmed. The Cheyennes fight on until 1880. With the buffalo nearly wiped out, native peoples are pushed into confinement. The leaders of the Cheyenne resistance are incarcerated in wretched conditions at Fort Marion, Florida. An 1869 presidential executive order authorizes the creation of Indian reservations. From Texas to Canada, the Arapaho, Cheyenne, Comanche, Kiowa, Sioux, and other tribes of the plains and mountains are swept up and forced onto reservations—Indian islands in a vast sea of whites.



1887

“Kill the Indian and Save the Man”

With their lands taken and the buffalo nearly extinct, the tribes are reduced to utter dependence on the U.S. government. Some whites fear (while others hope) that the Indian people face extinction. In an attempt to assimilate Indian peoples into white society, Congress, in 1887, passes the Dawes Act to distribute reservation lands into 160-acre holdings and force Indians to give up communal claims on reservation lands. Tribal religion and cultural practices are outlawed, tribal government eliminated, and reservation lands reduced by over 60%. Indian children by the thousands are separated from their families and sent east to be raised and educated as whites in boarding schools. The United States incredibly finds a way to inflict additional misery on Indian peoples. The ability to justify the continued assault on native culture and identity is the enduring legacy of Manifest Destiny.

◀ SAND CREEK LEGACY ▶



1870-1920

The Civil War and the Invention of Memory

Colorado develops rapidly with the completion of the Denver Pacific and Kansas Railroads.

Denver grows from a dusty plains town to become one of the largest cities in the country. With the buffalo nearly gone, the Colorado plains are transformed into a cattle ranching empire.

Farming triggers a population boom and the plains are defined by numerous new counties. The massacre is redefined as a battle in the list of engagements on Colorado's Civil War monument in front of the State Capitol. The memory of the Sand Creek massacre is obscured and the Cheyennes and Arapahos are remembered in Colorado largely as street and county names on the lands once recognized as theirs.

← SAND CREEK LEGACY →



1900-1950

The Legacy of George Bent

George Bent provides invaluable information to researchers about the Cheyennes and preserves the history and culture of his people, including his eyewitness accounts of the Sand Creek massacre and the Plains wars. The tribes regain political autonomy in the 1930s and press for reparations promised under the Treaty of the Little Arkansas.

Sand Creek descendants prevent the naming of a new boulevard in Denver after John Chivington.

The Colorado State Historical Society placed a small stone marker on the bluff overlooking what has become the accepted massacre site. The marker reads simply, "Sand Creek Battleground. November 29 and 30, 1864."

← SAND CREEK LEGACY →




1950–Present

The Persistence of History

Government policies in the 1950s and 1960s force tribal members off the reservations and into urban areas in a continuation of assimilation policies. Indians in the cities encounter the same virulent racism they have come to expect in the towns bordering the reservations. The publication of Dee Brown's *Bury My Heart at Wounded Knee* in 1970 reawakens the nation to the injustices perpetrated on American Indians. The massacre at Sand Creek features prominently in this compelling account of the conquest of the American West. Empowered tribal members retake control of their own affairs and press for a congressional report regarding treaty interpretation, which results in the creation of the American Indian Policy Review Commission and publication of a two-volume report in 1977. Ben Nighthorse Campbell becomes the first American Indian member of Congress. Campbell spearheads legislation redressing the wrongs of the past. Custer Battlefield becomes Little Bighorn Battlefield National Monument and in 2000, Senator Campbell sponsors a bill that establishes "Sand Creek Massacre National Historic Site" as a unit of the national park system. The National Park Service assumes management of the site in 2007 and with the Cheyenne and Arapaho peoples, begins planning for the future of Sand Creek.

CHAPTER 2

ALTERNATIVES INCLUDING THE PREFERRED ALTERNATIVE



Conquest and Expansion Manifest Destiny and the Mexican-American War

*It is our manifest destiny to overspread the continent allotted by Providence
for the free development of our yearly multiplying millions.*

John O'Sullivan, writing in the "Democratic Review" – 1845

*The United States will conquer Mexico, but it will be as the man who
swallows arsenic which brings him down in turn. Mexico will poison us.*

Ralph Waldo Emerson

FORT LARAMIE TREATY OF 1851

Articles of a treaty made and concluded at Fort Laramie, in the Indian Territory, between D. D. Mitchell, superintendent of Indian affairs, and Thomas Fitzpatrick, Indian agent, commissioners specially appointed and authorized by the President of the United States, of the first part, and the chiefs, headmen, and braves of the following Indian nations, residing south of the Missouri River, east of the Rocky Mountains, and north of the lines of Texas and New Mexico, viz, the Sioux or Dahcotahs, Cheyennes, Arrapahoes, Crows, Assinaboines, Gros-Ventre Mandans, and Arrickaras, parties of the second part, on the seventeenth day of September, A. D. one thousand eight hundred and fifty-one.

Article I

The aforesaid nations, parties to this treaty, having assembled for the purpose of establishing and confirming peaceful relations amongst themselves, do hereby covenant and agree to abstain in future from all hostilities whatever against each other, to maintain good faith and friendship in all their mutual intercourse, and to make an effective and lasting peace.

Article II

The aforesaid nations do hereby recognize the right of the United States Government to establish roads, military and other posts, within their respective territories.

Article III

In consideration of the rights and privileges acknowledged in the preceding article, the United States bind themselves to protect the aforesaid Indian nations against the commission of all depredations by the people of the said United States, after the ratification of this treaty.

Article V

The territory of the Cheyennes and Arrapahoes, commencing at the Red Butte, or the place where the road leaves the north fork of the Platte River; thence up the north fork of the Platte River to its source; thence along the main range of the Rocky Mountains to the head-waters of the Arkansas River; thence down the Arkansas River to the crossing of the Santa Fé road; thence in a northwesterly direction to the forks of the Platte River, and thence up the Platte River to the place of beginning. It is, however, understood that, in making this recognition and acknowledgement, the aforesaid Indian nations do not hereby abandon or prejudice any rights or claims they may have to other lands; and further, that they do not surrender the privilege of hunting, fishing, or passing over any of the tracts of country heretofore described.

INTRODUCTION

Many aspects of the desired future condition of Sand Creek Massacre National Historic Site are defined in the authorizing legislation, the national historic site's purpose and significance statements, and the servicewide mandates and policies that were described earlier. Within these parameters, the National Park Service solicited input from the public, NPS staff, government agencies, associated tribes, and other organizations regarding issues and desired conditions for the park unit. Planning team members gathered information about existing visitor use and the condition of national historic site facilities and resources. They considered which areas of the national historic site attract visitors and which areas contain sensitive resources.

Using the above information, the planning team developed a set of five management zones and five alternatives (see the "Management Alternatives" section for more information) to reflect the range of ideas proposed by the planning team and the public. These ideas and concepts provided the framework for the range of alternatives described in this planning document. A "no-action" alternative and four "action" alternatives were developed in ongoing consultation between members of the National Park Service and the designated Sand Creek representatives of the Cheyenne and Arapaho tribes, the Colorado state historic preservation officer and staff of History Colorado (formerly the Colorado Historical Society), and representatives of Kiowa County, Colorado. These alternative concepts were developed in two alternatives workshops in 2007 and 2009. The no-action alternative serves as a description of baseline conditions from 2007 forward against which to evaluate the impacts of potential management actions.

This chapter describes the management prescriptions and alternatives for managing the national historic site, which includes tables summarizing key differences in the impacts that are expected from implementing each alternative. (The summary of impacts table is based on the analysis in "Chapter 4: Environmental Consequences.") This chapter also describes mitigation measures that would be used to lessen or avoid impacts and includes a discussion of the environmentally preferred alternative.

When Sand Creek Massacre National Historic Site was established, a larger boundary than that currently administered by the National Park Service was created. The larger legislated boundary encompasses state and private lands. Because these other lands are within the legislated boundary, they may be purchased by the federal government to become a part of the national historic site whenever a willing seller comes forward. The legislation also states that land may be acquired through donation or exchange. No lands or interests in lands shall be acquired by the federal government without the consent of the owner.

The State of Colorado owns about 640 acres and there are about 10,000 acres of private land in three tracts outside the lands currently administered by the National Park Service. These tracts may include resources that would merit preservation and contribute to conveying the complete history of the massacre.

Authorization to acquire these tracts is included in existing legislation and could occur in the future if there is a willing seller; therefore, this topic will not be analyzed further in this document.

IMPLEMENTING THE PREFERRED ALTERNATIVE

The preferred alternative focuses on *what* resource conditions and visitor uses, experiences, and opportunities should be available at the national historic site, rather than on the details of *how* these conditions and uses or experiences should be achieved.

The preferred alternative better meets the national historic site's purpose, need, and objectives compared with the no-action alternative by providing additional protection for the cultural and natural resources of the national historic site, expanding the range of visitor experience, and enhancing outreach and partnership programs.

More detailed plans or studies will be required before most conditions proposed in the alternatives can be achieved. Implementing any alternative also depends on future funding and environmental compliance. This plan does not guarantee that any money will be forthcoming. The plan establishes a vision for the future that will guide the day-to-day and year-to-year management of the national historic site, but full implementation could take many years.

MANAGEMENT ZONES

INTRODUCTION

The building blocks for reaching an approved plan for managing a national park system unit comprise the management prescriptions and the alternatives. All are developed within the scope of the park unit's purpose, significance, mandates, and legislation.

MANAGEMENT ZONES

Management zones describe the potential visitor experience, desired resource conditions, and appropriate activities and facilities that could be part of the future of Sand Creek Massacre National Historic Site. The ways in which these management zones are applied to the site reflect the various action alternatives selected for the site. Since the management zones have been designed to describe future management of the site, they are not applied to the no-action alternative. The five zones developed for use in this General Management Plan / Environmental Assessment are:

- Resource Preservation Zone
- Contemplative Zone
- Learning Zone
- Development Zone
- Sensitive Resource Zone (used only in alternative E)

Please refer to table 1 below for definitions, desired conditions, visitor experience, and appropriate facilities.

TABLE 1. MANAGEMENT ZONES

	Resource Preservation Zone	Contemplative Zone	Learning Zone	Development Zone	Sensitive Resource Zone
Overview	The primary purpose of this zone is to provide protection for significant cultural and natural resources.	The primary purpose of this zone is to provide opportunities for quiet contemplation, healing activities, and traditional tribal observances.	The purposes of this zone are to provide interpretive and educational experiences and opportunities for visitor access to the site.	The purposes of this zone are to provide park administration and operations and to provide visitor orientation to the site.	The primary purpose of this zone is to provide the highest level of protection for highly sensitive or at-risk cultural and natural resources.
Desired Resource Condition	The natural landscape reflects the native High Plains environment. The ethnographic landscape reflects the appearance of the 1864 massacre site to the greatest extent practicable.	Natural and cultural resources in this zone would be managed to support and enhance the contemplative experience.	The natural environment in this zone would be managed to maintain its representative High Plains character. Cultural sites in this zone would be monitored and protected.	Development in this zone would not detract from the cultural and natural landscape of the rest of the site. There would be a low probability of cultural resources occurring in this zone, but these resources would be protected and monitored should they be found.	This zone would contain many of the site's most sensitive or at-risk cultural and natural resources. The ethnographic associations with the resources in this zone are particularly strong. Features of the 1864 ethnographic landscape, such as reproductions of Cheyenne and Arapaho lodges, could be placed in this zone.
Desired Visitor Experience	Visitor access to this zone would be by ranger-guided tours only. Natural views would predominate and visitors would gain a sense of the expansiveness of the plains environment and the extent of the actual massacre site.	Visitors in this zone would have opportunities for commemorative healing activities and traditional tribal observances and ceremonies. This zone would provide opportunities for self-guided activity; enabling personal reflection and quiet contemplation.	This zone would provide the most extensive visitor access to the site. A variety of interpretive and educational media would be found here. This zone would be a destination for school groups and other group tours.	Visitors would receive their initial orientation to the site in this zone. They would encounter the most extensive educational and interpretive programs here, both on the site and at the main visitor center in Eads. They would have the greatest likelihood of encountering NPS staff and other visitors here.	There would be no visitor access to this zone.
Appropriate Facilities	Facilities in this zone would be limited to primitive roads for NPS administrative access.	Facilities in this zone would include a sheltered seating area, limited interpretive media, trails with unobtrusive informational signs, and appropriate commemorative features.	Facilities in this zone would include a sheltered seating area for groups, trails, educational and interpretive panels and signs, and benches.	Facilities in this zone would include the maintenance and administrative offices, the main visitor center (off-site in Eads), interpretive signs and panels, restrooms and other visitor facilities, roads, and parking areas.	There would be no new facility development for administrative or visitor use in this zone. Primitive roads would remain for NPS administrative use. Facilities representing the historic scene of Sand Creek, such as reproductions of tribal lodges, could be placed in this zone.

MANAGEMENT ALTERNATIVES

The NPS planning team is required to develop and analyze alternative ways to manage the site to address the issues and to achieve the site's stated purpose and protect its nationally significant history, resources, and values. The planning team considered comments and suggestions from the public and legislative partners to develop the alternatives described here.

The development of the action alternatives for the future management of the historic site began with the development of broad concepts regarding the history and resources of the site—concepts related to the need to preserve the resources of the site, the need to educate people about the events that occurred at the site, and the need to reflect on those events. When these broad concepts were identified, management zones were developed to identify a range of desired conditions for the site's resources, possible visitor experiences, and general levels of development based on the purpose and significance of the site. These management zones were then applied to the site in different ways to reflect the concept of each alternative.

ALTERNATIVE A: NO-ACTION ALTERNATIVE

Concept

The site would continue to be managed as it is now, in accordance with the interim site plan developed in September 2007. The no-action alternative serves as a basis of comparison for evaluating the action alternatives and is a requirement of the National Environmental Policy Act. The "Management Zones" map is provided after the "Key Elements Common to All the Action Alternatives" section.

How the Site Would Be Managed

Under the no-action alternative, the temporary administrative / visitor contact station would remain at the site. The main administrative headquarters would remain in Eads, Colorado. The existing on-site interpretive and informational media would be maintained. The maintenance facility would remain in the existing shop. The on-site cemetery would remain accessible for repatriation of human remains, funerary objects, or other tribal artifacts related to the Sand Creek Massacre. The existing monument overlook and trail would remain accessible to visitors. National historic site managers would continue to cooperate with the tribes on resource management issues. These issues would include protection of archeological sites and providing tribal fire crews for reduction of fuel loads in the cottonwood gallery, the floodplain, the stream channel, and other areas of the site where fuel buildup would raise the potential of fire damage and resultant adverse resources impacts.

How Visitors Would Experience the Site

Under the no-action alternative, visitors would continue to begin their exploration of Sand Creek Massacre National Historic Site at either of two facilities: park headquarters in Eads, Colorado, or at the site of the massacre—25 miles from Eads. Both areas are staffed to address visitor orientation

and questions. Both provide a cooperating association sales outlet to purchase literature about the national historic site. The park brochure is offered free to the public.

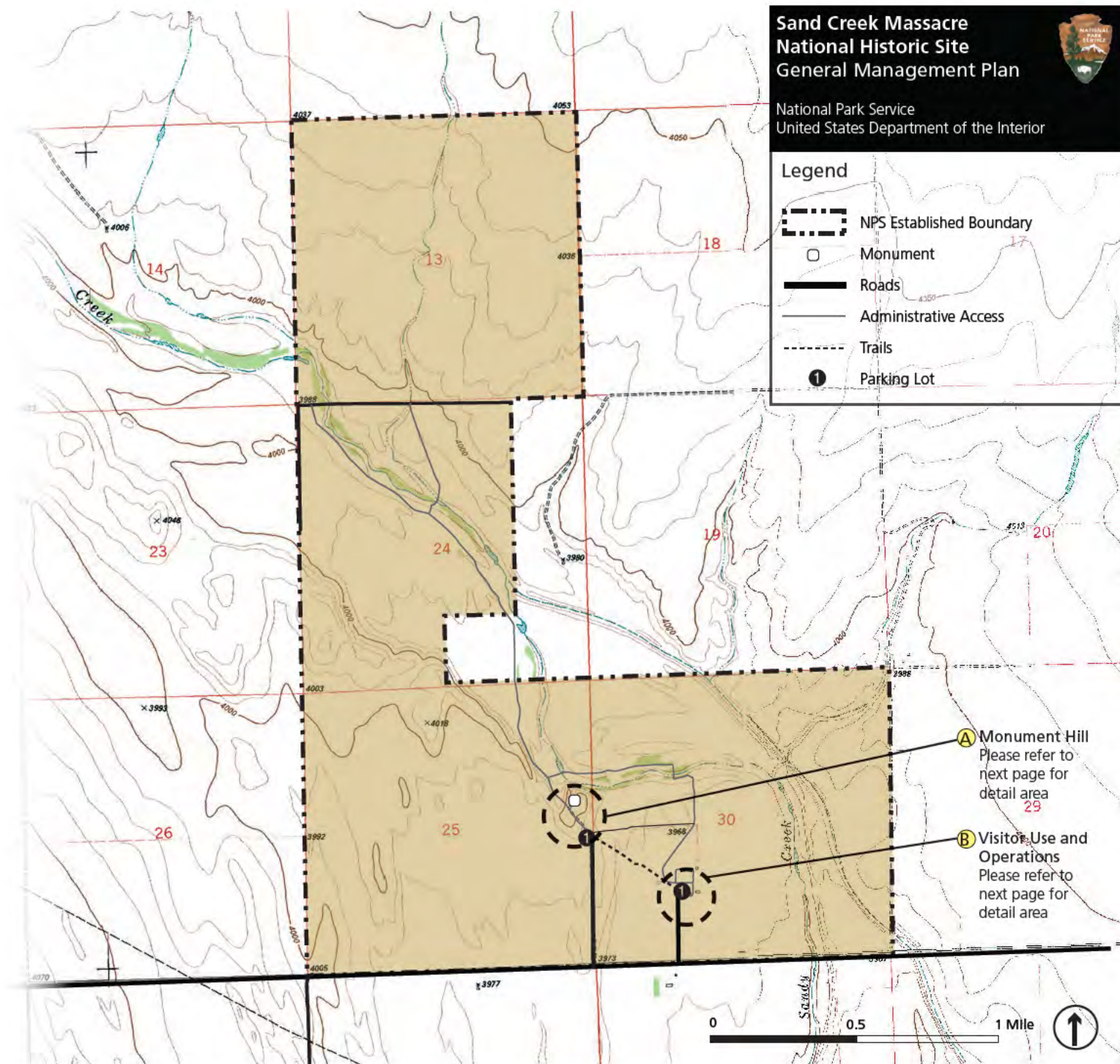
Once visitors arrive at the historic site, information would be provided to them at the contact station; they would have the option of walking the 0.5-mile trail leading to the historic monument on a bluff overlooking Sand Creek, visiting the cemetery, or picnicking at the facilities provided near the main administrative area. All visitors to the site are greeted by a ranger. They can independently tour or join a ranger to the stone monument to learn more about the event and site. Access would remain limited to the existing trail and overlook. The creekbed would remain closed to the public.

The stone monument commemorating the tragedy and the benches would continue to provide opportunities to reflect upon the events surrounding the massacre. Several wayside exhibits interpret the events leading up to and after the massacre to allow visitors to reflect personally on the tragedy and the area in which it took place. The monument would remain a seasonal, strictly day-use facility, although access during winter may be available, pending weather conditions and ranger availability. Tribal requests for access would continue to be honored throughout the year. The landscape would remain uncluttered with no new development. The average time visitors would spend at the site would remain under 1 hour due to limited interpretive and recreational opportunities. Access for mobility-impaired visitors would continue to be provided via an alternate driving route and parking area.

Visitors would continue to encounter NPS staff at the site throughout their visit, either at the contact station, along the trail via roving interpreters, or on small ranger-guided tours, providing an intimate learning experience about Sand Creek. Solace and contemplation would remain key components to the visitor experience.

KEY ELEMENTS COMMON TO ALL THE ACTION ALTERNATIVES

- Locate visitor center and research center off-site in Eads, Colorado.
- On-site facilities would include administrative and maintenance facilities, restrooms, trails, interpretive signs, roads, and parking areas.
- Access to the monument (on ranger-guided tours and on some portions of the trails) would be improved to accommodate visitors of all ability levels.
- Restore components of the ethnographic landscape to the 1864 appearance where practicable.
- Encourage and maintain partnerships with federal and state agencies, tribes, and neighboring landowners for resource management.
- Work with partners to improve and maintain watershed hydrology of Sand Creek.
- Present the broad historical context necessary to understand the events of November 29, 1864, including the legacy of conflict, impacts of the tragedy on the Cheyenne and Arapaho tribes, and lessons learned, in the park visitor center in Eads, Colorado—interpretive programs would be presented at the site.



General Management Zoning
Sand Creek Massacre National Historic Site

Concept

The site would be managed in accordance with the interim plan developed in September 2007.

Key Elements of the Alternative

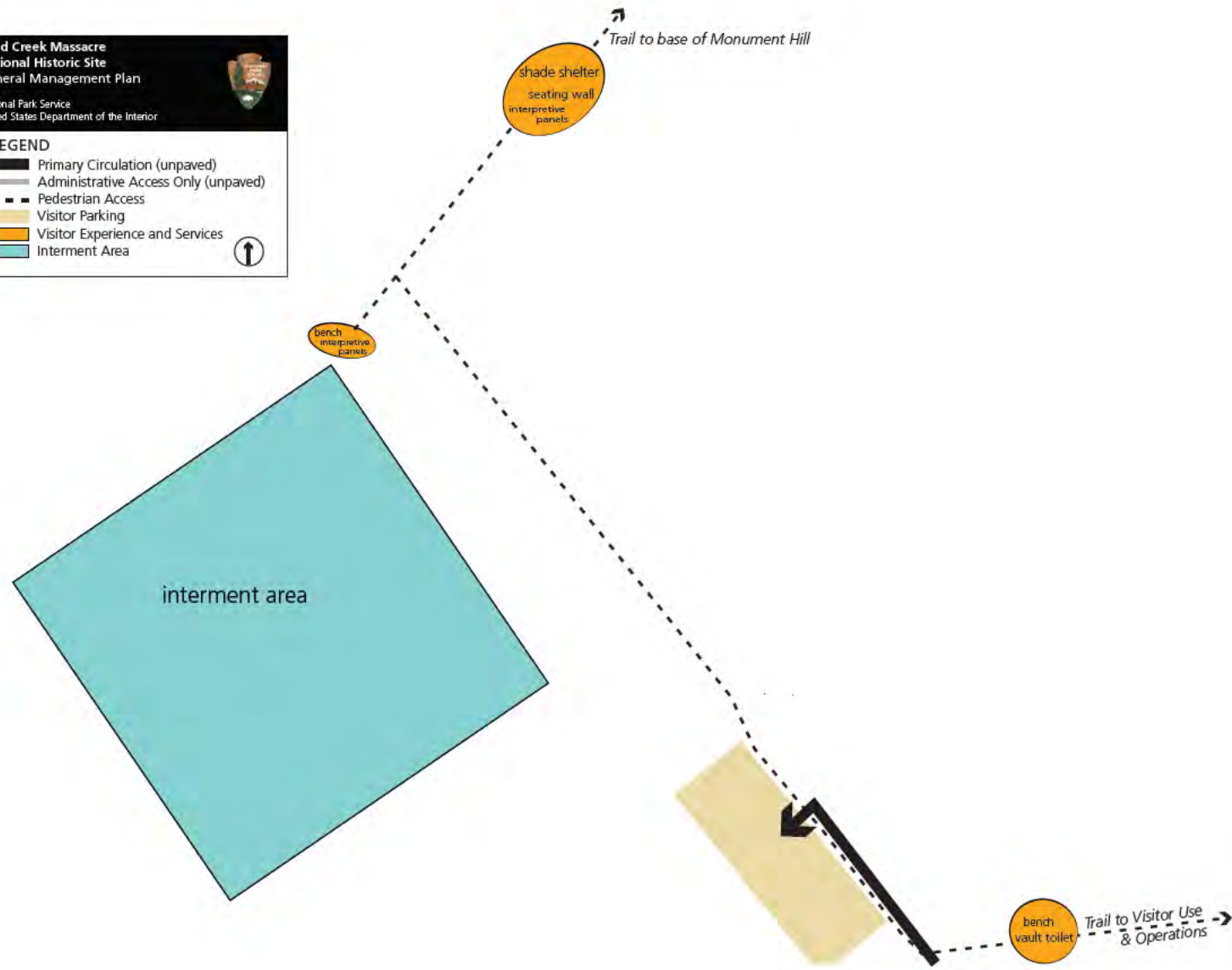
- The temporary administrative / visitor contact station would remain at the site.
- The headquarters would remain in Eads, CO.
- Existing interpretive and informational media and programs on-site would be maintained.
- The maintenance facility would remain in the existing shop.
- The interment area on-site would remain accessible for repatriation of human remains, funerary objects, or other artifacts related to the Sand Creek Massacre.
- Existing monument overlook and trail would remain accessible to visitors.

Sand Creek Massacre National Historic Site General Management Plan
National Park Service
United States Department of the Interior



LEGEND

- Primary Circulation (unpaved)
- Administrative Access Only (unpaved)
- Pedestrian Access
- Visitor Parking
- Visitor Experience and Services
- Interment Area



Key Elements of the Area

- The entrance from County Road W would remain and be maintained for staff and visitors.
- Trail to monument hill would remain accessible to visitors.
- The interment area on-site would remain accessible for repatriation of human remains, funerary objects, or other tribal artifacts related to the Sand Creek Massacre.
- Monument hill features would remain including a bench and shade shelter
- The parking area would continue to be mowed.

Monument Hill
Area Detail **A**

B **Visitor Use and Operations Area**
Area Detail

Key Elements of the Area

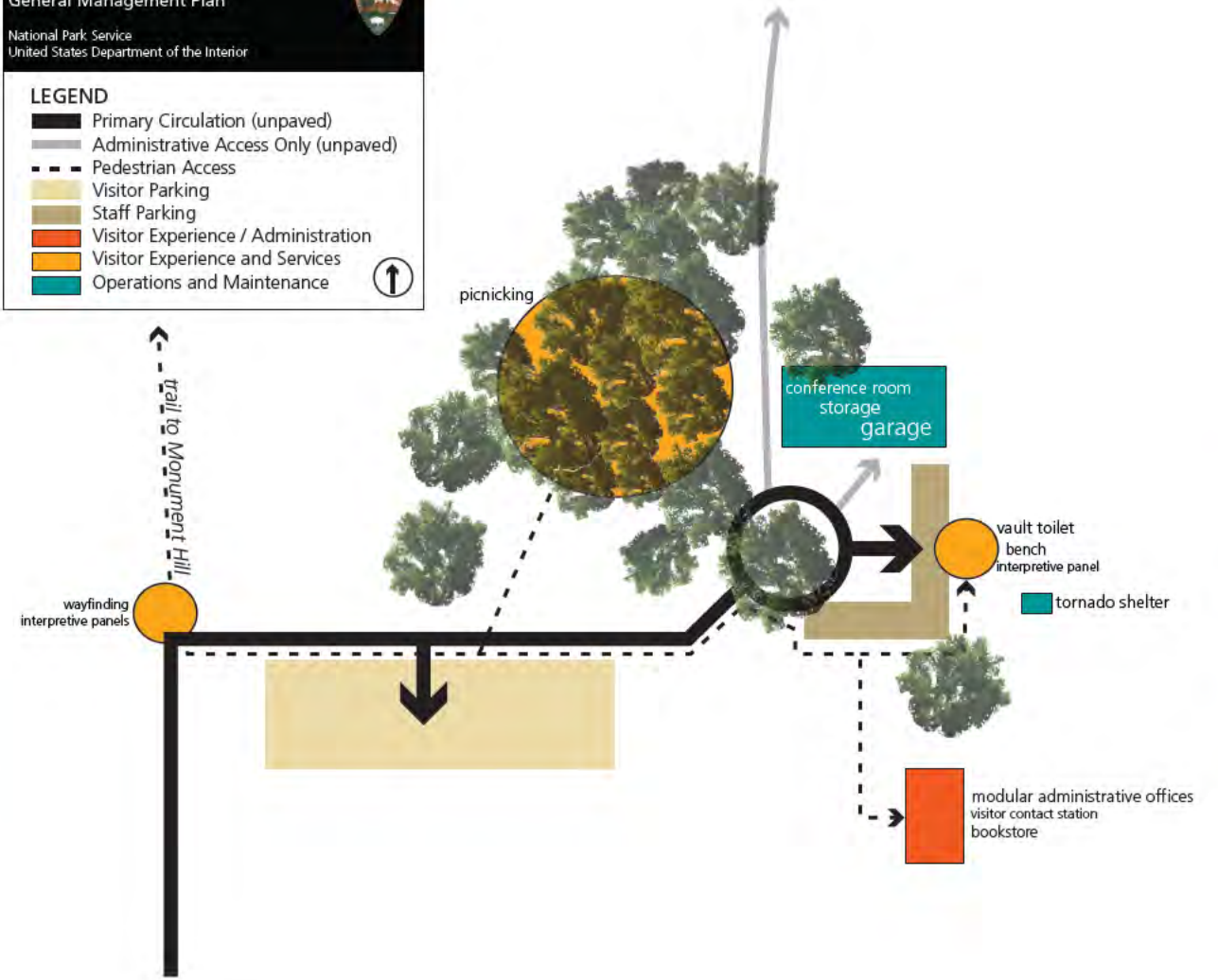
- Maintain existing entrance from County Road W.
- The modular administration / visitor use building would remain and continue to serve its existing purpose.
- The four picnic sites would continue to be maintained within the cottonwood grove.

Sand Creek Massacre National Historic Site General Management Plan
National Park Service
United States Department of the Interior



LEGEND

- Primary Circulation (unpaved)
- Administrative Access Only (unpaved)
- Pedestrian Access
- Visitor Parking
- Staff Parking
- Visitor Experience / Administration
- Visitor Experience and Services
- Operations and Maintenance



ALTERNATIVE A NO ACTION

ALTERNATIVE B

Concept

This alternative would allow more of the stories of the massacre to be shared through varied on-site and off-site educational and interpretive programs, media, and other services. It would provide visitors with the broadest range of opportunities to access and experience certain areas of the landscape and gain a broader conception of the massacre. At the site, visitors would have the time and opportunities to comprehend the events of November 29, 1864, and the role the landscape played in those events. The “Management Zones” and “Monument Hill and Visitor Use and Operations Areas” maps are provided after the “How Visitors Would Experience the Site” section.

How the Site Would Be Managed

Park operations would be based in the operations and maintenance area in the main administrative zone. The existing shop would continue to serve as maintenance headquarters. A small administrative building would provide office space for on-site staff. The small visitor contact station would offer initial visitor orientation, other site information, and book sales.

Two new roads would be constructed inside the boundary. The first would be positioned along the southern fenceline between the main administrative area and the road to the monument overlook. This road would enhance visitor safety by reducing the risks faced by visitors while turning from the county road onto the monument overlook road and from the site onto the county road. A second road would be developed along the west section line to the high elevation in the northwest corner of the site. Two small parking areas (five to six vehicles) would be developed at the trailheads in the northwest and southeast corners of the site to facilitate visitor access to these more remote locations. A loop trail around the contemplative zone would also be added for those wanting greater opportunity to reflect upon the tragedy and the healing efforts that have been pursued in the more recent past.

A visitor center would be developed in conjunction with a research and learning center in the town of Eads. Park staff would increase efforts for community outreach through off-site interpretive programs, traveling exhibits, and participation in community events occurring in Eads and beyond.

Archeological investigations currently underway continue to reveal details regarding where and how events took place, which could guide the development of additional interpretative programs. In the future, archeological investigations would continue to gather additional information about the massacre as part of resource protection efforts to reduce the potential of adverse impacts resulting from the construction of roads, parking areas, trails, visitor facilities, and the installation of interpretive and educational displays. Access to areas sensitive to tribes where historically significant events took place, however, would continue to be closed to the public.

National historic site managers would continue to cooperate with the tribes on resource management issues. These issues would include protection of archeological sites and providing tribal fire crews for reduction of fuel loads in the cottonwood gallery, the floodplain, the stream channel, and other areas of the site where fuel buildup would raise the potential of fire damage and resultant adverse resource impacts.

Appropriate facilities for tribal ceremonial use could be developed in the contemplative zone around the monument and in the valley of Sand Creek. These facilities would be developed in consultation with the tribes as part of a subsequent planning and design process.

How Visitors Would Experience the Site

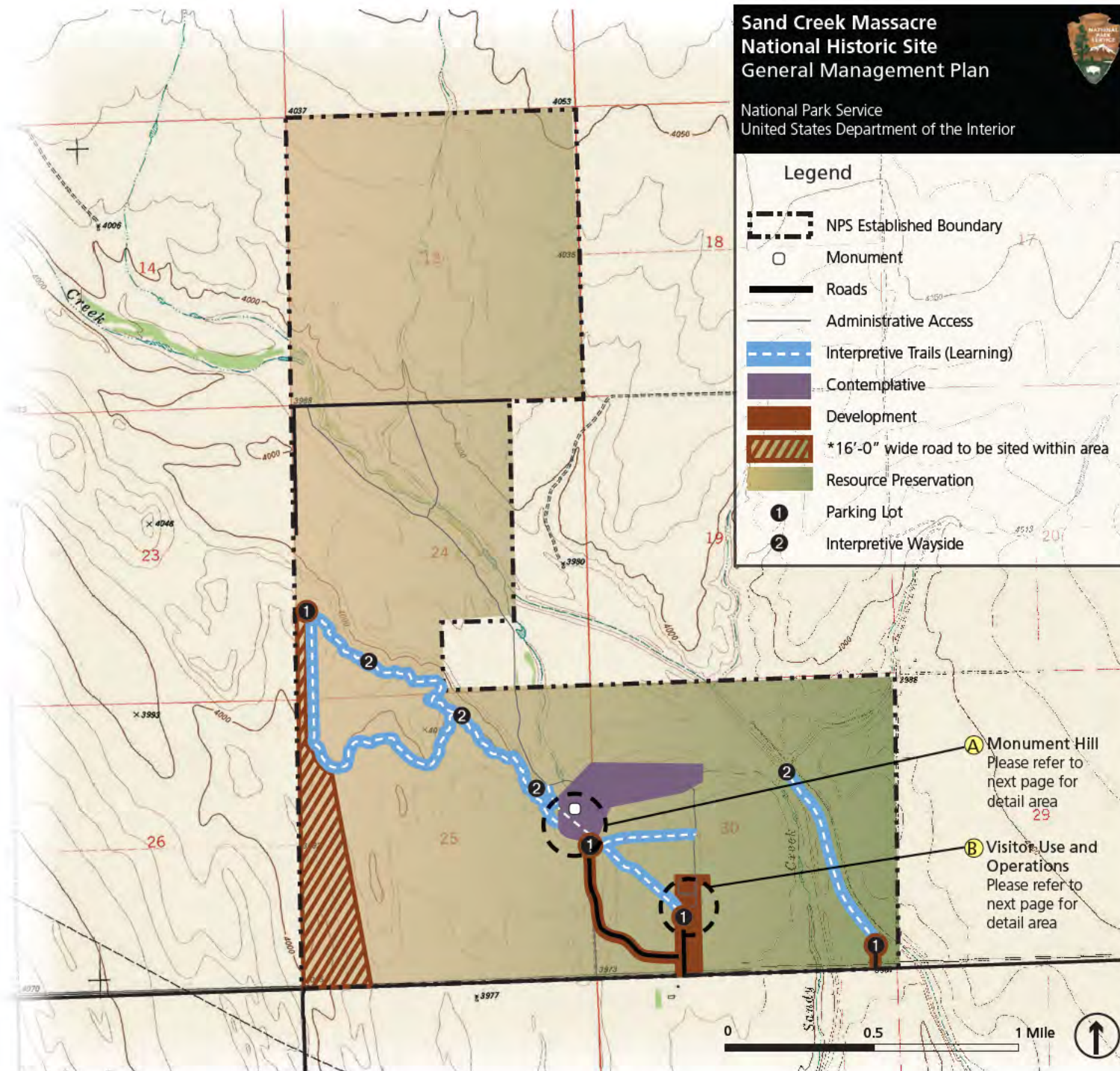
Informational and directional signs on U.S. Highway 287 and Colorado Highway 96 would direct visitors to the main visitor and research center in Eads. Here, visitors would have access to *The Sand Creek Massacre and the Civil War*, a National Park Service documentary produced by Denver-based Post Modern Company, as well as interpretive and educational programs that would inform visitors of the broad historical context of southeastern Colorado in the 19th century and how these historical patterns helped lead to the disaster at Sand Creek on November 29, 1864. Historians, students, and other researchers would find extensive archival records related to tribal history, military history, and the early history of Colorado and the American Southwest.

In addition to current visitor opportunities under this alternative, there would be greater opportunities to access the site. Nearly 5 miles of trails would allow visitors to follow more of the history of Sand Creek on the ground. From the stone monument overlooking Sand Creek, a trail would lead to the northwest along the bluff, affording increased opportunities to view the creekbed where victims escaped and dug pits into the bluffs above Sand Creek. This trail would extend to the western boundary of the historic site, then follow the road on the west section to a second trail to the south, creating a loop back to the monument. A new trail would be developed at the southeastern boundary of the historic site along the berm of historic Chivington Canal, providing additional access to the site to view and learn about the natural resources and the post-massacre history of ranching and farming.

Various interpretive media and services would be developed for the newly opened areas. This could take the form of self-guided trails; brochures or site bulletins; small, low-profile exhibits at key points along the landscape; or ranger-guided tours. With alternative B, more interpretive media would be developed on-site than under other alternatives, which would provide accessibility to the breadth and depth of Sand Creek stories.

Visitors would be encouraged to begin their visit to Sand Creek at the visitor contact station adjacent to the main parking area in the administrative zone. Here, they would be oriented to the site and listen to a park ranger present an overview of the history of Sand Creek. Visitors could then follow expanded ranger-guided talks at the monument or take self-directed hikes on the trails in the northwest and southeast corners of the site.

The key component of this alternative is the opportunity it would provide visitors to access the site via nearly 5 miles of trails, where visitors could hike on the bluff above the valley, paralleling the path of tribal members who fled northwest along Sand Creek after the attack on the encampment. Visitors could reflect on the complex events of the Sand Creek Massacre that would be interpreted at the site of the 1950 stone marker. The trails would provide access to view the actual sites where events related to the attack and camp occurred, the location of escape routes, and historic ranching and farming activity. This alternative could lengthen the duration of stay at the site from the average of 45 minutes to well over an hour.



General Management Zoning
Sand Creek Massacre National Historic Site

Concept

Alternative B would offer the greatest variety and depth of interpretive media, programs, and services, both on-site and off-site. It would provide visitors opportunities to access and experience certain areas of the landscape and gain a broader understanding of the massacre. At the site, visitors would have opportunities to comprehend the events of November 29, 1864, and the role the landscape played in those events.

Key Elements of the Alternative

- There would be opportunities for visitor access to the site through additional trail, road, and parking development.
- The trails system would be extended to 4.8 miles to provide additional visitor access and interpretation.
- Varied on-site interpretive media and programs would provide visitors with a detailed narrative of the attack on the Sand Creek village.
- Facilities on-site would include a visitor contact station, maintenance facility, staff offices, water and comfort stations, benches, shade shelters, and additional parking on the southeast corner and on the western boundary.

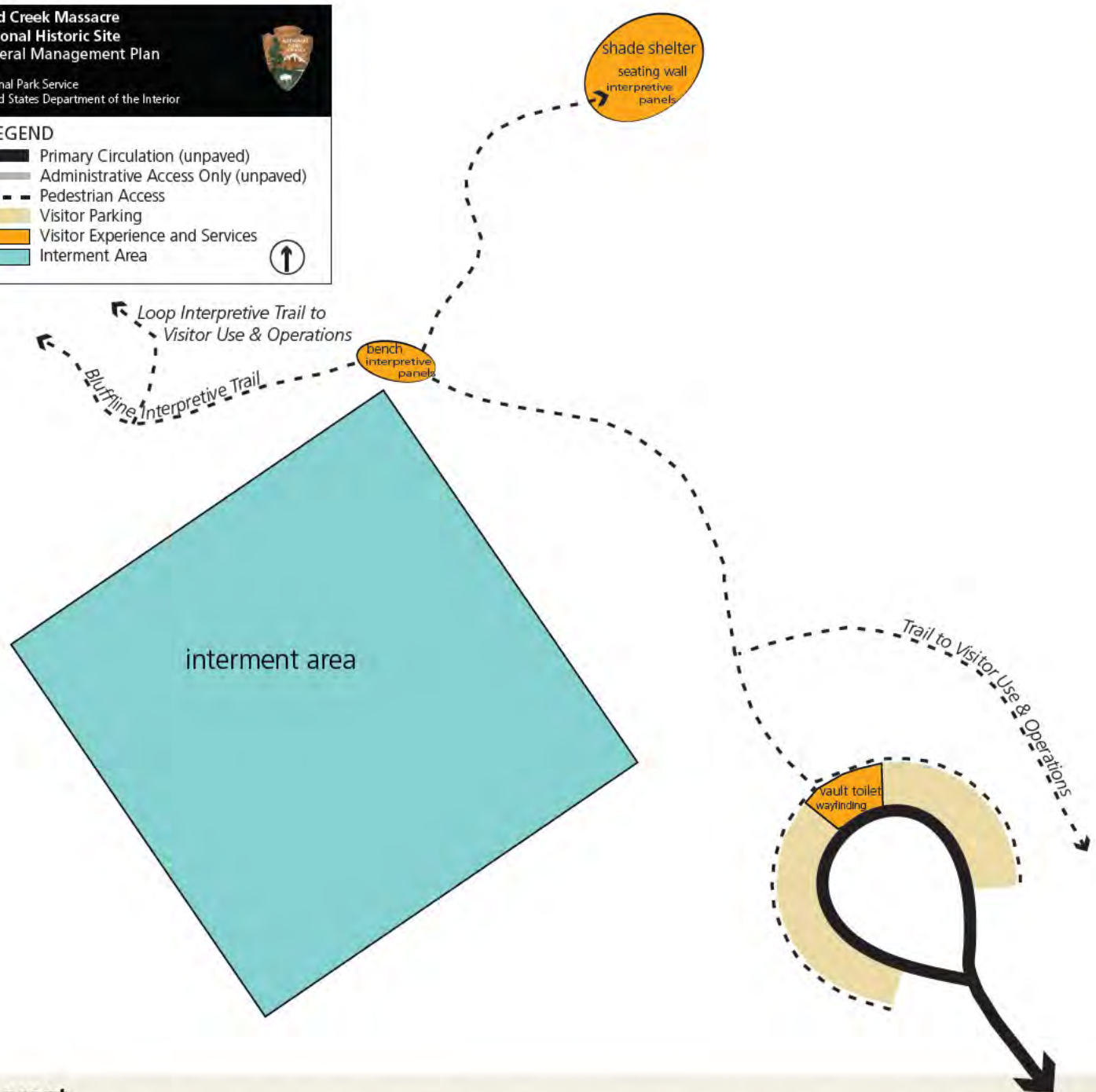
ALTERNATIVE B

Sand Creek Massacre National Historic Site General Management Plan
National Park Service
United States Department of the Interior



LEGEND

- Primary Circulation (unpaved)
- Administrative Access Only (unpaved)
- Pedestrian Access
- Visitor Parking
- Visitor Experience and Services
- Interment Area



Concept

Promote the highest level of accessible design throughout the historic site and especially in this area to provide the greatest opportunity for interpretation. Create a contemplative and reflective visitor experience for the events that occurred in November 1864. An additional trail system splits off from this space that loops through the cottonwood grove where the massacre occurred.

Key Elements of the Area

- Decrease erosion and increase accessibility through a curvilinear trail to monument hill.
- Create an interment area viewing space with interpretive panels and a resting space for visitor reflections and contemplation.
- Upgrade monument hill features; include a shaded seating area under a new shade shelter with interpretive panels.
- Upgrade the parking area to provide wayfinding for monument hill and a vault toilet.

Monument Hill
Area Detail **A**

B **Visitor Use and Operations Area**
Area Detail

Concept

All facilities were originally constructed and sited as temporary features. Under alternative B, all facilities would be sited permanently. This would reduce the potential of visitor and staff conflicts and create a more contemplative experience. All facilities are screened by the cottonwood grove to eliminate views of the visitor use and operations area from monument hill.

Key Elements of the Area

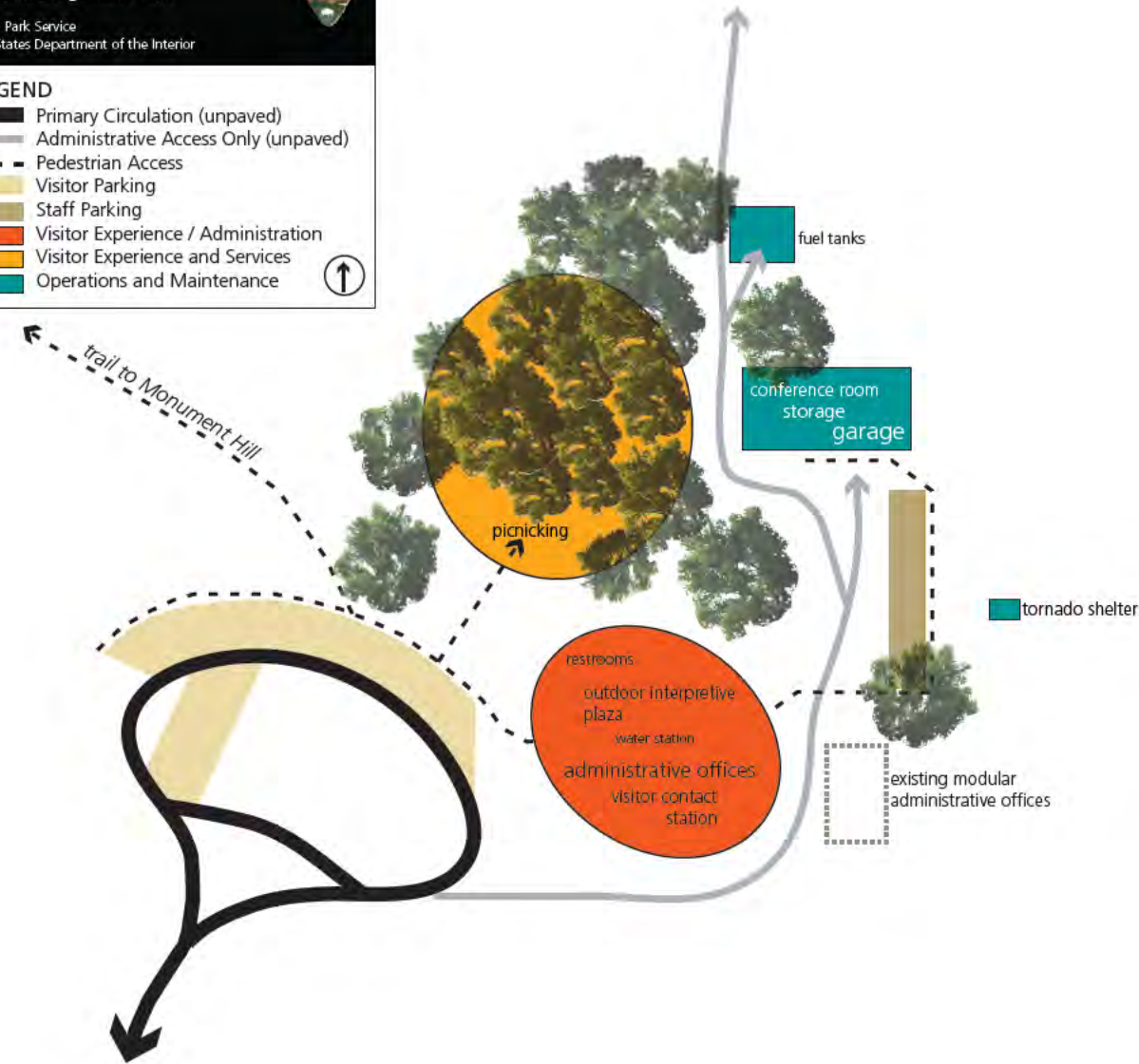
- Retain existing entrance from County Road W.
- Create separation between visitor use and operations spaces through facilities and parking areas.
- Provide a permanent visitor contact station with attached restrooms and administration offices to replace the existing temporary facility when it is no longer functional.
- Create a small outdoor interpretive plaza.
- Upgrade existing four picnic sites with one accessible site.

Sand Creek Massacre National Historic Site General Management Plan
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LEGEND

- Primary Circulation (unpaved)
- Administrative Access Only (unpaved)
- Pedestrian Access
- Visitor Parking
- Staff Parking
- Visitor Experience / Administration
- Visitor Experience and Services
- Operations and Maintenance



ALTERNATIVE B

ALTERNATIVE C

Concept

This alternative would offer visitors enhanced opportunities for reflection, reverence, and remembrance of the physical and emotional costs of the Sand Creek Massacre. Development and visitor access would be the minimum necessary to commemorate the event. Visual and auditory distractions would be limited. Off-site interpretation would focus on the larger context of Sand Creek—the legacy of conflict, impacts of the tragedy on the Cheyenne and Arapaho tribes, and lessons learned. The “Management Zones” and “Monument Hill and Visitor Use and Operations Areas” maps are provided after the “How Visitors Would Experience the Site” section.

How the Site Would Be Managed

Park operations would be based in the operations and maintenance area in the main administrative zone. The existing shop would continue to serve as maintenance headquarters. A small administrative building would provide office space for on-site staff. The small visitor contact station would offer initial visitor orientation, other site information, and book sales.

One new road would be constructed inside the historic site boundary. This road would be located along the southern fenceline between the main administrative area and the road to the monument. This road would enhance visitor safety by reducing the risks faced by visitors while turning from the county road onto the monument overlook road, and from the site onto the county road. Vehicle parking would be available in the main administrative zone. No additional parking would be developed under this alternative. A pedestrian trail would connect the main administrative zone with the monument. No additional trails would be developed under this alternative.

A visitor center would be constructed in conjunction with a research and learning center in the town of Eads. Historic site staff would increase efforts for community outreach through off-site interpretive programs, traveling exhibits, and participation in community events in Eads and beyond.

Archeological investigations currently underway continue to reveal details regarding where and how events took place, which could guide the development of additional interpretative programs. Archeological investigations would continue in the future to gather additional information about the massacre and also as part of resource protection efforts to reduce the potential of adverse impacts resulting from the construction of roads, parking areas, trails, visitor facilities, and the installation of interpretive and educational displays. Areas sensitive to associated tribes where historically significant events took place would continue to remain closed to the public.

National historic site managers would continue to cooperate with the tribes on resource management issues. These issues would include protection of archeological sites and providing tribal fire crews for reduction of fuel loads in the cottonwood gallery, the floodplain, the stream channel, and other areas of the site where fuel buildup would raise the potential of fire damage and resultant adverse resources impacts.

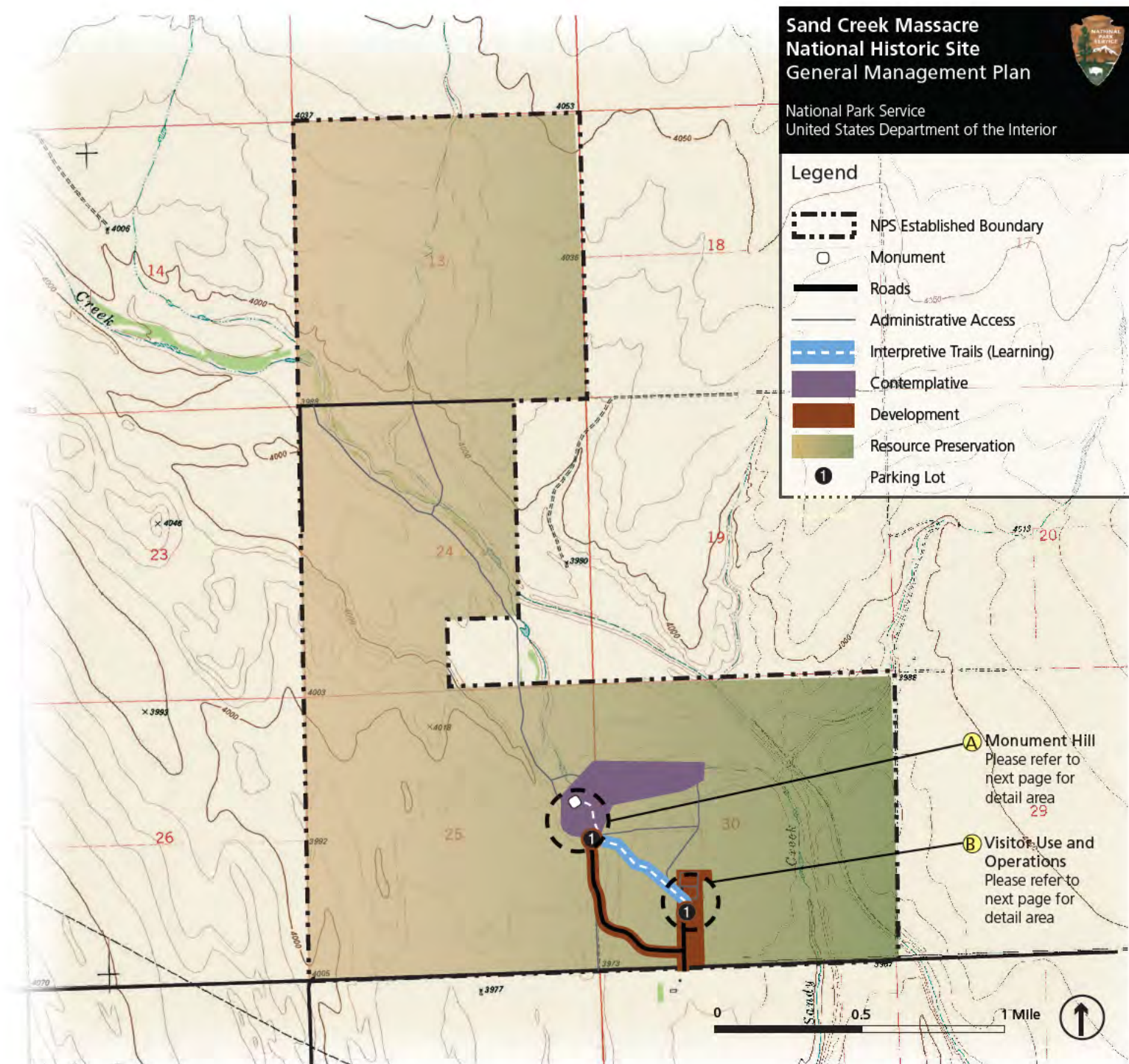
Appropriate facilities for ceremonial use by the tribes could be developed in the contemplative zone around the monument overlook and in the valley of Sand Creek. These facilities would be developed in consultation with the tribes as part of a subsequent planning and design process.

How Visitors Would Experience the Site

With the focus of this alternative on the commemorative aspects of Sand Creek, visitor orientation to the site would be developed in conjunction with a research and learning center in the town of Eads. Informational and directional signs on U.S. Highway 287 and Colorado Highway 96 would direct visitors to the main visitor and research center in Eads. Here, visitors would have access to *The Sand Creek Massacre and the Civil War*, a National Park Service documentary produced by Denver-based Post Modern Company, as well as interpretive and educational programs that would help inform visitors of the broad historical context comprising southeastern Colorado in the 19th century and how these historical patterns helped lead to the disaster at Sand Creek on November 29, 1864.

Visitor access to the site would be limited to the main administrative zone and the trail leading from the parking lot to the stone monument and the overlook to Sand Creek, as currently provided. There would be no added development. The stark and uncluttered values of the landscape would remain essential ingredients to a reflective experience. Interpretive media on-site would be limited to the existing wayside exhibits to avoid distractions from the memorial and contemplative aspects of the site. Visitors would encounter rangers on-site who would provide orientation and intimate small-group tours as they arrive. Visitors would rely more on their own knowledge of the site, imagination of the event, and interpretation from rangers as the built environment would not include additional interpretive media. This alternative would most closely resemble the conditions within the no-action alternative.

Without an addition of trails and interpretive services, the average visitor stay would remain 45 minutes or less. Rangers would be available, but would respect the visitors' rights to privacy when contemplating the site.



General Management Zoning
Sand Creek Massacre National Historic Site

Concept

This alternative would offer visitors enhanced opportunities for reflection, reverence, and remembrance of the physical and emotional costs of the Sand Creek massacre. Development and visitor access would be the minimum necessary to commemorate the event. Visual and auditory distractions would be limited.

Key Elements of the Alternative

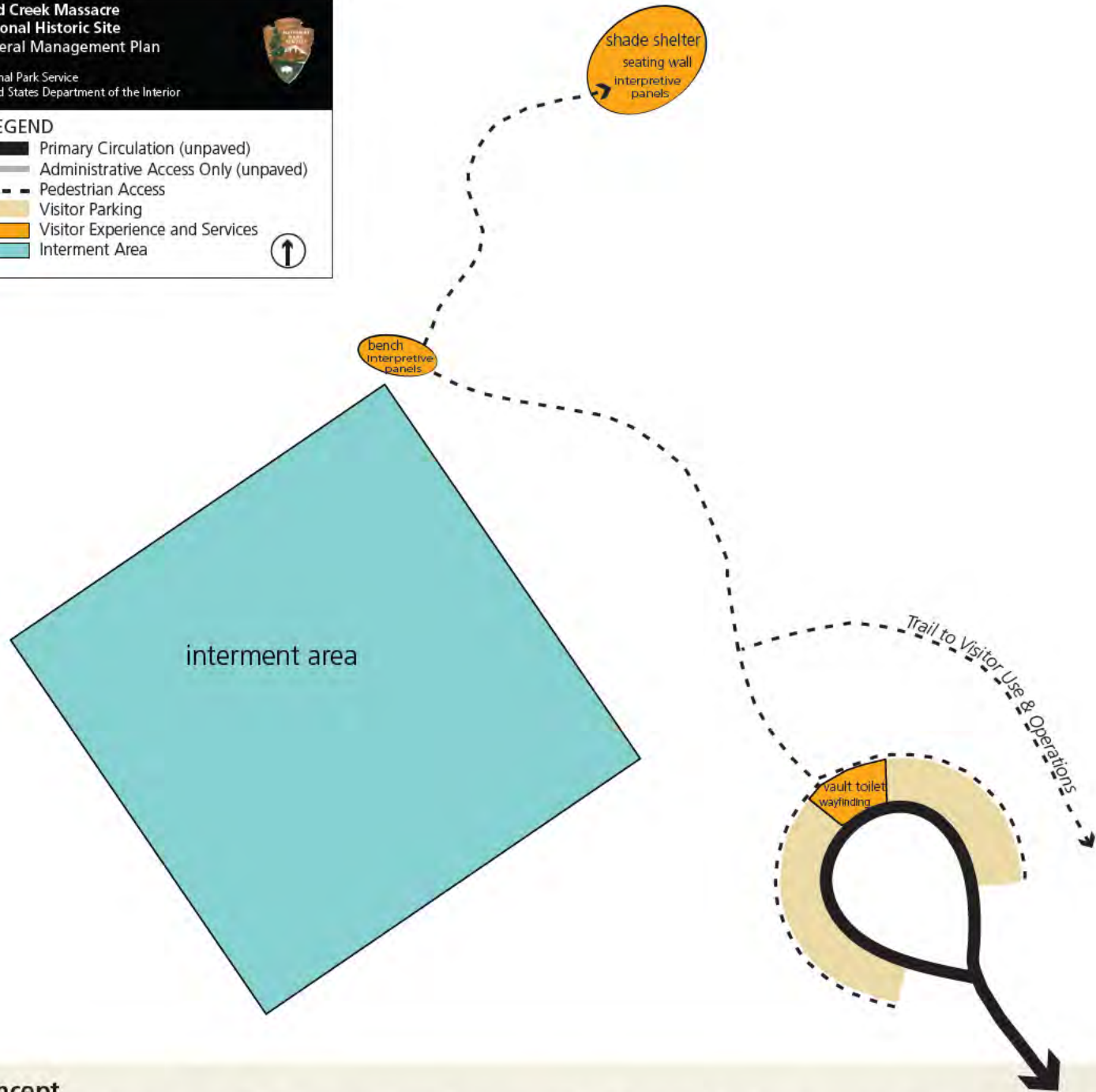
- Visitor access would be confined to the developed area and the monument overlook.
- There would be minimal trail development (0.3 mile) only between the developed area and the monument overlook.
- There would be limited interpretive media on-site.
- Facilities on-site would include a visitor contact station, maintenance facility, staff offices, water and comfort stations, benches, and shade shelter.

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National Park Service
United States Department of the Interior



LEGEND

- Primary Circulation (unpaved)
- Administrative Access Only (unpaved)
- Pedestrian Access
- Visitor Parking
- Visitor Experience and Services
- Interment Area



Concept

Promote the highest level of accessible design throughout the historic site and especially in this area to provide the greatest opportunity for interpretation. Create a contemplative and reflective visitor experience for the events that occurred in November 1864.

Key Elements of the Area

- Decrease erosion and increase accessibility through a curvilinear trail to monument hill.
- Create an interment area viewing space with interpretive panels and a resting space for visitor reflection and contemplation.
- Upgrade monument hill features; include a shaded seating area under a new shade shelter with interpretive panels.
- Upgrade the parking area to provide wayfinding for monument hill and a vault toilet.

Monument Hill
Area Detail **A**

B **Visitor Use and Operations Area**
Area Detail

Concept

All facilities were originally constructed and sited as temporary features. Under this alternative all facilities would be sited permanently. This would reduce the potential of visitor and staff conflicts and create a more contemplative experience. All facilities are screened within the cottonwood grove to eliminate views of the visitor use and operations areas from monument hill.

Key Elements of the Area

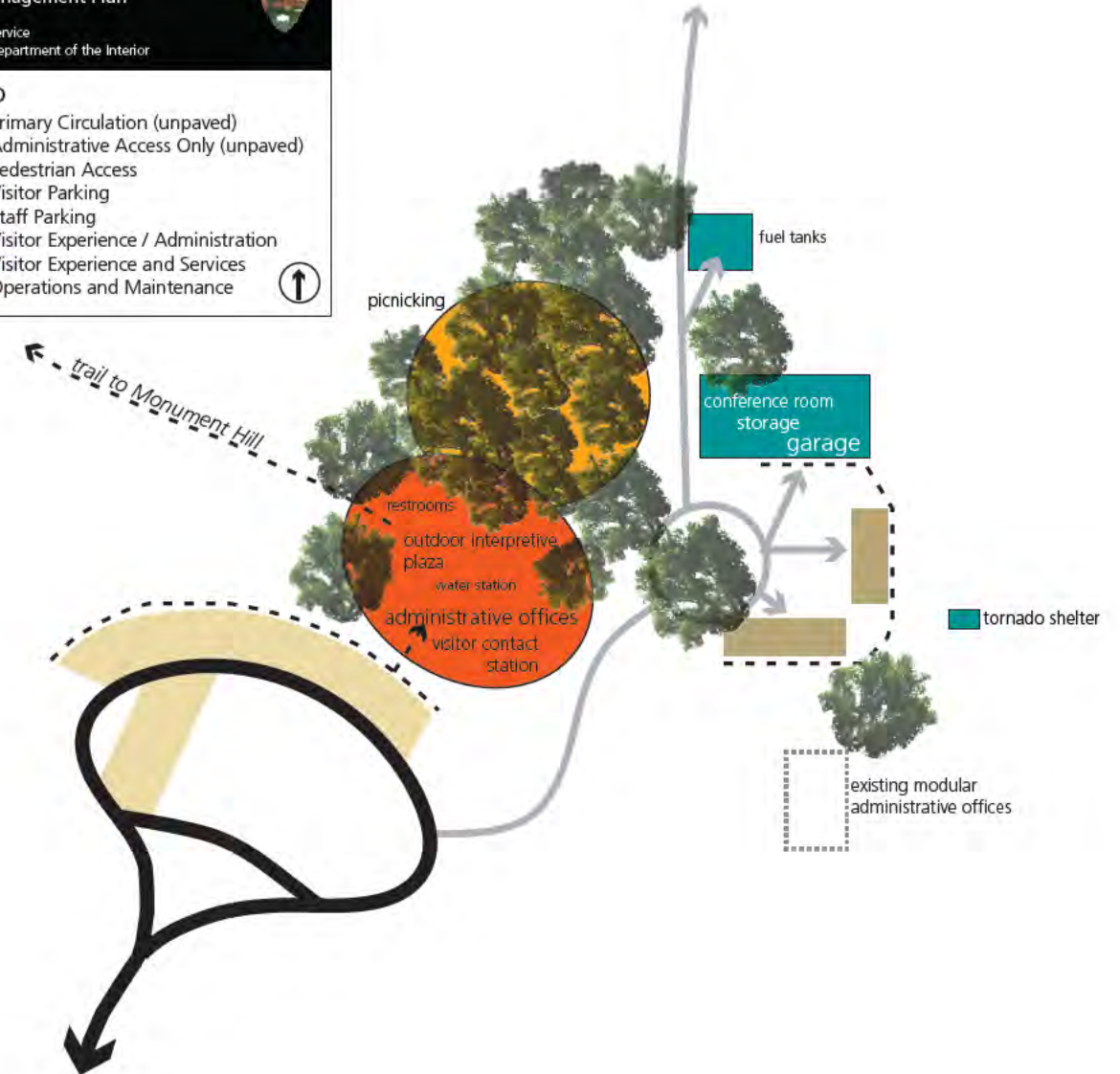
- Retain existing entrance from County Road W.
- Create separation between visitor use and operations spaces through facilities and parking areas.
- Provide a permanent visitor contact station with attached restrooms and administration offices to replace the existing temporary facility when it is no longer functional.
- Create a small outdoor interpretive plaza.
- Upgrade existing four picnic sites with one accessible site.

Sand Creek Massacre National Historic Site General Management Plan
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LEGEND

- Primary Circulation (unpaved)
- Administrative Access Only (unpaved)
- Pedestrian Access
- Visitor Parking
- Staff Parking
- Visitor Experience / Administration
- Visitor Experience and Services
- Operations and Maintenance



ALTERNATIVE C

ALTERNATIVE D

Concept

This alternative would provide equal opportunities for interpretation and memorialization. The stories of the massacre would be shared through a variety of on-site and off-site educational and interpretive programs, media, and services. Visitors would have opportunities to access and experience certain areas of the landscape for reflection, reverence, and remembrance. At the site, visitors would have the time and opportunity to comprehend the events of November 29, 1864, and the role the landscape played in those events. Off-site interpretation would focus on the larger context of Sand Creek, the legacy of conflict, impacts of the tragedy on the Cheyenne and Arapaho tribes, and lessons learned. The “Management Zones” and “Monument Hill and Visitor Use and Operations Areas” maps are provided after the “How Visitors Would Experience the Site” section.

How the Site Would Be Managed

Park operations would be based at the operations and maintenance area in the main administrative zone. The existing shop would continue to serve as maintenance headquarters. A small administrative building would provide office space for on-site staff. The small visitor contact station would offer initial visitor orientation, other site information, and book sales.

As in alternative B, two new roads would be constructed inside the boundary of the national historic site. The first would be located along the southern fenceline, between the main administrative area and the road to the monument overlook. This road would enhance visitor safety by reducing the risks faced by visitors while turning from the county road onto the monument overlook road and from the site onto the county road. A second road would be developed along the west section line to the high elevation in the northwest corner of the site. Two small parking areas (five to six vehicles) would be developed at the trailheads in the northwest and southeast corners of the site to facilitate visitor access to these more remote locations. There would be moderate expansion of the trail system, in keeping with the balance between contemplation and interpretation under this alternative. One 2.5-mile loop trail, accessible from the road on the western boundary of the site, would provide access to the bluff above Sand Creek. A 0.75-mile trail would be developed along the berm of Chivington Canal. A pedestrian trail would connect the main administrative zone with the monument overlook. There would be no loop trail around and through the contemplative zone as in alternative B. This would enhance opportunities at the monument to reflect upon the tragedy and the healing efforts that have been pursued in the more recent past.

A visitor center would be developed in conjunction with a research and learning center in the town of Eads. Park staff would increase efforts at community outreach through interpretive programs off-site, traveling exhibits, and participation in community events at Eads and beyond.

Archeological investigations currently underway continue to reveal details regarding where and how events took place, which could guide the development of additional interpretative programs. Archeological investigations would continue in the future to gather additional information about the massacre and also as part of resource protection efforts to reduce the potential of adverse impacts resulting from the construction of roads, parking areas, trails, visitor facilities, and the installation of interpretive and educational displays. Areas sensitive to tribes where historically significant events took place, however, would continue to remain closed to the public.

National historic site managers would continue to cooperate with the tribes on resource management issues. These issues would include protection of archeological sites and providing tribal fire crews for reduction of fuel loads in the cottonwood gallery, the floodplain, the stream channel, and other areas of the site where fuel buildup would raise the potential of fire damage and resultant adverse resource impacts.

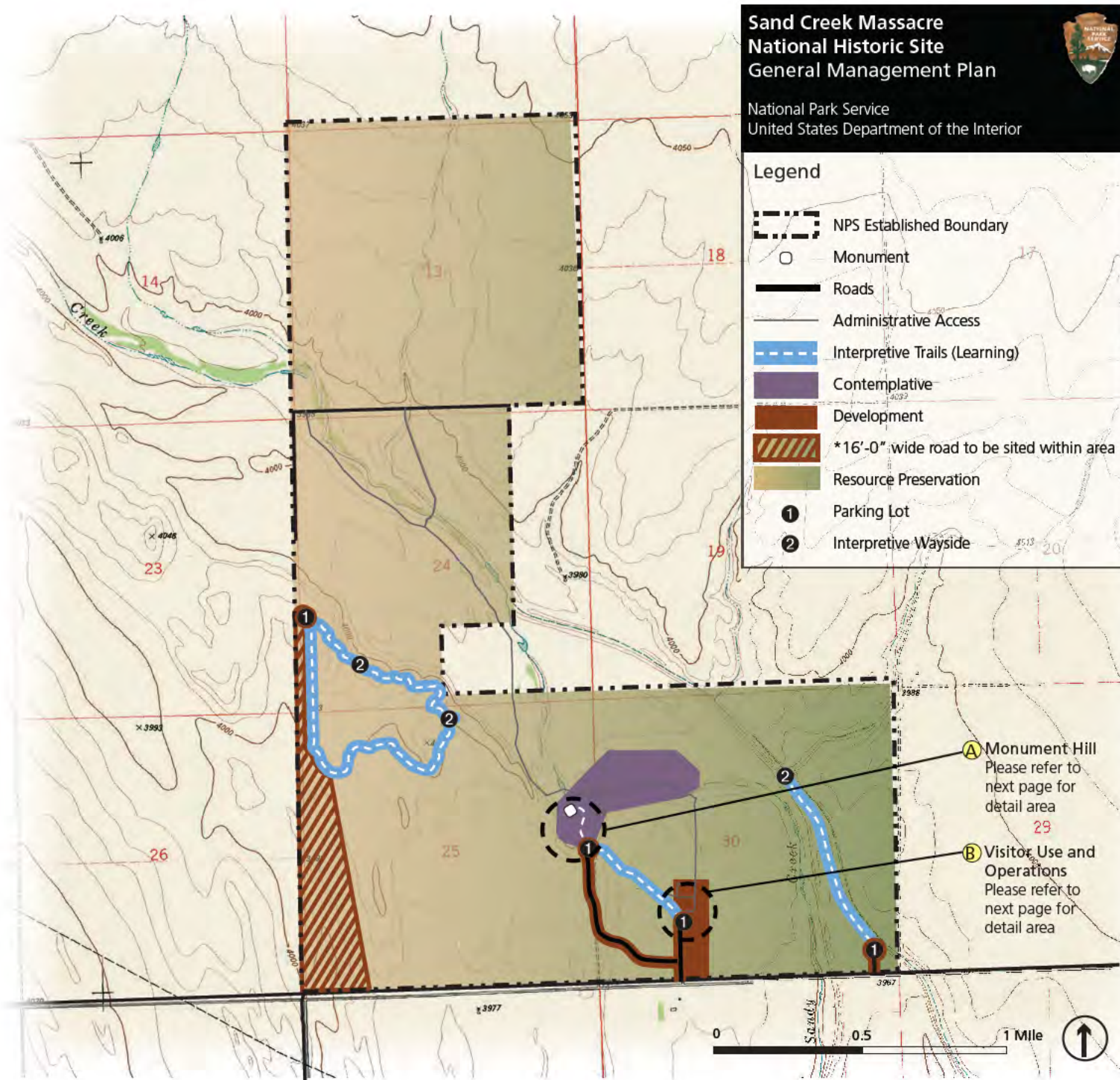
Appropriate facilities for tribal ceremonial use could be developed in the contemplative zone around the monument overlook and in the valley of Sand Creek. These facilities would be developed in consultation with the tribes as part of a subsequent planning and design process.

How Visitors Would Experience the Site

As under alternatives B and C, visitor orientation to the site and center would be developed in conjunction with a research and learning center in the town of Eads. Informational and directional signs on U.S. Highway 287 and Colorado Highway 96 would direct visitors to the main visitor and research center in Eads. Here park visitors would have access to the park film as well as interpretive and educational programs that would inform visitors of the broad historical context of southeastern Colorado in the 19th century and how these historical patterns led to the disaster at Sand Creek on November 29, 1864.

There would be moderate expansion of the trail system under this alternative, in keeping with the balance between contemplation and interpretation. The 2.5-mile loop trail, accessible from the road on the western boundary of the site, would enable visitors to access the bluff above Sand Creek. Here they would have broad views of the landscape of Sand Creek valley, including the likely routes used by tribal members to escape the massacre. The 0.75-mile trail along the Chivington Canal berm would provide interpretive opportunities of the natural resources at the site as well as the history of ranch and farm life in the decades after the massacre. Both trail segments would provide opportunities for additional interpretive media and services by means of self-guided trail brochures and ranger-guided tours.

Visitors would still encounter rangers at the site, either at the contact station, on the trails, or through ranger-guided tours. The time spent on the trails would not substantially increase the overall time that visitors would spend at the site.



General Management Zoning
Sand Creek Massacre National Historic Site

Concept

This alternative would provide equal opportunities for interpretation and memorialization. The stories of the massacre would be shared through a variety of on-site and off-site educational and interpretive programs, media, and services. Visitors would also have opportunities to access and experience certain areas of the landscape for reflection, reverence, and remembrance. At the site, visitors would have opportunities to comprehend the events of November 29, 1864, and the role the landscape played in those events.

Key Elements of the Alternative

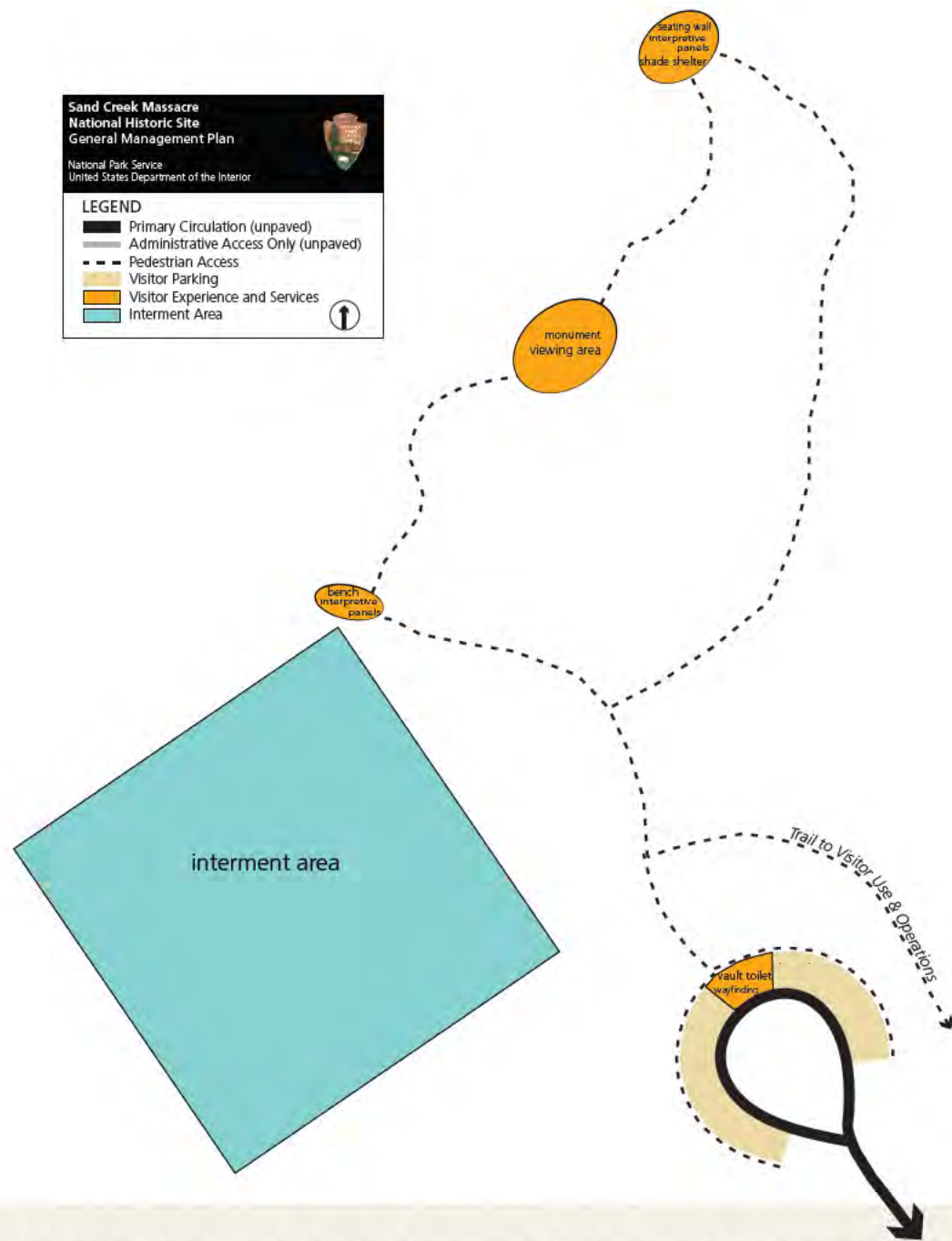
- The trail system would be extended to 3.2 miles, including a loop trail accessible from the road on the western boundary of the site.
- There would be moderate opportunities for public access.
- There would be moderate levels of interpretive media on-site.
- Facilities on-site would include a visitor contact station, maintenance facility, staff offices, water and comfort stations, benches, shade shelters, and additional parking in the southeast corner and on the western boundary.

ALTERNATIVE D

Sand Creek Massacre National Historic Site General Management Plan
National Park Service
United States Department of the Interior

LEGEND

- Primary Circulation (unpaved)
- Administrative Access Only (unpaved)
- Pedestrian Access
- Visitor Parking
- Visitor Experience and Services
- Interment Area



Concept

Promote the highest level of accessible design throughout the historic site and especially in this area to provide the greatest opportunity for interpretation. Create a contemplative and reflective visitor experience for the events that occurred in November 1864.

Key Elements of the Area

- Decrease erosion and increase accessibility through a curvilinear loop trail system to the burial area, monument hill, and below monument hill.
- Create an interment area viewing space with interpretive panels and a resting space for visitor reflection and contemplation.
- Provide minimal development with a viewing area and the existing monument at monument hill.
- Provide a shade shelter and interpretive panels at the base of monument hill to interpret the events of that day in 1864 and the Big Sandy creekbed.
- Upgrade the parking area to provide wayfinding for monument hill and a vault toilet.

Monument Hill
Area Detail

B

Visitor Use and Operations Area

Area Detail

Concept

All facilities were originally constructed and sited as temporary features. Under alternative D all facilities would be sited permanently. This would reduce the potential of visitor and staff conflicts and create a more contemplative experience. All facilities are screened by the cottonwood grove to eliminate views of the visitor use and operations areas from monument hill.

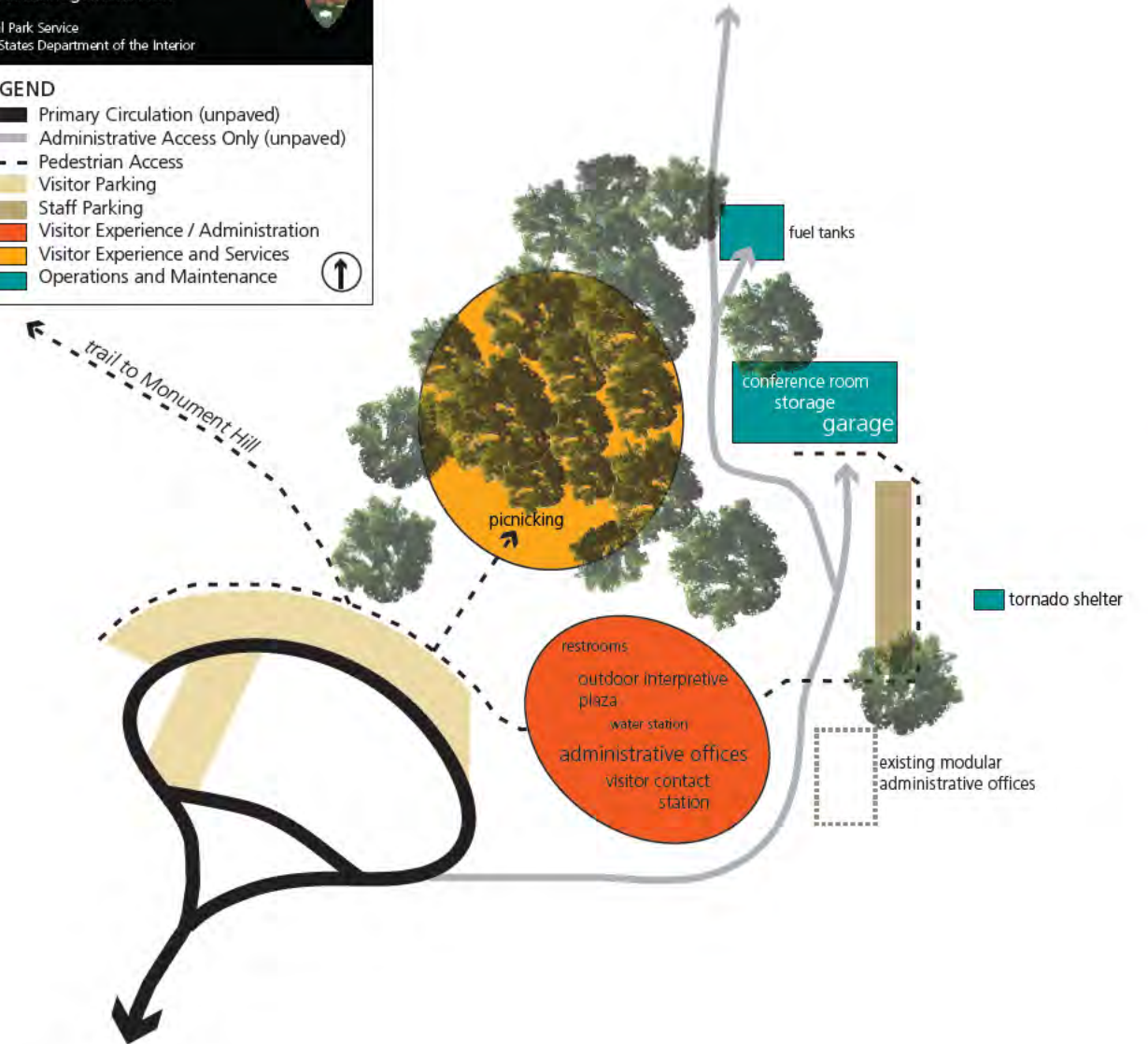
Key Elements of the Area

- Retain existing entrance from County Road W.
- Create separation between visitor use and operations spaces through facilities and parking areas.
- Provide a permanent visitor contact station with attached restrooms and administration offices to replace the existing temporary facility when it is no longer functional.
- Create a small outdoor interpretive plaza.
- Upgrade existing four picnic sites with one accessible site.

Sand Creek Massacre National Historic Site General Management Plan
National Park Service
United States Department of the Interior

LEGEND

- Primary Circulation (unpaved)
- Administrative Access Only (unpaved)
- Pedestrian Access
- Visitor Parking
- Staff Parking
- Visitor Experience / Administration
- Visitor Experience and Services
- Operations and Maintenance



ALTERNATIVE D

ALTERNATIVE E (NPS PREFERRED ALTERNATIVE)

Concept

This alternative would 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 would continue. Another contemplative zone would be placed west of the creek and accessed via existing roads from the main administrative zone. A low level of development would support visitor access and interpretation. In addition to interpretation of the massacre site, information on natural resource information and the post-massacre evolution of the site would be provided on-site. The “Management Zones” and “Monument Hill and Visitor Use and Operations Areas” maps are provided after the “National Park Service Preferred Alternative” section.

How the Site Would Be Managed

Park operations would be based in the operations and maintenance area in the main administrative zone. The existing shop would continue to serve as maintenance headquarters. A small administrative building would provide office space for on-site staff. The small visitor contact station would offer initial visitor orientation, other site information, and book sales.

Two new roads would be constructed inside the boundary. The first would be located between the main administrative area and the road to the monument overlook. This road would enhance visitor safety by reducing the risks faced by visitors while turning from the county road onto the monument overlook road and from the site onto the county road. A second road would be developed in section 25 to the raised elevation on the trail in the southwest corner of section 24. A small parking area (five to six vehicles) would be developed at this trailhead to facilitate visitor access to this more remote area. A pedestrian trail would connect the main administrative zone with the monument overlook.

A visitor center would be developed in conjunction with a research and learning center in the town of Eads. Park staff would increase community outreach efforts through off-site interpretive programs, traveling exhibits, and participation in community events in Eads and beyond.

As in the other alternatives, archeological investigations currently underway would continue to reveal details regarding where and how events took place, which could guide the development of additional interpretative programs. In the future, archeological investigations would continue to gather additional information about the massacre as part of resource protection efforts to reduce the potential of adverse impacts resulting from the construction of roads, parking areas, trails, visitor facilities, and installation of interpretive and educational displays. Areas sensitive to tribes where historically significant events took place, however, would continue to remain closed to the public.

National historic site managers would continue to cooperate with the tribes on resource management issues. These issues would include protection of archeological sites and providing tribal fire crews for reduction of fuel loads in the cottonwood gallery, the floodplain, the stream channel, and other areas of the site where fuel buildup would raise the potential of fire damage and resultant adverse resource impacts.

Appropriate facilities for tribal ceremonial use could be developed in the contemplative zone east of the administrative zone and west of Sand Creek. These facilities would be developed in consultation with the tribes as part of a subsequent planning and design process.

How Visitors Would Experience the Site

Under this alternative, visitors would be able to access the monument along approximately 1.5 miles of trails along the bluff above Sand Creek, providing opportunities to interpret the natural landscape and resources and the role they played in the events of Sand Creek before, during, and after the onslaught. Low-profile wayside exhibits, site bulletins, or ranger-guided tours would accentuate interpretation of the natural landscape and how it influenced the evolution of the human environment as well. From the stone monument, the trail would extend along the bluff of Sand Creek allowing visitors to view the creekbed where the massacre took place; however, there would be no loop connecting back to the monument, so visitors would have to retrace their steps. Visitors could also begin their hike on the trail from the parking area on the west end of the trail. Self-guided or ranger-guided tours could access various parts of the site and story.

The sensitive resource zone, placed along the creek only in this alternative, would be closed to visitors.

A visitor center addressing the broader context of Sand Creek would be developed off-site as part of a research and learning center in the town of Eads. Off-site interpretation would focus on the larger context of Sand Creek, the legacy of conflict, impacts of the tragedy on the Cheyenne and Arapaho tribes, and lessons learned.

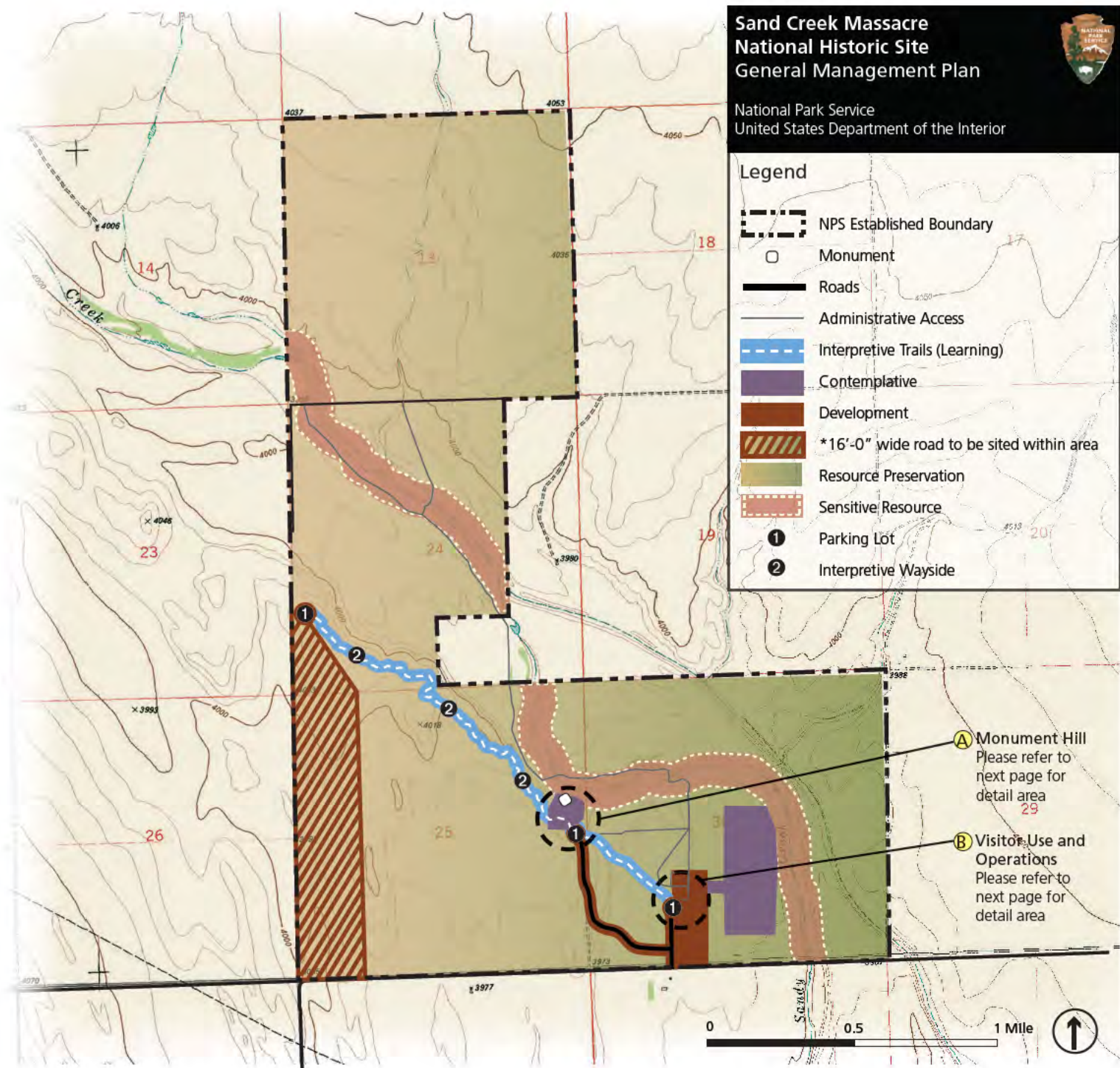
DEVELOPMENT OF THE NPS PREFERRED ALTERNATIVE

A “choosing by advantages” (CBA) workshop was held in December 2011 to analyze the alternatives and decide which one would be the recommended NPS preferred alternative. Three factors were used during the CBA process to analyze each alternative contribution to the following:

1. protect cultural resources
2. protect natural resources
3. provide and enhance visitor experience

NATIONAL PARK SERVICE PREFERRED ALTERNATIVE

Alternative E is the alternative preferred by the National Park Service because it better meets the site’s purposes, needs, and objectives compared with the no-action alternative. Compared with the other alternatives, alternative E provides the highest level of protection for the national historic site’s sensitive cultural and natural resources, expands the range of visitor experiences, expands the park’s educational and interpretive programs, and enhances the NPS partnership with the Cheyenne and Arapaho tribes, the State of Colorado, and Kiowa County. Alternative E would have beneficial impacts on visitor experience, interpretive programs, cultural and natural resources, and monument operations.



General Management Zoning
Sand Creek Massacre National Historic Site

Concept

Alternative E would 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 would remain. Another Contemplative Zone would be placed west of the creek and accessed via existing roads. A low level of development would support visitor access and interpretation. On-site interpretation would include natural resource information and the post-massacre evolution of the site.

Key Elements of the Alternative

- The Sensitive Resource Zone located along the creek bottom, would be closed to protect highly sensitive cultural and natural resources.
- The trail system would be extended to 1.5 miles.
- There would be moderate opportunities for public access.
- There would be moderate levels of interpretive media on-site.
- Facilities on-site would include visitor contact station, maintenance facility, staff offices, water and comfort stations, benches, shade shelters, and additional parking on the western boundary.

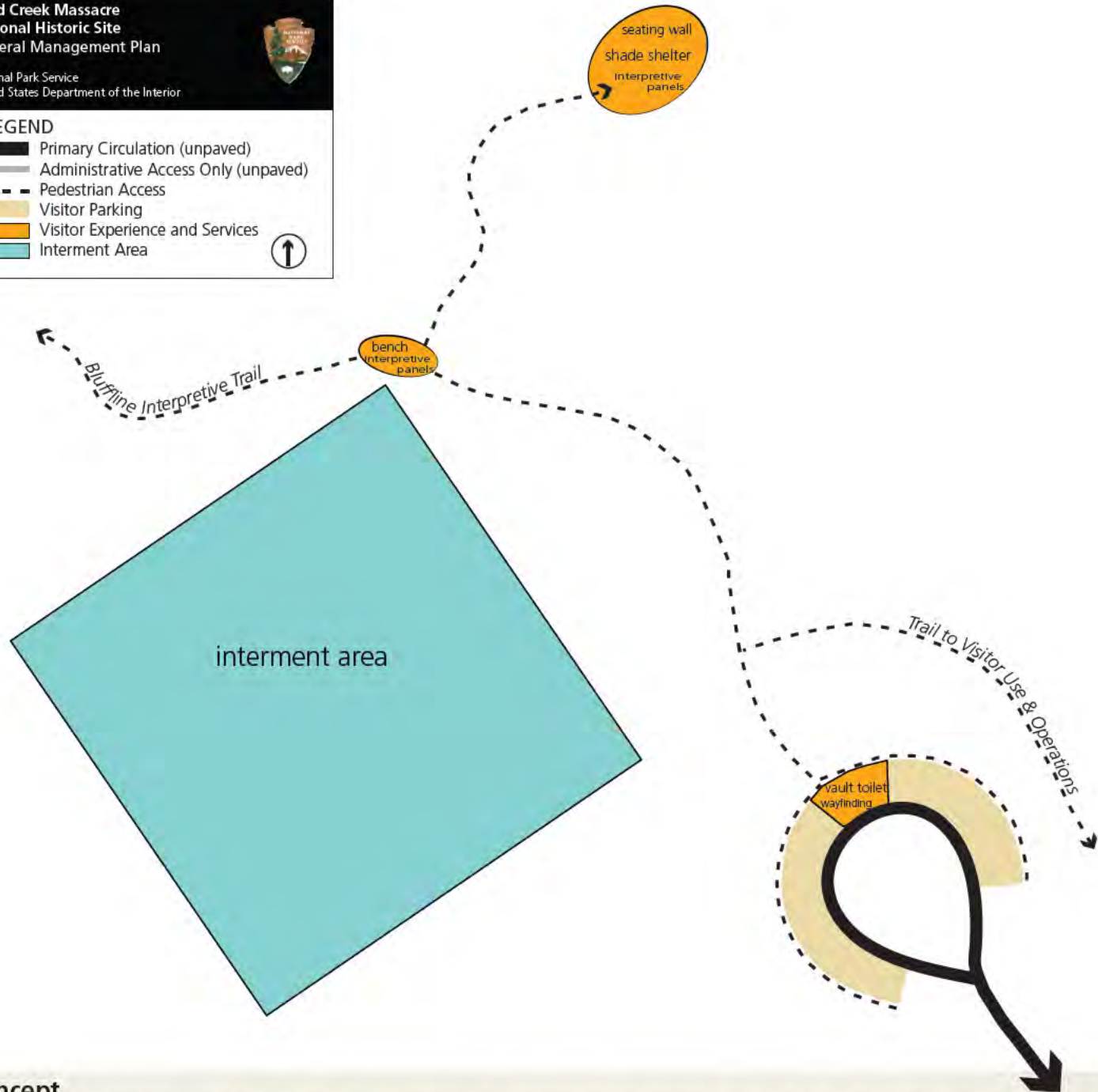
ALTERNATIVE E THE PREFERRED

Sand Creek Massacre National Historic Site General Management Plan
National Park Service
United States Department of the Interior



LEGEND

- Primary Circulation (unpaved)
- Administrative Access Only (unpaved)
- Pedestrian Access
- Visitor Parking
- Visitor Experience and Services
- Interment Area



Concept

Promote the highest level of accessible design throughout the historic site and especially in this area to provide the greatest opportunity for interpretation. Create a contemplative and reflective visitor experience for the events that occurred in November 1864.

Key Elements of the Area

- Decrease erosion and increase accessibility through a curvilinear trail to monument hill.
- Create an interment area viewing space with interpretive panels and a resting space for visitor reflection and contemplation.
- Upgrade monument hill features; include a shaded seating area under a new shade shelter with interpretive panels.
- Upgrade the parking area to provide wayfinding for monument hill and a vault toilet.

Monument Hill
Area Detail **A**

B **Visitor Use and Operations Area**
Area Detail

Concept

All facilities were originally constructed and sited as temporary features. Under alternative E all facilities would be sited permanently. This would reduce the potential of visitor and staff conflicts and create a more contemplative experience. All facilities are screened within the cottonwood grove to eliminate views of the visitor use and operations areas from monument hill.

Key Elements of the Area

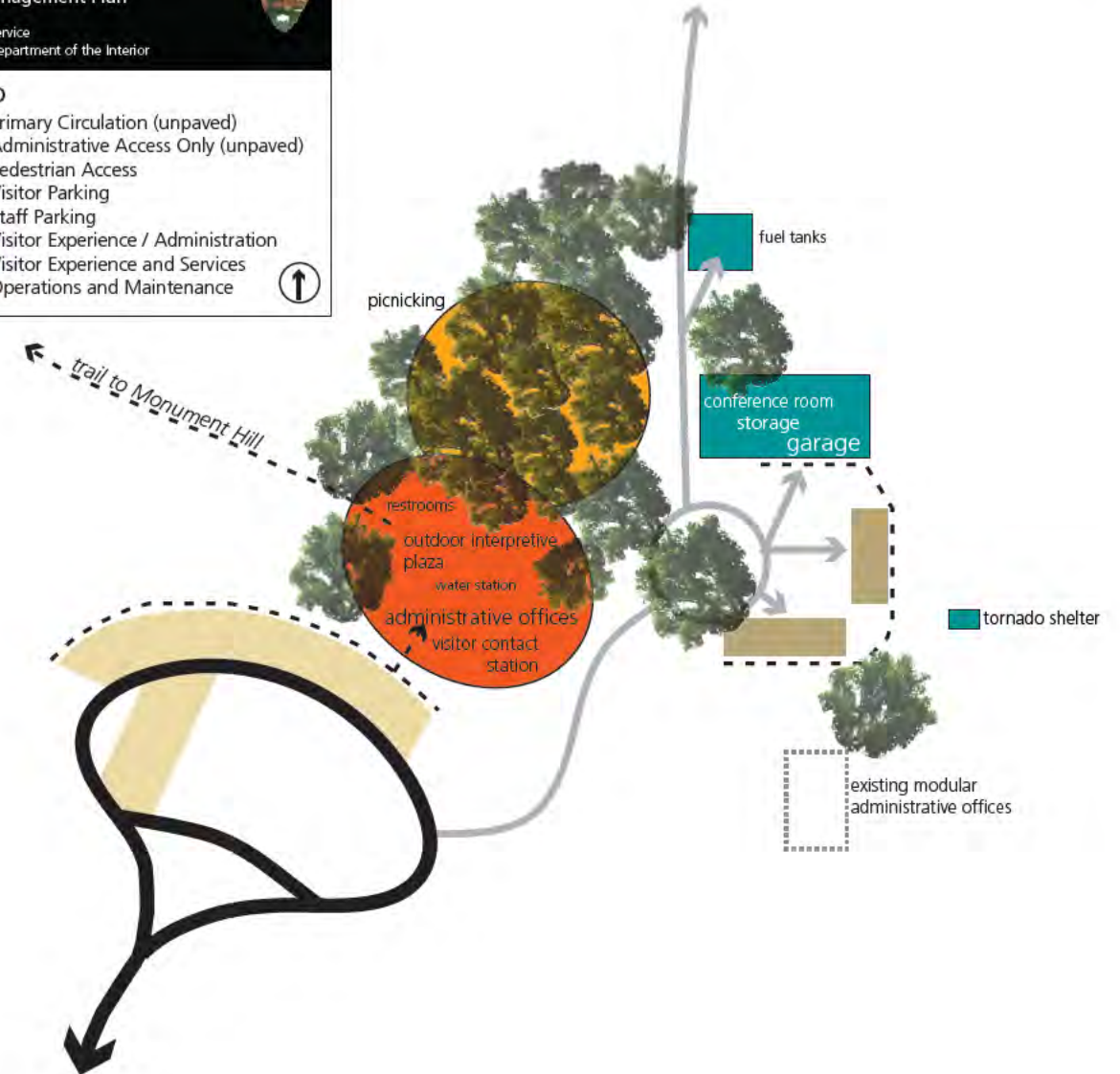
- Retain existing entrance from County Road W.
- Create separation between visitor use and operations spaces through facilities and parking areas.
- Provide a permanent visitor contact station with attached restrooms and administration offices to replace the existing temporary facility when it is no longer functional.
- Create a small outdoor interpretive plaza.
- Upgrade existing four picnic sites with one accessible site.

Sand Creek Massacre National Historic Site General Management Plan
National Park Service
United States Department of the Interior



LEGEND

- Primary Circulation (unpaved)
- Administrative Access Only (unpaved)
- Pedestrian Access
- Visitor Parking
- Staff Parking
- Visitor Experience / Administration
- Visitor Experience and Services
- Operations and Maintenance



ALTERNATIVE E THE PREFERRED

USER CAPACITY

The General Authorities Act for the National Park Service, section 604, amended section 12(b), requires that general management plans establish a user (carrying) capacity for a unit of the national park system, saying, among other things, that there must be “identification of an implementation commitment for visitor carrying capacity for all areas of the [national park system] unit . . .” In addition, there also is a requirement in *NPS Management Policies 2006* that general management plans address the issue of user capacity. The use of the concept of user capacity in planning infrastructure and visitor management programs is expected to result in effective and efficient management.

User capacity, once referred to as visitor carrying capacity, is the type and level of visitor use that can be accommodated while sustaining the quality of park resources and visitor opportunities consistent with the purposes of a park. Although many people think of capacity as the number of people in a given area, the concept is more complex. Research has shown that user capacity often cannot be measured simply as the number of people because impacts on desired resource conditions and visitor experience are often related to a variety of factors. These can include the number of people, the activities in which people engage, where they go, what type of resources are in the area, and the level of management presence.

General management plans are required by law to address the topic of user capacity. The National Park Service defines user capacity as the types and extent of visitor use that can be accommodated while sustaining the quality of resources and visitor opportunities consistent with the purposes of the park. It is a process involving planning, monitoring, and management actions to ensure that a park unit’s values are protected.

Managing user capacity in national parks is inherently complex and depends not only on the number of visitors, but also on where they go, what they do, and the “footprints” they leave behind. In managing for user capacity, the park staff relies on a variety of management tools and strategies, rather than solely on regulating the number of people in a park or simply establishing limits on visitor use. In addition, the ever-changing nature of visitor use in parks requires a deliberate and adaptive approach to user capacity management.

Adaptive management is intended to maintain the desired conditions described in the management zones. Indicators and standards are the tools for monitoring shifts toward or away from desired conditions. An indicator is a measurable variable that can be used to track changes in resource and social conditions related to human activity so that existing conditions can be compared to desired conditions. A standard is the minimum acceptable condition for an indicator. The indicators and standards help translate the broader qualitative descriptions of desired conditions in the management zones into measurable conditions. As a result, park managers can track changes in resource conditions and visitor experience, and provide a basis for park staff to determine whether desired conditions are being met. The monitoring component of this process also tests the effectiveness of management actions and provides a basis for informed adaptive management of visitor use.

User capacity decision making is a continuous process; decisions are adjusted based on monitoring the indicators and standards. Management actions are taken to minimize impacts when needed. The indicators and standards included in this management plan would generally not change in the

future. However, as monitoring historic site conditions continues, managers may decide to modify, add, or eliminate indicators if better ways are found to measure important changes in resource and social conditions. Also, if new use-related resource or visitor experience concerns arise in the future, additional indicators and standards would be identified as needed to address these concerns. The results of the monitoring efforts, related visitor use management actions, and any changes to the indicators and standards would be available to the public.

INDICATORS AND STANDARDS

Indicators are measurable effects on the condition of resources or values that might change as a result of human use. Standards are the maximum acceptable levels of adverse effect on the indicators.

The following indicators and standards have been developed for Sand Creek Massacre National Historic Site. Monitoring resource and visitor experience would occur, and if new knowledge is gained or visitor use patterns change drastically from projected patterns, these indicators would be modified. Table 2 summarizes the identified indicators, standards, and some actions that could be taken when the conditions being monitored are found to be approaching or exceeding the standard.

User Capacity at Sand Creek Massacre National Historic Site

Currently, visitor use has had few adverse effects on the resources of Sand Creek Massacre National Historic Site. As visitor numbers increase, it is expected that the potential for adverse effects on natural and cultural resources would also increase. A large number of visitors at one time could affect visitor experience and result in resource damage. Therefore, it is important for the National Park Service to be proactive in preventing problems that could result from visitors' use of the site.

While final user capacities are being determined during implementation of this plan, NPS staff will monitor resources and visitor use and judge whether or not the capacities (desired conditions) are being exceeded in any area. It is not likely that the expected levels of facility development and visitation and the expected types of use would cause unacceptable impacts on the desired visitor experience or on the site's resources.

For the life of this plan, visitation would be controlled by the number and quality of facilities, by management actions, and by cooperative local efforts and initiatives. The NPS Visitor Experience and Resource Protection (VERP) process, or similar processes would guide planners and managers in addressing user capacity and assessing impacts on resources and visitor experience. The process would enable the staff to avoid some of the problems that other areas have experienced when visitation has not been managed to protect resources or the quality of visitor experience.

Desired Conditions

The Sand Creek Massacre National Historic Site staff has identified general desired conditions for various areas (zones), which are described in table 1 of this document. Desired conditions for specific resources are outlined in the resource stewardship strategy that was developed as a supporting document to this general management plan.

Indicators and Standards

During development of this general management plan, indicators of resource conditions and visitor experience were identified, as well as standards for the indicators. Monitoring programs would be initiated to measure resource conditions and visitor experience. The indicators would establish the maximum amount of deterioration of the quality of resources or visitor experience allowed before management action is taken. Such indicators would reflect the overall condition of the area and facilitate the measurement of effects on the national historic site's biological, physical, and cultural resources, and on visitor experience.

Indicators are effects on the condition of resources or values that can be measured. Standards are the level of effect on the indicators. The following indicators and standards have been developed for use in a VERP plan to be prepared subsequent to completion of this general management plan. Modification of these indicators may occur if new knowledge is gained or visitor use patterns change drastically from projected patterns.

TABLE 2. SUMMARY OF IDENTIFIED INDICATORS, STANDARDS, AND MONITORING ACTIONS

Resource	Indicator	Standard	Possible Mitigation
Visitor Contact Station Crowding	The number of times that the number of visitors (not counting school groups) exceeds established capacity of 15 people for more than 5 minutes at a time.	The stated capacity is not exceeded more often than twice per day during the summer season and once per day during the rest of the year.	Move some ranger-guided programs to the staging area.
Archeological Sites	Disturbance (e.g., loss of artifacts, trampling, extreme weather events) of sites.	Archeological sites remain intact.	Position trails to avoid impacts.
	Vandalism.	No evidence of vandalism.	Educate visitors regarding the sensitive nature of archeological resources.
	Water quality.	Water quality does not deteriorate from baseline.	Find source of degradation and remedy.
Springs and Wetlands	Water quantity.	Water quantity does not decrease due to human activity.	Identify cause and remedy if feasible.
	Average width of tread.	Not to exceed 110% of baseline.	Harden trails (e.g., install trailside "curbs").

TABLE 2. SUMMARY OF IDENTIFIED INDICATORS, STANDARDS, AND MONITORING ACTIONS

Resource	Indicator	Standard	Possible Mitigation
Trail Impacts	Average depth of tread below surrounding terrain.	Not to exceed average depth of 4 inches.	Increased maintenance. Harden trail.
	Erosion or other impacts on adjacent soil caused by human presence or use of trail.	No new impacts.	Rebuild trail to NPS standards to prevent erosion. Eliminate or minimize establishment of social trails.
	Number of unauthorized trails.	None. No new impacts.	Eliminate unauthorized trails. Develop and present visitor education programs on sensitivity of soil crusts.
	Size of primitive parking area (unpaved). Number of unauthorized trails.	Parking areas do not increase more than 10% above baseline measurement. None.	Increase constructed parking areas. Install barriers. Harden areas. Eliminate unauthorized trails.
Parking Areas	Size of primitive parking area (unpaved).	Parking areas do not increase more than 10% above baseline measurement.	Increase constructed parking areas. Install barriers. Harden areas.

Monitoring and Remedial Actions

Monitoring would be carried out to evaluate resource conditions and visitor experience to ensure that the national historic site’s desired conditions would remain as prescribed. Historic site staff would periodically monitor resources and facilities in order to determine whether regular visitor use resulted in unacceptable levels of impacts. For example, the trails would be monitored to determine whether regular visitor use was causing deterioration of the trail surface. Historic site staff would also monitor visitor use to determine if visitation was adversely affecting the solemn character of the site and interfering with opportunities for reflection and contemplation. Ongoing monitoring would determine if visitor use resulted in the creation of new social trails and disturbance of archeological resources or wildlife. Park staff would conduct more intensive monitoring before and after special events to determine if greater numbers of visitors and vehicles were causing more extensive impacts on the natural and cultural resources of the park.

The process of determining how much is too much is a dynamic one. Critical to the success of this process are identifying standards and indicators and adjusting management strategies when monitoring indicates that conditions are out of standard. If these user capacities were exceeded on a regular basis, NPS staff would take actions to restore conditions to acceptable levels. For example, the number of visitors to critical areas/buildings could be restricted, or a ticketing system to redistribute visitation could be instituted. This would be implemented through a strategy developed by NPS staff subsequent to the general management plan.

ESTIMATED COSTS

The following cost descriptions are for items and actions above the current cost of operations for the national historic site (see table 3).

ALTERNATIVE A: NO-ACTION ALTERNATIVE

The no-action alternative would not result in any new construction costs. However, there would be administrative and personnel costs associated with operating additional facilities in Eads. This would include additional utility costs.

ALTERNATIVE B

This alternative would involve the most new park development. In addition to the administrative and personnel costs associated with operating additional facilities in Eads, there would be new amenities developed on-site. These would include new roads and trails, two parking areas, a shade structure, benches, and interpretive panels.

ALTERNATIVE C

This alternative would involve a minimum of new park development: one new road, a bench, an interpretive panel, and an upgrade of the restrooms. Administrative and personnel costs associated with operating additional facilities in Eads would be included.

ALTERNATIVE D

This alternative would involve a moderate amount of new park development. In addition to the administrative and personnel costs associated with operating additional facilities in Eads, there would be new amenities developed on-site. These would include new roads and trails, a parking area, a shade structure, a bench, and interpretive panels.

ALTERNATIVE E: NPS PREFERRED ALTERNATIVE

This alternative would involve a moderate amount of new park development. In addition to the administrative and personnel costs associated with operating additional facilities in Eads, there would be new amenities developed on-site. These would include new roads and trails, a parking area, a shade structure, a bench, and interpretive panels.

COSTS ASSOCIATED WITH THE ALTERNATIVES

The following tables summarize the costs associated with facility development under each of the action alternatives. These actions will enhance visitor experience and access at the site, including

providing reasonable access under the Americans with Disabilities Act. Table 3 summarizes estimated staffing costs for each alternative. Table 4 summarizes estimated costs for phasing these actions over a five-year period.

**TABLE 3. ESTIMATED LABOR COSTS TO IMPLEMENT THE ALTERNATIVES
(BASED ON COSTS FOR FISCAL YEAR 2014)**

Cost Item	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E (preferred)
7 Permanent full-time equivalent (FTE)	\$624,620	—	—	—	—
7.5 Permanent FTE	n/a	\$651,329	\$651,329	\$651,329	\$651,329

TABLE 4. ESTIMATED ONE-TIME FACILITY COSTS TO IMPLEMENT THE ALTERNATIVES

Cost Item	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E (preferred)
Monument Area (Phase 1 – 2020)	0	\$798,638	\$798,638	\$798,638	\$798,638
Interpretive Area (Phase 2 – 2016)	0	663,877	96,860	663,877	663,877
Visitor Use / Operations Area (Phase 3 – 2020)	0	557,260	551,500	557,260	557,260
Western Boundary Road (Phase 4 – 2020)	0	1,213,460	0	1,213,460	1,213,460
Chivington Canal Berm Trail (2020)	0	286,440	0	260,400	0
East Parking Area (2020)		46,600		46,600	
One-Time Total		\$3,566,275	\$1,446,700	\$3,540,235	\$3,233,235

MITIGATION MEASURES COMMON TO THE ALTERNATIVES

Congress has charged the National Park Service with managing the lands under its stewardship “in such manner and by such means as will leave them unimpaired for the enjoyment of future generations” (NPS Organic Act, 16 USC 1). As a result, the National Park Service routinely evaluates and implements mitigation whenever conditions occur that could adversely affect the sustainability of national park system resources.

To ensure that implementation of the final selected management alternative protects natural and cultural resources unimpaired for future generations and provides for a high-quality visitor experience, a consistent set of mitigation measures would be applied to all alternatives.

As global and regional climates continue to change, a management approach that enhances the protection and resilience of climate-sensitive resources will become increasingly important.

For all future actions that resulted from the implementation of this plan, the National Park Service would prepare appropriate environmental compliance reviews, such as those required by the National Environmental Policy Act, National Historic Preservation Act sections 106 and 110, Archaeological Resources Protection Act, Endangered Species Act, Clean Water Act, and other relevant legislation. As part of the environmental review, the National Park Service would avoid, minimize, and mitigate adverse impacts. The park unit could consider implementing a compliance monitoring program that would apply these mitigation measures and also include reporting protocols.

The following mitigation measures and best management practices would be applied to avoid or minimize potential adverse impacts from implementation of the general management plan. These measures would not apply to the no-action alternative.

CULTURAL RESOURCES

The National Park Service would preserve and protect, to the greatest extent possible, resources that reflect human occupation and historical events at Sand Creek Massacre National Historic Site. Specific mitigating measures include the following:

- Continue to develop inventories for and oversee research about archeological, historic, and ethnographic resources to better understand and manage the resources, including historic cultural and ethnographic 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. Continue to manage cultural resources and collections following federal regulations and NPS guidelines and the NPS *Museum Collection Facilities Strategy, Intermountain Region*. Any cultural resource professionals will meet the Secretary of the Interior’s historic preservation professional qualifications.
- Subject projects (with the potential for ground disturbance) to site-specific planning and environmental analysis procedures. For archeological resources, 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 would 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 a consultation process with all interested parties.

- Perform archeological surveys before ground-disturbing undertakings. Archeological resources would be avoided to the greatest extent possible during construction. If such resources could not be avoided, an appropriate mitigation strategy and memorandum of agreement would 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 would be halted until the resources could be identified and documented and, if the resources cannot be preserved in situ, an appropriate mitigation strategy would 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) would be followed.
- Adhere to NPS standards and guidelines on the display and care of artifacts. This would include artifacts used in exhibits in the visitor center. Irreplaceable items would be kept outside the 500-year floodplain.
- Continue ongoing 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.
- Encourage visitors (by means of the interpretive programs) 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

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

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 construction areas with native plants in a timely manner.

Threatened and Endangered Species and Species of Concern

Mitigation actions would occur during normal park operations as well as before, during, and after construction to minimize immediate and long-term impacts on rare, threatened, and endangered species. These actions would vary by specific project and area of the national historic site affected. Additional mitigation will be added depending on the specific action and location. Many of the measures listed above for vegetation and wildlife would also benefit rare, threatened, and endangered species by helping to preserve habitat. Mitigation actions specific to rare, threatened, and endangered species would include the following:

- Conduct surveys for rare, threatened, and endangered species and their habitat, as warranted.
- Position and design facilities/actions to avoid adverse effects on 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.
- Develop and implement restoration and/or monitoring plans, as warranted. Plans should include methods for implementation, performance standards, monitoring criteria, and adaptive management techniques.
- Implement measures to reduce adverse effects of nonnative plants and wildlife on rare, threatened, and endangered species.

Vegetation

- 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.
- 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.

Water Resources

To prevent water pollution during construction, use erosion-control measures, minimize discharge to water bodies, and regularly inspect construction equipment for leaks of fuel and other chemicals. Minimize the use of heavy equipment in waterways.

Wetlands

Delineate existing wetlands and apply protection measures during construction. Wetlands would 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

Mitigating measures would be applied to protect natural sounds in the national historic site and surrounding high plains environment. Specific mitigating measures include the following:

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.

SOCIOECONOMIC ENVIRONMENT

During the future planning and implementation of the approved management plan for Sand Creek Massacre National Historic Site, the National Park Service would work with local communities and county governments to further identify potential impacts and mitigating measures that would best serve the interests and concerns of both the National Park Service and the local communities. Partnerships would be pursued to improve the quality and diversity of community amenities and services.

FUTURE STUDIES NEEDED

After completion and approval of a general management plan for the national historic site, other more detailed studies and plans would be needed before specific actions could be implemented. As required, additional environmental compliance (National Environmental Policy Act, National Historic Preservation Act, and other relevant laws and policies), and public involvement would be implemented. Those additional studies include, but would not be limited to, the following:

- complete ongoing administrative history
- continue the archeological surveys
- prepare an archeological overview and assessment
- prepare an ethnographic landscape report for the national historic site
- prepare a cultural landscape study
- prepare a museum collections plan

ENVIRONMENTALLY PREFERRED ALTERNATIVE

The environmentally preferred alternative is the alternative that will promote the national environmental policy as expressed in section 101 of the National Environmental Policy Act. According to the CEQ regulations implementing NEPA (43 CFR 46.30), the environmentally preferred alternative is the alternative that, “causes the least damage to the biological and physical environment and best protects, preserves, and enhances historical, cultural, and natural resources. The environmentally preferable alternative is identified on 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.”

The environmentally preferred alternative is determined by applying the criteria suggested in the National Environmental Policy Act and guided by the Council on Environmental Quality. According to section 101, this alternative would also “create and maintain conditions under which man and nature can exist in productive harmony and fulfill the social, economic, and other requirements of present and future generations of Americans.”

Alternative A (no action) would continue existing natural and cultural resource management actions, and visitor services. Alternative A provides some range of diversity and individual choices. It does not provide as much resource protection and beneficial management as some other alternatives; therefore, more resource impacts would be expected if visitor use levels increase under this alternative. Thus, the no-action alternative would not meet national environmental policy criteria as well as the other alternatives.

Alternative B would greatly expand NPS visitor use opportunities and interpretation at Sand Creek Massacre National Historic Site via the additional trails, roads, and parking areas and increased interpretation. This would provide the widest range of neutral and beneficial uses of the environment of any alternative. This alternative would also continue protection of the undeveloped areas of the national historic site.

Alternative C would provide a high level of resource protection as management emphasis is shifted away from development. This alternative would continue protection of the undeveloped areas of the national historic site and enhancement of the resource education program, which would lead to long-term protection of the resources by instilling a stewardship ethic in visitors. The range of visitor experience opportunities would not be as great in this alternative when compared to the others.

Alternative D would moderately expand visitor use opportunities at Sand Creek via additional trails, roads, and parking areas and increased interpretation. This would provide some range of neutral and beneficial uses of the environment.

Alternative E would somewhat expand visitor opportunities and interpretation at the site by means of an additional trail, a new road, and more focused interpretation. The combination of the resource preservation zone and the sensitive resources zone would provide the highest level of protection for cultural and natural resources of any of the alternatives. This would provide a range of beneficial uses of the environment while continuing protection of undeveloped areas in the national historic site.

After consideration of the alternatives in this general management plan and the environmental consequences of implementing them, alternative E best meets the criteria of section 101(b) and is the environmentally preferable alternative. This alternative would fully satisfy more of the national environmental criteria than alternatives A, B, C, or D. Alternative E would provide a high level of protection of natural and cultural resources throughout the entire site. Alternative E would also maintain an environment that supports a diversity and variety of individual choices and would integrate resource protection with an appropriate range of visitor use.



CHAPTER 3
AFFECTED ENVIRONMENT

THE
COLORADO GOLD RUSH
AND THE FORT WISE
TREATY OF 1861

Article I

The said chiefs and delegates of said Arapahoe and Cheyenne tribes of Indians do hereby cede and relinquish to the United States all lands now owned, possessed, or claimed by them, wherever situated, except a tract to be reserved for the use of said tribes located within the following described boundaries, to wit: Beginning at the mouth of the Sandy Fork of the Arkansas River and extending westwardly along the said river to the mouth of Purgatory River; thence along up the west bank of the Purgatory River to the northern boundary of the Territory of New Mexico; thence west along said boundary to a point where a line drawn due south from a point on the Arkansas River, five miles east of the mouth of the Huerfano River, would intersect said northern boundary of New Mexico; thence due north from that point on said boundary of the Sandy Fork to the place of the beginning.

The Arapahoe and Cheyennes, being desirous of promoting settled habits of industry and enterprise among themselves, by abolishing the tenure in common by which they now hold their lands, and by assigning limited quantities thereof in severalty to the individual members of the respective tribes, to be cultivated and improved for their individual use and benefit, it is hereby agreed and stipulated that the tract of country contained within the boundary above described shall be set apart and retained by them for the purposes aforesaid.

But as a solution to the problems of Indian-white contact, the (Fort Wise) treaty proved wholly inadequate. When Colorado was organized as a territory within the same month, the untoward haste of the government was explained. The whole purpose of the treaty was to clear away Indian land claims to the mining region... The government forced the issue at Fort Wise simply because whites wanted the land.

“Sand Creek: Tragedy and Symbol,” Gary Leland Roberts, Unpublished PhD dissertation, 1984, p. 101



I am not a big war chief but all the soldiers of this country are under my command. My rule of fighting white men or Indians is to fight them until they lay down their arms and submit to military authority.

They are nearer Major Wynkoop than any one else, and they can go to him when they are ready to do that.

Col. Chivington at the Camp Weld, Conference, September 29, 1864

AFFECTED ENVIRONMENT

LOCATION

Sand Creek Massacre National Historic Site is located where the inception of the 1864 massacre took place in Kiowa County on the grassland plains of southeastern Colorado, about 171 miles southeast of Denver.

CULTURAL RESOURCES

Archeological Resources

The National Park Service has demonstrated a long-standing commitment to the appropriate investigation, documentation, preservation, interpretation, and protection of archeological resources inside units of the national park system. As one of the principal stewards of America's heritage, the National Park Service is charged with the preservation of the commemorative, educational, scientific, and traditional cultural values of archeological resources for the benefit and enjoyment of present and future generations. Archeological resources are nonrenewable and irreplaceable; thus, it is important that all management decisions and activities throughout the National Park Service reflect a commitment to the conservation of archeological resources as elements of our national heritage.

A number of archeological surveys have been conducted at the Sand Creek Massacre National Historic Site, including the site location survey, *Archeological Reconnaissance of Two Possible Locations of the Sand Creek Massacre of 1864 (1997)* conducted by Fort Lewis College and the Colorado Historical Society in conjunction with the tribes as well as the NPS site location surveys beginning in 1999.

Site Location Study Surveys (1997–2000). This survey to “identify the location and extent of the massacre area” was conducted by Fort Lewis College, the Colorado Historical Society, with some help from the NPS Midwest Archeological Center and the Oklahoma Historical Society, along with the tribes as part of a larger effort to determine “the suitability and feasibility of designating the site as a unit of the National Park Service system.” The NPS Intermountain Region and Colorado Historical Society, along with the tribes conducted an additional site location survey beginning in 1999. In addition to collecting oral histories about the massacre, the survey evaluated historical and archeological information to determine the massacre site boundary. Fieldwork was conducted in 1999–2000 in conjunction with tribal consultations. A limited number of artifacts related to military use and American Indian occupation, consistent with the time period of the massacre, were recorded. The study helped determine the suitability and feasibility rationale for establishment of the national historic site. Subsequent efforts to refine the preliminary conclusions regarding the site location have been conducted in a partnership effort between the National Park Service and the representative of the Cheyenne and Arapaho peoples. The National Park Service and tribal representatives are continuing with research and on-site surveys to make a final determination of the village location.

Dawson Residence Removal (2005). In spring 2005, a cultural resource inventory of the Dawson ranch complex was performed (for more information, see the “Historic Structures” section). The

complex was determined to not be eligible for inclusion in the National Register of Historic Places. The National Park Service proposed the removal of the residence and an underground storage tank, the corrals, storage sheds, livestock stalls, fencing, and refuse piles because they were no longer structurally sound or posed a future threat to visitor safety. Concurrence from the Colorado Historical Society on the determination of no historic properties meeting the criteria of the national register was affected, in accordance with 36 CFR 800, was received on September 6, 2005.

Cemetery Survey (2005). From October 11–13, 2005, NPS archeologists conducted archeological investigations at the national historic site for a proposed cemetery to be used by the Cheyenne and Arapaho tribes for repatriation purposes. Pedestrian survey and shovel testing occurred in the presence of and in consultation with tribal representatives. The results of both the surface survey and shovel testing were negative, with no indication of the presence of archeological materials. This information was submitted to the Colorado Historical Society (state historic preservation officer [SHPO]) in a letter dated April 6, 2006. Concurrence from the Colorado Historical Society on the determination of *no historic properties affected* was received on April 19, 2006. *This project also documented the remains of the historic SS Line Camp and completed a re-determination of its eligibility for inclusion in the National Register of Historic Places.*

Electrical Powerline Survey (2006). Per consultations with the Colorado Historical Society and the Cheyenne and Arapaho tribes, a trench was dug and an electrical powerline was laid in Sand Creek Massacre National Historic Site within the headquarters complex in 2006. The powerline was installed near the existing easternmost ranch road. Construction activity was monitored by an archeologist, and no cultural materials were discovered. This information was conveyed to the Colorado Historical Society in a letter dated January 9, 2007. At the time of this writing, the National Park Service received concurrence from the Colorado Historical Society on a determination of *no historic properties affected*.

Archeological Survey Prior to Temporary Facility Development (2007). A cultural resource survey of the existing headquarters location and the surrounding area was conducted in 2007, prior to the grand opening dedication of Sand Creek Massacre National Historic Site. Tribal representatives participated and monitored this survey.

Archeological Monitoring for Tornado Shelter Installation (2009). A contracted archeologist monitored excavations for the installation of a tornado shelter at the site; no archeological materials were encountered and the Colorado state historic preservation officer was notified accordingly.

Archeological Survey of Proposed Burn Area (2009). A contracted archeologist and NPS staff completed a class III archeological survey of a proposed 123-acre burn plot. A class III or intensive survey involves 100% pedestrian coverage of a project area. No archeological evidence was found. As the burn project was not implemented, a section 106 compliance package was not created for submission to the Colorado state historic preservation officer.

Metal Detector Survey of the potential “Big Head Site” (2012). An additional metal detector survey was conducted in the extreme southwest corner of section 24 of the site in the fall of 2012. The work was conducted with contracted archeologists, NPS archeologists and staff, and tribal representatives. The goals of the project were to test a hypothesis derived from eyewitness accounts about the location of an engagement between U.S. Third Regiment soldiers and about 30 Cheyennes and Arapahos associated with the warrior Big Head during the Sand Creek Massacre, and also to assess a proposed hiking trail location. The project included metal detecting of about 133 acres along transects established within a 320-acre area. While hundreds of metal artifacts were

encountered, the vast majority were related to modern ranch practices. A handful were historic but none conclusively dating to or apparently related to the Sand Creek Massacre. A report summarizing the findings of this survey has been submitted to the National Park Service and Sand Creek Massacre National Historic Site personnel. The recovered artifacts have been included in the historic site's museum collection.

Archeological Testing of Historic Trash Dump (2012). In preparation for stabilization of an eroded gully near the monument overlook, a historic trash dump was tested by contracted archeologists. The dump was determined to be associated with the most recent occupation of the ranch preceding the national historic site and was determined to not be eligible for inclusion in the National Register of Historic Places.

Electrical Powerline Project (2013). The enabling legislation for Sand Creek Massacre National Historical Site directs the National Park Service to restore, where practicable, the 1864 cultural landscape. Beginning in 2013, a project was initiated to remove the last human-made intrusion to the viewshed within Sand Creek Massacre National Historic Site. This modern intrusion belongs to Southeastern Colorado Power Association, comprising a total of 3 miles of powerlines and poles. The electricity is invaluable to the site, and in 2013 the park proposed to bury the 3 miles of powerlines, thus removing the visual intrusion while still maintaining the power grid. The project was proposed to the Colorado Historical Society and presented through consultation with the Cheyenne and Arapaho tribes. The project was funded in 2013, providing for completion of a surface survey with appropriate mitigation measures. The actual trenching for the powerlines was completed in 2014. Trenching was monitored by an archeologist and followed section 106 and NEPA compliance requirements.

Metal Detection Survey (2014). An additional archeological survey will be undertaken by NPS archeologists, volunteer metal detector specialists, and tribal representatives, to further investigate hypotheses about where specific events occurred during the Sand Creek Massacre as indicated by primary source materials.

Ethnographic Resources

The Sand Creek Massacre site is particularly sacred to the Cheyenne and Arapaho tribes. It lies along a primary migratory route where the tribes hunted, gathered, held ceremonies, and camped. The entire massacre site is within the original reservation designated for the Cheyenne and Arapaho people in the 1851 Fort Laramie Treaty and a portion of the massacre site fell within the reservation lands designated under the 1861 Fort Wise Treaty. Also important in the study area are places where spiritual experiences have occurred, where ceremonies have been conducted, and where artifacts have been found. Time, elements, and people have changed the site's natural features, but the intangible spiritual qualities of the landscape are as strong, or even stronger, today than on the day of the massacre.

Among the apparent ethnographic resources in the area (but not within the massacre site boundary) is a natural spring in section 20 of township 17 south, range 45 west, approximately 2 miles northeast of the Dawson South Bend. As noted earlier, Cheyenne oral histories state that the village attacked by Chivington's troops may have been close to a large natural spring. Although the encampment was on the banks of Big Sandy Creek, Cheyenne tradition held that only animals would drink creek water, and people drank water from a clear running source, such as a spring. The Cheyennes believe the spring, creekbed, sand pits, and cottonwood trees in section 20 may be associated with the Sand Creek Massacre encampment.

Museum Collections

According to Director's Order 24: *Museum Collections Management*, the National Park Service is the custodian in perpetuity of irreplaceable and priceless museum collections including objects, specimens, and archival and manuscript materials (textual, electronic, and audio-visual documents), representing cultural and natural resources in the United States. The collections include but are not limited to the disciplines of archeology, biology, ethnology, geology, history, genealogy, and paleontology. National Park Service museum collections are part of the natural and cultural heritage of the country and are collected, preserved, and interpreted for public benefit.

The museum and archival collections at Sand Creek Massacre National Historic Site total 55,129 items as of August 2013. These collections include manuscripts, maps, oral history recordings or transcripts, and artifacts from the site or which are associated with the massacre. Collections are stored in the National Park Service Western Archeological and Conservation Center in Tucson, Arizona.

Indian Trust Resources

Secretarial Order 3175 requires that any anticipated impacts to Indian trust resources from a proposed project or action by Department of the Interior agencies be explicitly addressed in environmental documents. The federal Indian trust responsibility is a legally enforceable fiduciary obligation on the part of the United States to protect tribal lands, assets, resources, treaty rights, and treaty obligations. It represents a duty to carry out the mandates of federal law with respect to American Indian and Alaska Native tribes.

Tribal trust legislation was signed by President George W. Bush on August 2, 2005. This legislation, *Sand Creek Massacre National Historic Site Trust Act of 2005* (Public Law 109-45), authorizes the transfer, in trust, of 1,465 acres within the site's authorized boundaries from the Southern Cheyenne and Arapaho Tribes of Oklahoma to the National Park Service (NPS 2005b). On September 9, 2006, the governor of the Southern Cheyenne and Arapaho Tribes of Oklahoma signed legislation conveying, as trust, 1,465 acres of land at Sand Creek from the Cheyenne and Arapaho Tribes of Oklahoma to the United States of America. This conveyance, unanimously approved by tribal legislators, enabled the establishment of the Sand Creek Massacre National Historic Site.

Sand Creek Massacre National Historic Site includes about 2,385 acres of land, with about 920 acres owned by the National Park Service. The 1,465 acres within the authorized site are tribal trust lands managed by the National Park Service. The tribes incorporated this land into the national historic site as tribal trust land. This trust land within the Sand Creek Massacre National Historic Site means that the Cheyenne and Arapaho Tribes of Oklahoma remain the "beneficial owners" of the land, but the United States is charged with the responsibility of managing the land for the cultural, historical, and traditional benefit of the tribes. Unlike trust lands within tribal reservations, the trust land within Sand Creek Massacre National Historic Site is to be managed according to laws specifically governing national parks.

The tribal trust legislation states that the trust property shall be administered in perpetuity by the Secretary of the Interior as part of the Sand Creek Massacre National Historic Site, only for historical, traditional, cultural, and other uses in accordance with the Sand Creek Massacre National Historic Site Establishment Act of 2000. Further, the National Park Service may construct a facility on the trust property only after consulting with, soliciting advice from, and obtaining the

agreement of, the Northern Cheyenne Tribe, the Arapaho Tribe of the Wind River Reservation, and the Cheyenne and Arapaho Tribes of Oklahoma. Facilities constructed with federal funds or funds donated to the United States shall be owned in fee by the United States. For the purposes of construction, maintenance, or demolition of improvements or facilities, federal funds shall be expended only on improvements or facilities that are owned in fee by the United States.

NATURAL RESOURCES

Topography and Geology

The historic site lies in eastern Kiowa County within the High Plains section of the Great Plains-Palouse Dry Steppe Province ecoregion. This ecoregion stretches from northeastern Oklahoma, north-northwesterly through Montana. The historic site has gently rolling topography with elevations of approximately 3,960 feet above sea level along the creek. The bluffs to the west rise more than 4,000 feet above sea level, and the slopes to the east are more than 4,050 feet above sea level. The Big Sandy Creek floodplain is terraced, but mostly level to gently sloping and varying from 0.25 to 0.5 mile in width throughout the site (NPS 2000b).

Big Sandy Creek drains the eastern side of a broad southeasterly trending valley composed largely of Quaternary eolian (wind-deposited) sands. These sands from the Holocene and Pleistocene periods overlay complex and discontinuous Pleistocene sands, silts, and gravels from 0 to 70 feet in depth to the Smoky Hill Shale (part of the Niobrara Formation). Dune sands make up the bluffs along and extending back from the western side of the creek, while coarser (and including more silt) valley fill and slopewash materials blanket the terraces and slopes extending eastward. Along Big Sandy Creek, just south of the large bend in the creek, dune, and valley fill deposits average 20 to 50 feet in depth above the chalky Smoky Hill Shale (NPS 2000b).

Along and directly adjacent to the massacre site and Sand Creek, distinct alluvial terraces have developed as secondarily worked deposits of Pliocene and lower Pleistocene materials that originated from the mountains to the west. Numerous climatic extremes of wet, dry, and wind periods over thousands of years have then modified surficial conditions to allow development of most of the alluvial and eolian soils seen on the site today (NPS 2000b).

Soils

The diversity of the soils of Sand Creek Massacre National Historic Site is a result of a variety of natural soil-forming factors and anthropogenic stressors that have formed the 23 different soil types that we can observe today. The dominate soils of the park are the Bijou, Fort Collins, Valent, and Wiley soils, which have formed in windblown sandy material that originated from mixed sources. These soils have fine sandy loam or loamy fine sand textures, with very little soil development present, and occur on stream terraces and upland areas within the park. They are well-drained or excessively well-drained soils with rapid soil permeability. These soils are very susceptible to wind erosion, and to a lesser extent, water erosion in steeper areas of the park.

The park soils have been significantly impacted by years of accelerated wind erosion on arid croplands, partially resulting from the Dust Bowl era of the 1930s. Additional impacts to soil resources have occurred since then via a variety of agricultural practices such as mechanical cultivation, irrigation, and livestock grazing. Since the park was established, these agricultural practices have been discontinued on most of the park lands administered by the National Park

Service. The park staff has implemented several resource management treatments that have benefitted soil resources. One in particular has been the brush management treatment in which a small area of the park was mechanically mowed, which decreased the sand sage canopy, increased the herbaceous cover, and decreased the amount of bare ground, reducing the potential for soil erosion.

The key to preserving soil quality is to ensure that proper resource management activities maintain a protective and healthy vegetation cover and reduce the amount of bare ground, minimizing the potential for accelerated erosion by wind and water.

Water Resources

National Park Service policies require protection of water quality consistent with the Clean Water Act. The following text describes water resources in terms of water quantity, water quality, and water rights.

Water Quantity. Big Sandy Creek is an intermittently flowing stream through Sand Creek Massacre National Historic Site. The creek's watershed stretches more than 120 miles from El Paso County, Colorado, through Limon and Kit Carson before reaching the historic site and continues more than 30 miles more to join the Arkansas River, 8 miles east of Lamar. While Big Sandy Creek drains more than 3,400 square miles of southeastern Colorado to the Arkansas River, most of the flow through the historic site derives from infrequent large rainfall events during the spring and summer. Thus, during normal and dry years, there are long periods during which the creek does not substantially flow at the site. It has not been reliably used for potable or irrigation use in its history. Recent observations of the creek and associated plant communities suggest that the only water normally found on the site is in creek-scoured depressions that intercept groundwater, several minor seeps, and one large spring on the east side of the creek floodplain. The spring is in section 20, with water flowing through section 30, township 17 south, range 45 west. The bed of Big Sandy Creek is lightly defined throughout much of its floodplain, both upstream and downstream of the site. During moderate to large flows of the creek, clearly marked edges and bank conditions develop through erosion and debris deposition; numerous braided channels and shallow flow areas are evident among the cottonwood groves (NPS 2000b).

Because of the creek's ephemeral character, the nearest water flow monitoring has occurred at a gauging station more than 30 miles downstream, close to the confluence with the Arkansas River. Because of return flow from irrigated fields downstream of the historic site, the average and low flows recorded during the summer months are not reflective of the true creek flow. During several winter observations of the creek at the site and the downstream gauging station, the site showed no flow, while at the gauging station, the creek was flowing more than 5 cubic feet per second. Gauging station records since 1968 show daily mean flows at 12 to 76 cubic feet per second, a maximum daily flow of 276 cubic feet per second, and a daily mean low flow during spring and summer months of less than 1 cubic foot per second. During several on-site investigations during the summer of 1999, streamflow flooding on Sand Creek caused access difficulties with flowing and standing portions of water greater than 50 feet in width and more than 4 feet in depth. Indian oral histories, period diaries and interviews, and period U.S. Army soldiers' accounts describe the general creek area of the historic site as being similar to the current condition, with some notable exceptions. Apparently, at the time of the Sand Creek Massacre, very few small and/or stunted cottonwoods existed along the creek within the historic site, compared to the numerous groves of large cottonwoods observed today (NPS 2000b).

Streamflow diversion has occurred for a number of years earlier in the 20th century for the Chivington irrigation canal. Just prior to World War I, the Chivington Irrigation Company built and operated this short-lived and now defunct creek diversion and canal that fed Chivington Reservoir No. 4, also known as Brandon Lake, for agricultural irrigation purposes. All of the diversion structures and most of the earthen canal system remain in a poor and unworkable condition. The canal construction and operation, compounded by extensive livestock grazing, some crop tilling farming, and erosion have altered flow characteristics and embankments surrounding the largest spring entering the creek at the east end of Dawson South Bend (NPS 2000b).

The intermittent flow and periodic flooding character of Big Sandy Creek appear essential to the maintenance of the general physical stream morphology, plant species habitat, and the visual appearance of the floodplain through the historic site. More mesic and wetland species, such as rushes and sedges, are limited to the wettest of areas in or surrounding surface or shallow groundwater. Cottonwoods are only successful where established during specific scouring and flooding conditions, nurtured by available surface or groundwater, and minimally disturbed by livestock grazing. Wildlife grazing by bison and fuel wood gathering by Indian tribes may have been the primary forces limiting the successful establishment and growth of cottonwoods throughout the 19th century (NPS 2000b).

Several springs enter Big Sandy Creek or its floodplain throughout the length of the site. Very small spring traces exist that provide water to areas of vegetation and occasional wildlife grazing along the east floodplain of the creek. There is a large spring that is recharged by local groundwater and from more than 5 miles of contributing surface and groundwater flow from the northeast. Water from this perennial spring flows into Big Sandy Creek at the terminus of Dawson South Bend. The spring historically produced enough water such that two wells with recorded water well “exempt” status tap portions of its source more than 2 miles upgradient northeast of the historic site (NPS 2000b).

Most of the region’s water comes from the High Plains aquifer (also referred to by the name of its largest formation, the Ogallala aquifer) from which water withdrawals already outpace recharge. Rising temperatures, faster evaporation rates, and more sustained drought brought on by climate change will add more stress to overtaxed surface and subsurface water resources.

Water Quality. Water quality in Big Sandy Creek through the national historic site varies to a great degree throughout the year and through particular storm events because of the creek’s intermittent character. It is generally of good quality although with limitations of use as potable water due to high alkalinity and periodic high suspended sediments. Local residents and Indian oral histories suggest that the water quality in the creek or in the persistent ponding of water within the creek bottom was never considered as a potable source for humans, although consumption by cattle, horses, or wildlife appeared to cause no ill effects. Vegetation types and soil surfaces observed during site evaluations indicated no visible reaction of plants (e.g., increase in alkali-tolerant species) to poor water quality or any significant deposits of alkali salts. Few data exist on measured water quality in Big Sandy Creek, partially because of its intermittent character and the lack of development of its surface water as a potable supply for individuals or communities. Sporadic testing of the creek downstream at the gauging station yielded specific conductance measurements between 2,620 and 4,420 micro-ohms per centimeter at respective discharge flows of 126 to 50 cubic feet per second (October 1997 through September 1998) (NPS 2000b).

The large perennial spring in section 20 is of apparent excellent quality and flows from the northeast into the easternmost extent of Dawson South Bend. As noted above, this spring has some

local source, but also exists as a small groundwater drainage trace that flows discontinuously from sources more than 5 miles distant. The spring and its entire drainage throughout sections 20 and 30 are heavily used and impacted by livestock grazing within those sections. The water quality of the spring may also be affected by livestock grazing and unknown agricultural use farther upstream. Two shallow wells mentioned in the “Water Quantity” section, and of unknown quality, tap the groundwater that likely feeds this spring. Several other springs on the east side of the Big Sandy Creek floodplain, also mentioned previously, supply water of unknown quality for at least one stock watering location. Each of these springs may have been used historically by American Indians, even though the source or discharges may have changed since 1864 (NPS 2000b).

Groundwater quality in the area of the creek has generally been rated as fair to poor. In a 1967 report on local groundwater resources, 37 of 41 wells had sulfate contents greater than the 250 parts per million limit recommended by the U.S. Public Health Service—all of the wells contained more than the recommended 500 parts per million dissolved solids limit. One local well had an elevated selenium content of 0.11 parts per million, and it was recommended that all wells be carefully checked for elevated levels of that potentially toxic element. It is possible that the shallow spring sources along the eastern side of the creek floodplain could be of similar, better, or worse quality than the tested wells (NPS 2000b).

Current land uses on the historic site are not substantially affecting water quality in the creek. Groundwater locally and beneath the site is considered hard (and high in sulfate and dissolved solids), but is used for domestic and livestock purposes. No current threat to surface or groundwater is apparent, particularly since livestock operations have ceased since the land was acquired for the historic site. The perennial spring(s) along the east side of the creek floodplain are believed to have been one of the reasons for historic encampments made on the site by numerous Indian tribes. While the spring on sections 20 and 30 appears to tap shallow groundwater draining from the northeast, it apparently sustains its flow even during dry periods through its connection to a large watershed and aquifer. The location of the source, flow discharge, and riparian habitat of the spring has changed through the construction and operation of Chivington Canal, some local farming, extensive livestock grazing, and local erosion (NPS 2000b).

Wetlands

Executive Order 11990, “Protection of Wetlands,” requires federal agencies to avoid, where possible, adversely impacting wetlands. Further, section 404 of the Clean Water Act authorizes the U.S. Army Corps of Engineers to prohibit or regulate, through a permitting process, discharge or dredged or fill material or excavation within waters of the United States. National Park Service policies for wetlands as stated in NPS *Management Policies 2006* strive to (1) provide leadership and take action to prevent the destruction, loss, or degradation of wetlands; (2) preserve and enhance the natural and beneficial values of wetlands; and (3) avoid direct and indirect support of new construction in wetlands unless there are no practicable alternatives and the proposed action includes all practicable measures to minimize harm to wetlands (2006a). In accordance with Director’s Order 77-1: *Wetland Protection*, proposed actions that have the potential to adversely impact wetlands must be addressed in a statement of findings for wetlands (NPS 2002).

For regulatory purposes under the Clean Water Act, the term wetlands means “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.”

A narrow strip of wetlands shown on *National Wetlands Inventory* mapping borders Big Sandy Creek throughout the length of the historic site consisting of two Palustrine wetland types: (1) Palustrine Emergent Intermittently Flooded/Temporary, and (2) Palustrine Forested Intermittently Flooded/ Temporary. A third type of wetland classification is found along the creekbed where more flow character is maintained: Riverine Intermittent Streambed Intermittently Flooded. Four small pockets or strips of wetland are also indicated on spring areas within sections 19, 20, and 30, known as Palustrine Emergent Intermittently Flooded. All four wetland classifications were determined by use of the *Classification of Wetlands and Deepwater Habitats of the United States* by Cowardin et al., the system the National Park Service has adopted for wetland determination. No field surveys of wetland boundaries or functions were undertaken for this plan (NPS 2000b).

Floodplains

Executive Order 11988, "Floodplain Management," requires all federal agencies to avoid construction within the 100-year floodplain unless no other practicable alternative exists. Director's Order 77-2: *Floodplain Management*, states that park units shall strive to preserve floodplain values and minimize hazardous floodplain conditions (NPS 2003). Specifically, the National Park Service will (1) protect, preserve, and restore the natural resources and functions of floodplains; (2) avoid the long- and short-term environmental effects associated with the occupancy and modification of floodplains; and (3) avoid direct and indirect support of floodplain development and actions that could adversely affect the natural resources and functions of floodplains or increase flood risks (NPS 2006a). Policy also states that certain construction within a 100-year floodplain requires preparation of a statement of findings for floodplains (NPS 2003).

No current flood survey or floodplain delineation exists for the Big Sandy Creek drainage at or near the site. The nearest gauging station on Big Sandy Creek is more than 30 miles downstream and flow discharge records from that station are too distant to be helpful in describing flooding characteristics of the historic site. Anecdotal evidence and observations of the watershed and the site suggests that there are no structures or uses of the land that are threatened by flooding along Big Sandy Creek, except for boundary fencing and small portions of vegetation on grazed land. The floodplain bordering Big Sandy Creek is 0.25 to 0.5 mile and displays terraces that likely describe certain flow frequency events. The flood flows in Big Sandy Creek can carry large quantities of sand/gravel and floating vegetation debris (grasses, branches, and small trees). Evidence of large open bars of sand and gravel were observed after the large flows in the summer of 1999; many of the cottonwood tree trunks on bars in the floodplain were decorated with masses of floated debris. The County Road W crossing of Sand Creek downstream of Dawson South Bend was overtopped during May 1999 for more than 100 feet of its length (NPS 2000b).

Vegetation

The National Park Service will maintain, as part of the natural ecosystems of parks, all plants and wildlife native to park ecosystems by (1) preserving and restoring the natural abundance, diversity, dynamics, distribution, habitat, and behavior of native plant and wildlife populations and the communities and ecosystems in which they occur; (2) restoring native plant and animal populations in parks when they have been extirpated by past human-caused actions; and (3) minimizing human impacts on native plants, animals, populations, communities, and ecosystems, and the processes that sustain them (NPS 2006a).

The primary grasses found in the area are blue gramma grass and buffalo grass, accompanied by some switchgrass and side-oats gramma. Western wheatgrass is also found in the lower, moister swales. Where livestock grazing has been excessive and on drier slopes, sand sage has gained a foothold. Trees on the site are eastern cottonwood, found in several even-aged groves (cohorts) close to current or historic seasonal stream traces of Big Sandy Creek. In the area surrounding the site, there is little active farming by cultivation. Crops usually cultivated, primarily east and north of the site, have been milo, sorghum, and millet (the land is normally too dry for wheat). The dry and sandy nature of the soil is more suited to livestock grazing, although several sections of land in and bordering the historic site have been placed into the U.S. Department of Agriculture (USDA) Conservation Reserve Program. The Conservation Reserve Program is a federal program administered by the Natural Resources Conservation Service and was developed as part of the Federal Agriculture Improvement and Reform Act of 1996 (Public Law 104-127) to preserve lands that had been tilled and could be preserved for plant or wildlife habitat through planting and protection from livestock grazing or future farming.

Important to the associated tribes are the cottonwoods growing near Big Sandy Creek. Tribal history identifies some of these as “period” trees meaning that they were present during the massacre.

According to *NPS Management Policies 2006*, nonnative species will not be allowed to displace native species if displacement can be prevented (NPS 2006a). Nonnative plants are found in Kiowa County and throughout southeastern Colorado, but currently are not a major problem along Big Sandy Creek. Cheat grass, Russian thistle (tumbleweeds), sand burr, and goatshead burr are probably some of the more common nuisance species on the site. Canada thistle is troublesome east of the site, and leafy spurge is prevalent in Lincoln County to the northwest.

Climate change will likely affect vegetation and wildlife communities of the national historic site because of projected changes in annual temperature, precipitation levels, and extreme weather occurrences. However, the rate and magnitude of these changes to specific populations of plants and animals is difficult to predict.

Climate change will likely impact vegetation composition because air temperatures will continue to increase, with average low temperatures in winter and average high temperatures in summer increasing. These changes will likely alter species composition as some species requiring cooler temperatures will move northward. Warming temperatures could further alter the composition of native plant communities and increase problems related to insects and disease.

Wildlife

The National Park Service will maintain, as part of the natural ecosystems of parks, all plants and animals native to park ecosystems by (1) preserving and restoring the natural abundance, diversity, dynamics, distribution, habitat, and behavior of native plant and animal populations and the communities and ecosystems in which they occur; (2) restoring native plant and animal populations in parks when they have been extirpated by past human-caused actions; and (3) minimizing human impacts on native plants, animals, populations, communities, and ecosystems, and the processes that sustain them (NPS 2006a).

Sand Creek Massacre National Historic Site is composed of a diversity of habitats in various conditions within the shortgrass prairie that support the life history requirements of species in

various seasons. The site is composed of two main habitats: riparian and upland shortgrass prairie (NPS 2005a).

Larger wildlife in the area of the site consists of free-ranging mule deer, white-tailed deer, and pronghorn. Other mammals include coyote, fox, raccoon, badger, and prairie dogs (NPS 2000b). At the time of the writing of this document, there were no prairie dogs inhabiting the site, possibly due to plague. Various reptiles, amphibians, and insects associated with high plains grasslands are also found here. The black-tailed prairie dog formerly occurred at Sand Creek Massacre National Historic Site. An outbreak of the plague in 2010 decimated prairie dog communities in this area.

The Rocky Mountain Bird Observatory conducted a bird inventory in 2005, in which they collected valuable information about the birds present at the historic site, resulting in an initial species list and establishment of baseline information that can be used to evaluate population trends in the future (NPS 2005a). Compared with some habitat areas in Colorado, the grasslands harbor relatively few bird species. Only in summer, when food, cover, and attractive nesting sites are available, are birds abundant on the site. Agricultural grazing and cropping have reduced historic bird habitat regionally; however, lightly grazed and Conservation Reserve Program lands provide some excellent grassland habitat for birdlife (NPS 2000b).

The riparian habitat along Big Sandy Creek provides suitable habitat for many probable breeding bird species, the most common being western kingbird, orchard oriole, mourning dove, and western meadowlark. Another, less common, probable breeding bird species detected in this area is the red-headed woodpecker, a species of conservation concern according to the Partners in Flight North American Landbird Conservation Plan (NPS 2005a). During spring, the riparian habitat on the historic site provides a necessary stopover for migrating birds, allowing them to replenish reserves essential for the flight to their breeding grounds. More on migratory birds can be found under the “Special Status Species” section.

The upland habitats of the historic site host many species that are designated species of conservation concern or stewardship species as defined in the Partners in Flight North American Landbird Conservation Plan. During the 2005 inventory, the following designated species were detected: scaled quail, northern harrier, Swainson’s hawk, mountain plover, burrowing owl, short-eared owl, Say’s phoebe, western kingbird, horned lark, Cassin’s sparrow, lark sparrow, lark bunting, grasshopper sparrow, dickcissel, and western meadowlark (NPS 2005a).

Climate change is expected to have profound effects on wildlife because their biological cycles are so closely tied to temperature and habitat. Birds and mammals will most likely be affected. Plant-wildlife interactions such as pollination, seed dispersal, and insect control may be disrupted. Altered precipitation and temperature regimes may trigger invasive species to expand their ranges.

Acoustic Environment and Soundscapes

The acoustic environment in national parks is managed under several policies and regulations, which include: NPS Organic Act of 1916, Director’s Order 47: *Soundscape Preservation and Noise Management*, National Parks Air Tour Management Act of 2000, and several sections of the *Code of Federal Regulations* regarding audio noise levels, snowmobiles, boats, and other motorized equipment. In addition, soundscapes are mentioned throughout *NPS Management Policies 2006*, including “Soundscape Management” (4.9), “Cultural Soundscape Management” (5.3.1.7), “Recreational Activities” (8.2.2), “Use of Motorized Equipment” (8.2.3), and “Wilderness

Management Planning” (6.3.4.3). Together, these provide guidance to NPS parks and programs for protecting and restoring natural soundscapes to the greatest extent possible and for celebrating and conserving the cultural soundscapes at cultural and historic sites. The frequency, magnitude, and duration of human-caused sound considered acceptable varies among national park system units, being generally greater in developed areas and less in undeveloped areas. NPS *Management Policies 2006* state that the National Park Service will preserve, protect, and restore, to the greatest extent possible, the acoustic resources of park units.

The National Park Service conducted two long-term acoustical monitoring studies for Sand Creek Massacre National Historic Site (one in summer and one in winter) to document seasonal variations. During the acoustical monitoring, the Natural Sounds Program deployed a type 1 sound-level meter, as well as meteorological sensors that collected data for temperature, relative humidity, wind speed, and wind direction. A continuous recorder was also simultaneously deployed to document sound sources. Overall, existing ambient sound levels ranged from about 15.4 dBA to 30.2 dBA in the winter and 29.6 dBA to 37.6 dBA in the summer. The differences in sound levels between winter and summer were anticipated, as biologic activity is generally reduced in winter. Sound source analysis of these two datasets reveals that human-caused sounds were audible in the national historic site between 33% and 36% of the time in both winter and summer. The most common source of noise during both seasons was commercial jet overflights. Natural sources include wind in vegetation and wildlife (birds, coyotes, frogs, and insects).

The acoustic environment is a natural resource that is integral to wildlife communication, behavior, and many other ecological processes. Exposure to relatively high noise levels that typically occur close to a source can produce potentially harmful physiological responses in humans and other animals, including hearing loss, elevated stress hormone levels, and hypertension. Even low levels of noise can interfere with ecological processes in surprising and complex ways.

The most pervasive noise source at the site is aircraft. Noise from aircraft is a pervasive intrusion in many national parks. At the same time, all forms of aviation activities over parks have increased in recent years, including commercial passenger flights, park maintenance, scientific research, fire and emergency operations, and commercial air tours. Guided by the National Parks Overflight Act of 1987 (Public Law 100-91) and NPS *Management Policies 2006* (8.4), the National Park Service works to manage flights over national park units.

Table 5 presents results for four relevant values. Results indicate that existing ambient sound levels rarely exceeded 45 dBA in the summer and 35 dBA in the winter.

TABLE 5. PERCENT TIME ABOVE METRICS FOR SUMMER AND WINTER

Site	Frequency Range (Hz)	% Time above Sound Level: 0700 to 1900				% Time above Sound Level: 1900 to 0700			
		35dBA	45dBA	52dBA	60dBA	35 dBA	45dBA	52 dBA	60 dBA
SAND001 Summer	12.5–20,000	74.1	21.1	6.3	0.9	42.2	6.8	1.7	0.1
SAND001 Winter	12.5–20,000	9.8	0.5	0.1	0.0	1.6	0.1	0.0	0.0

The A-weighted decibel network (dBA) de-emphasizes the high (6.3 kHz and above) and low (below 1 kHz) frequencies and emphasizes the frequencies between 1 and 6.3 kHz in an effort to simulate the relative response of the human ear.

VISITOR USE AND EXPERIENCE

Sand Creek Massacre National Historic Site, one of the newest sites in the national park system, opened to the public on June 1, 2007. Visitors arrive in a remote and seemingly undeveloped landscape, the site of one of the most tragic events in American history. Preserving the landscape and interpreting the historic event are integral to helping visitors gain a better understanding of the Sand Creek massacre and its enduring impact on the Cheyenne and Arapaho people and the history of the United States.

Visitor Access/Use

The 2,385-acre historic site is 23 miles northeast of the town of Eads, Colorado. To reach Sand Creek Massacre National Historic Site from Eads, visitors should drive east on State Highway 96 approximately 16 miles to the town of Chivington before turning north on Chief White Antelope Way, formerly County Road 54 (a well-maintained unpaved road) for 8 miles before reaching the historic site.

The historic site is open daily from spring through fall. During the winter months, the days and times may vary. Peak visitation occurs during the summer months and decreases between September and May. Visitation has been steadily increasing since the site opened in 2007 and reached more than 5,000 visitors in 2012.

Visitors entering the site are directed to a visitor contact station where they are greeted by a ranger and provided with an orientation to the site. Visitors can also find site bulletins, interpretive brochures, and books for sale in the bookstore managed by the Western National Parks Association. Formal group interpretive programs can also be arranged.

After orientation and a brief interpretive presentation, visitors can hike a 0.25-mile foot trail to the stone monument and overlook on the bluff. Mobility impaired visitors can drive to the parking area at the base of the monument overlook, where ranger staff will facilitate access to the stone monument and overlook. At the stone monument and overlook, interpretive wayside exhibits and benches provide opportunities for visitors to reflect upon the tragic events that transpired on November 29, 1864. A designated site for repatriation of human remains and sacred objects associated with the massacre is below the crest of the bluff. The repatriation site is delineated by four corner fences and is open to the public for contemplation. A low-profile wayside exhibit provides information on the repatriation site and its significance.

The park brochure and several wayside exhibits at the overlook provide visitors with information about the massacre and the events leading up to it, the testimony of eyewitnesses to the massacre, and present-day ceremonies and observances. These include the Cheyenne Spiritual Healing Run, an annual event held on or around November 29, the anniversary of the massacre. The Healing Run commemorates the tragedy and honors the memory of the Cheyennes and Arapahos who were killed in the massacre. The run begins at the national historic site and ends at the State Capitol in Denver. This event is open to the public.

The average length of a visit to the park is one hour, which includes site orientation, access to the monument, and time spent at the overlook. For those participating in a ranger-guided interpretive program or browsing in the visitor contact station bookstore, the length of a visit increases by approximately 30 to 60 minutes. Visitors can also collect information about the site, purchase publications, and view exhibits about the Sand Creek Massacre at park headquarters in Eads.

Sand Creek Massacre National Historic Site is a day-use area. Camping is not allowed. The nearest primitive camping facilities are 25 miles southwest of Eads at the Nee Gronda and Nee Noshe reservoirs. Limited RV camping is available in Eads.

Visitor Experience, Interpretation, and Education

Interpretation and educational programs for Sand Creek Massacre National Historic Site are designed to fulfill the park's legislated purpose to protect and preserve the historic landscape, enhance understanding of the massacre, and contribute to preventing similar incidents from occurring in the future. Information from these programs can be found on the park's website, where visitors can access information on the history of the massacre, biographies of significant people associated with Sand Creek, testimony from individuals whose ancestors participated in or witnessed the massacre, and the natural history of the site.

Archeological investigations and thorough historical and archival research continue to uncover evidence that sheds new light on the massacre. These discoveries help shape the ongoing development of interpretive media and educational programs.

Ethnographic Landscape – Key to Visitor Understanding

The landscape of Sand Creek contains a record of the relationships between humans and the natural environment over a vast span of time, contrasting the values of European Americans and American Indians. The openness and isolation of the area creates a powerful setting in which the stories of Sand Creek can be told, which provides a key element of the contemplative experience. The ability to communicate that story relies heavily on the stark natural setting, which could be impacted by development.

Generally, most visitors seem to appreciate the isolation as a necessary ingredient for assimilating the immense tragedy of the massacre. A few, however, complain about the park's remote, undeveloped setting, the long unpaved approach, and extreme weather conditions. Nonetheless, these conditions are an integral part of the Sand Creek experience. To tame or contain, pave, or develop the site would deny the harsh and stark reality faced by the Cheyenne and Arapaho people on November 29, 1864, and mask the lessons that could be learned.

SOCIOECONOMIC ENVIRONMENT

Socioeconomic Benefits of the National Park Service

National parks generate to the public more than \$4 in value for every tax dollar invested. Nationwide, the national parks generate \$13.3 billion of local private-sector economic activity and 267,000 private sector jobs. National parks attract businesses and individuals to the area surrounding the park unit, resulting in economic growth in areas near parks that averages 1% per year greater than statewide rates over the past three decades. In addition to the economic benefits, the social benefits of national parks are many and extend well beyond economic values.

A trend affecting most units of the National Park Service in the past several years is decreased visitation. Of particular note is the apparent decrease in interest of young people. A priority for the National Park Service is to entice America's youth back to the parks.

Economic Values in the Study Area

The area of consideration for economic analysis is composed of Kiowa County, Colorado, where the national historic site is located. Eads, Colorado, is the largest town in the county. There are no designated metropolitan areas. A few other small, rural communities are within this county. The U.S. Census Bureau estimates that the county's population was 1,238 in 2009. The population decreased by 23.7% in the period from 2000 to 2009. For comparison, the state of Colorado experienced an increase in population of 16.8% over the same period. The average number of persons per square mile in the county was 0.9 in 2000; the statewide average was 41.5.

The median household income in the county in 2008 was \$38,581, while the median for Colorado was \$57,184. According to employment figures provided by the U.S. Bureau of Economic Analysis, the economy of Kiowa County is based in agriculture, private employment, and government employment. Private employment includes retail and wholesale trade, construction, and educational services. Government employment includes federal, state, and local governments. Energy production is increasing as an economic driver. The area of arts, entertainment, recreation, accommodations, and food services currently comprise less than 5% of total employment, but the county would like to increase this figure by attracting additional visitors and is looking to the National Park Service to assist in this effort. Federal spending in the county was \$33,915 in 2008.

Impact of Visitor Spending on the Local Economy

Sand Creek Massacre National Historic Site hosted 4,063 visits in 2010 (this year shall be used as a base for comparison of effects on the socioeconomic environment). Of all the visitors, it is estimated that 8% were local residents on day trips, 70% were visitors on day trips from outside the local area, 18% of visitors stayed in lodges, motels, or Bed & Breakfasts in the area, and 4% camped out. Using an average of 2.2 visitors per party or group, the 4,063 visits represent 1,983 visitor party days in the local area (days are equated to nights for overnight trips). Using the NPS Money Generation Model, visitors spent an average of \$57 per party per day in the local area for total visitor spending of \$152,000 in 2010 (table 6).

TABLE 6. VISITATION AND SPENDING BY VISITOR SEGMENTS, 2010

	Local Day Trips	Nonlocal Day Trips	Hotel	Camp	Total
Recreation Visits	325	2,844	730	162	4,063
Segment Shares in Recreational Visits	8%	70%	18%	4%	100%
Party Days	130	1,138	585	130	1,983
Average Spending Per Party Day	\$ 32	\$ 42	\$154	\$ 80	\$ 57
Total Spending	\$4,100	\$47,800	\$90,100	\$10,500	\$152,000

Source: NPS Public Use Statistics Office Money Generation Model

Table 7 shows the economic effect of visitor spending. The direct effect includes sales, income, and jobs in businesses selling goods and services directly to historic site visitors. Value added is the most commonly used measure of the contribution of an industry to the gross product (value added

equal total sales minus the cost of all nonlabor inputs). Secondary effects include both direct and induced effects resulting from circulation of the initial spending through the local economy.

TABLE 7. ECONOMIC EFFECTS OF VISITOR SPENDING BY SECTOR, 2010

Sectors	Sales	Personal Incomes	Jobs	Value Added
Direct Effects				
Motel, Hotel, B&B, and Cabins	\$48,000	\$16,000	1	\$28,000
Campsites	\$2,000	\$1,000	0	\$1,000
Restaurants and Bars	\$34,000	\$10,000	1	\$14,000
Admissions and Fees	\$12,000	\$2,000	0	\$3,000
Trade	\$21,000	\$9,000	0	\$15,000
Others	\$5,000	\$ 0	0	\$ 0
Subtotal	\$123,000	\$36,000	2	\$60,000
Secondary Effects	\$34,000	\$10,000	0	\$19,000
Total Effects	\$157,000	\$46,000	2	\$79,000

Source: NPS Public Use Statistics Office Money Generation Model

The social and economic situation in the area is affected by a combination of many factors, including the amount of tourism. As described above, attraction of visitors to nearby NPS units has a direct effect on the local economy. Should visitation drop, subsequent adverse impacts to the influx of tourism-related funds would be expected. Conversely, if visitation to NPS units and other attractions in the region were to increase, it would result in an economic boost.

NATIONAL HISTORIC SITE OPERATIONS

Sand Creek Massacre National Historic Site was authorized as a new unit of the national park system in 2000 and opened to the public on June 1, 2007. National historic site staff is responsible for managing the cultural and natural resources on about 2,400 acres and visitation that was 4,063 in 2010. Visitation is expected to increase substantially once the general management plan is implemented. Currently, there are 7 permanent positions and up to 3 seasonal and 10 volunteer positions, depending on the time of year.

Historic site staff maintains the walking trail from the public parking area to the massacre monument and several interpretive panels along the trail. There is a small office building and a utility building on-site. Roads to the historic site are maintained by Kiowa County.

The site's headquarters (administrative offices) are in leased space in Eads, Colorado, about 25 miles away.

Historic site staff conducts visitor programs such as talks or guided walks during the primary visitor season. Law enforcement is provided under a cooperative agreement with the Kiowa County sheriff's department.

Sand Creek Massacre National Historic Site's total operating budget was \$774,200 in 2013. One-time projects currently funded include deferred maintenance requirements and new facilities required for minimum visitor operations, tribal use, and park operations. A project to bury powerlines was funded for \$224,900.

CHAPTER 4

ENVIRONMENTAL CONSEQUENCES

ATTENTION! INDIAN FIGHTERS

Having been authorized by the Governor to raise a
Company of 100 day

U. S. VOL CAVALRY!

For immediate service against hostile Indians. I call upon all who wish to engage in such
service to call at my office and enroll their names immediately.

**Pay and Rations the same as other U. S.
Volunteer Cavalry.**

Parties furnishing their own horses will receive 40c per day, and rations for the same,
while in the service.

The Company will also be entitled to all horses and other plunder taken from the Indians.

Office first door East of Recorder's Office.

HAL SAYER

Centre! City, Aug. 13, '64.



War, and Conquest

I was in the camp of the Cheyennes when Chivington made his attack... I was, at the time of the attack, sleeping in a lodge... I could see the soldiers begin to dismount. I thought they were artillerymen and were about to shell the camp... I went to the northeast; I ran about five miles, when I came across an Indian woman driving a herd of ponies... she was a cousin of mine – one of White Antelope's daughters. I went with her to the Smoky Hill River. I saw as soon as the firing began, from the number of troops, that there could be no resistance, and I escaped.

Sand Creek survivor Edmond Guerrier, mixed-blood son of the French trader William Guerrier and the Cheyenne woman Walks in Sight.



Everyone was crying, even the warriors and the women and children... Nearly everyone present had lost some relations or friends, and many of them in their grief were gashing themselves with knives until the blood flowed in streams.

George Bent, mixed-blood son of William Bent. Sand Creek survivor.



The massacre lasted six or eight hours... I tell you, Ned, it was hard to see little children on their knees have their brains beat out by men professing to be civilized... there was no organization among our troops, they were a perfect mob... You would think it impossible for white men to butcher and mutilate human beings as they did there, but every word I have told you is the truth...

Captain Silas Soule.
1st Colorado Cavalry (USV)

IMPACT ANALYSIS METHODOLOGY

The planning team based the impact analysis of the resources described in Chapter 3 “Affected Environment” and the conclusions in this chapter largely on the review of existing literature and studies, information provided by experts in the National Park Service and other agencies, and national historic site staff insights and professional judgment. The team’s method of analyzing impacts is further explained below. It is important to remember that all impacts have been assessed under the assumption that mitigating measures have been implemented to minimize or avoid impacts. If mitigating measures described in “Chapter 2: Alternatives, Including the Preferred Alternative” were not applied, the potential for resource impacts and the magnitude of those impacts would increase.

The Director’s Order 12 Handbook presents an approach of identifying the duration (short or long term), type (adverse or beneficial), and intensity or magnitude (e.g., negligible, minor, moderate, or major) of the impact(s), which has been used in this document. Direct and indirect effects caused by an action were considered in the analysis. Direct effects are caused by an action and occur at the same time and place as the action. Indirect effects are caused by the action and occur later in time or farther removed from the place, but are still reasonably foreseeable.

This is consistent with the regulations of the Council on Environmental Quality that implement the National Environmental Policy Act. Because definitions of intensity (negligible, minor, moderate, or major) vary by impact topic, intensity definitions are provided separately for each impact topic. These impact analyses are intended, however, to comply with the requirements of both the National Environmental Policy Act and section 106 of the National Historic Preservation Act.

CEQ regulations and Director’s Order 12: *Conservation Planning, Environmental Impact Analysis, and Decision-making* also call for a discussion of mitigation and an analysis of how effective the mitigation measures would be in reducing the intensity of a potential impact—for example, reducing the intensity of an impact from major to moderate or minor. Any resultant reduction in intensity of impact due to mitigation, however, is an estimate of the effectiveness of mitigation under the National Environmental Policy Act only. It does not suggest that the level of effect as defined by section 106 is similarly reduced. Cultural resources are nonrenewable resources, and adverse effects generally consume, diminish, or destroy the original historic materials or form, resulting in a loss of integrity in the resource that can never be recovered. Therefore, although actions determined to have an adverse effect under section 106 might be mitigated, the effect remains adverse.

The impact analyses of the action alternatives describe the *difference between* implementing the no-action alternative and implementing the action alternative. To understand a complete “picture” of the impacts of implementing the action alternative, the reader must take into consideration the impacts that would occur under the no-action alternative.

Additional information on methodology that is specific to some topics is presented with the discussion of those topics.

SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT AND IMPACTS ON CULTURAL RESOURCES

In this environmental assessment, impacts to cultural resources are described in terms of type, context, duration, and intensity, which is consistent with the regulations of the Council on Environmental Quality that implement the National Environmental Policy Act. These impact analyses are intended, however, to also comply with the requirements of section 106 of the National Historic Preservation Act. In accordance with the Advisory Council on Historic Preservation regulations implementing section 106 of the National Historic Preservation Act (“Protection of Historic Properties” [36 CFR 800]), impacts to cultural resources were identified and evaluated by (1) determining the area of potential effects; (2) identifying cultural resources present in the area of potential effects that are either listed in or eligible to be listed in the National Register of Historic Places; (3) applying the criteria of adverse effect to affected national register-eligible or national register-listed cultural resources; and (4) considering ways to avoid, minimize, or mitigate adverse effects.

Under the Advisory Council’s regulations, a determination of either adverse effect or no adverse effect must be made for affected national register-listed or -eligible cultural resources. An adverse effect occurs whenever an impact alters, directly or indirectly, any characteristic of a cultural resource that qualifies it for inclusion in the National Register of Historic Places, such as diminishing the integrity (or the extent to which a resource retains its historic appearance) of its location, design, setting, materials, workmanship, feeling, or association. Adverse effects also include reasonably foreseeable effects caused by the alternatives that would occur later in time, be it further removed in distance or cumulative (“Assessment of Adverse Effects” (36 CFR 800.5)). A determination of no adverse effect means there is an effect, but the effect would not diminish the characteristics of the cultural resource that qualify it for inclusion in the national register.

In this general management plan / environmental assessment, impacts on cultural resources (archeological resources, ethnographic landscape, and museum collections) are described in the following terms:

- **type** – are the effects adverse?
- **context** – are the effects site-specific, local, or even regional?
- **duration** – are the effects short term, or long term, as defined in the beginning of each impact topic?
- **intensity** – are the effects negligible, minor, moderate, or major?

In accordance with ACHP regulations implementing section 106 of the National Historic Preservation Act (“Protection of Historic Properties” [36 CFR 800]), impacts on cultural resources were also identified and evaluated in the following way:

1. determining the area of potential effects
2. identifying cultural resources present in the area of potential effect that are either listed in or eligible to be listed in the National Register of Historic Places
3. applying the criteria of adverse effect to affected national register-eligible or national register-listed cultural resources
4. considering ways to avoid, minimize, or mitigate adverse effects

Under ACHP regulations, a determination of either *adverse effect* or *no adverse effect* must also be made for affected national register-listed or national register-eligible cultural resources. The Sand Creek Massacre National Historic Site is listed in the National Register of Historic Places (see appendix F). An *adverse effect* occurs whenever an impact alters—directly or indirectly—any characteristic of a cultural resource that qualifies it for inclusion in the national register; the impact diminishes the integrity (or the extent to which a resource retains its historic appearance) of its location, design, setting, materials, workmanship, feeling, or association. Adverse effects also include reasonably foreseeable effects caused by the alternatives that would occur later in time, be farther removed in distance, or be cumulative (“Assessment of Adverse Effects” [36 CFR 800.5]). A determination of *no adverse effect* means there is an effect, but the effect would not diminish the characteristics of the cultural resource that qualify it for inclusion in the national register.

CUMULATIVE IMPACT ANALYSIS

A cumulative impact is described in CEQ regulation 1508.7 as follows:

Cumulative impacts are incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or nonfederal) or person undertakes such other action. Cumulative impacts can result from individually minor, but collectively significant, actions taking place over a period of time.

To determine potential cumulative impacts, other projects within and surrounding Sand Creek National Historic Site were identified. The area includes Kiowa County and the town of Eads, Colorado. Projects examined as potential cumulative actions included any planning or development activity that was currently being implemented such as agricultural activities adjacent to the site, energy development, transportation development, impoundments on the Sand Creek watershed, or others that would be implemented in the reasonably foreseeable future. Impacts of past actions were also considered in the analysis.

These actions are evaluated in conjunction with the impacts of each alternative to determine if there would be any cumulative impacts on a particular cultural resource, visitor experience, socioeconomic environment, or NPS operations. This assessment of cumulative impacts is required under “Criteria of Adverse Effect” (36 CFR 800.5(1)).

Duration of Impacts:

Duration of impacts is resource specific and defined at the beginning of each impact topic.

CULTURAL RESOURCES IMPACT ANALYSIS

Analysis of potential impacts on cultural resources was based on research, knowledge of national historic site resources, and the best professional judgment of planners, archeologists, ethnographers, and historians who have experience with similar types of projects.

ARCHEOLOGICAL RESOURCES

Applying CEQ regulations for NEPA analysis, the thresholds for the intensity of impacts on archeological resources are defined as follows. [Please note that while beneficial impacts to archeological resources may be considered in NEPA analysis, beneficial impacts are not applicable under section 106.]

Negligible: Impacts are at the lowest levels of detection, with neither adverse nor beneficial consequences. The determination of effect for section 106 would be *no adverse effect*.

Minor: Adverse impacts are measurable or perceptible, but disturbance of a site(s) results in little, if any, loss of integrity. Beneficial impacts would include the implementation of measures to safeguard archeological resources from ongoing management undertakings or visitor activities. The determination of effect for section 106 would be *no adverse effect*.

Moderate: Impacts are measurable and perceptible, and disturbance of a site(s) results in loss of integrity. The determination of effect for section 106 would be *adverse effect*. A memorandum of agreement is executed among the National Park Service and applicable state or tribal historic preservation office(r) and, if necessary, the Advisory Council on Historic Preservation, in accordance with 36 CFR 800.6(b). Measures identified in the memorandum of agreement to minimize or mitigate adverse impacts reduce the intensity of impacts under NEPA impact analysis from major to moderate. Beneficial impacts would include the implementation of measures to limit visitor access to sensitive areas and minimize management undertakings to those essential to park operations.

Major: Impacts are substantial, disturbance of a site(s) results in loss of integrity. The determination of effect for section 106 would be *adverse effect*. Measures to minimize or mitigate adverse impacts cannot be agreed on and the National Park Service and applicable state or tribal historic preservation office(r) and/or the Advisory Council on Historic Preservation are unable to negotiate and execute a memorandum of agreement in accordance with 36 CFR 800.6(b). Beneficial impacts would include the implementation of measures to close sensitive areas to visitor access and minimize management undertakings to those essential to park operations with additional monitoring by NPS archeologists.

Cumulative Impacts. These impacts are the result of past, present, and reasonably foreseeable actions that have affected, or potentially could affect, archeological resources.

Impacts Under Alternative A

Archeological sites continually deteriorate, due primarily to the effects of weather and gravity. Left alone, sites will inevitably degrade over time. However, impacts from human visitation and use contribute to the effects of natural agents and can substantially increase the rate of site deterioration. Archeological resources adjacent to or easily accessible from visitor use areas or trails would continue to be vulnerable to inadvertent damage and vandalism. Inadvertent impacts would include picking up or otherwise displacing artifacts, the compaction of cultural deposits, and the creation of social trails (which can lead to erosion and destabilization of archeological sites). Vandalism includes removing artifacts and probing or digging at site locations. Inadvertent damage or vandalism would result in a loss of surface archeological materials, alteration of artifact distribution, and a reduction of contextual evidence.

Climate change may impact archeological sites and ethnographic resources at Sand Creek Massacre National Historic Site. Unprotected sites are especially vulnerable to accelerated erosion from increased storm frequency and intensity. Related to greenhouse gasses and other air pollution is the change in the pH of precipitation (acid rain) that can degrade exposed resources. As archeological resources become compromised or lost because of climate change, they become unavailable for their traditional use, archeological value, and visitor enjoyment.

Many such adverse impacts could be mitigated through additional stabilization of the site, prevention of social trails in undisturbed or vulnerable sites, and/or systematic collection of surface artifacts for long-term curation. Continued site monitoring and visitor education programs emphasizing the significance and fragility of such resources and how visitors can reduce their impacts on archeological resources, would discourage vandalism and inadvertent impacts and thus minimize adverse impacts. The actions under this alternative would result in negligible to minor, long-term, beneficial impacts on archeological resources.

The staff of Sand Creek Massacre National Historic Site would continue to work to develop partnerships with History Colorado; Kiowa County, Colorado; and the Cheyenne and Arapaho tribes to ensure that archeological resources would be protected to the greatest extent possible. The National Park Service would partner with willing landowners to protect archeological resources on lands adjacent to the national historic site.

Cumulative Impacts. A variety of past, present, and reasonably foreseeable future actions have affected, and in the future could affect, archeological resources, both at Sand Creek Massacre National Historic Site and on adjacent lands. Livestock grazing; farming; and development of roads, trails, and buildings have resulted in minor to moderate adverse impacts on archeological resources at Sand Creek Massacre National Historic Site.

The long-term, negligible impacts of this alternative, in conjunction with the minor to moderate, adverse impacts of past, present, and reasonably foreseeable future actions, would result in minor, adverse, cumulative impacts on archeological resources. Any adverse impacts on archeological resources resulting from implementation of alternative A would be a very small component of the negligible to minor, adverse, cumulative impacts.

Conclusion. Implementation of the no-action alternative would result in permanent, negligible impacts on archeological resources, which would be a very small component of the overall minor, adverse, cumulative impacts.

Impacts Under Alternative B

Actions under alternative B that could potentially impact archeological resources include the development of new roads along the southern boundary fence parallel to County Road W, the road and parking area on the western boundary of the site in sections 24 and 25, the small parking area in the southeast corner of the site, and the new trails in section 24 and 25 and along the berm of Chivington Canal. Previous archeological surveys have not revealed the presence of archeological resources in those areas. As required, additional archeological investigations would precede any ground-disturbing activities associated with these construction projects as well as monitoring archeological resources during construction. Development of visitor facilities and interpretive panels surrounding the Sand Creek battleground marker on the monument overlook summit potentially could cause adverse impacts on archeological resources, although previous investigations have not detected evidence of artifacts. New and expanded construction in the development zone in section 30, including tree plantings and other landscape improvements, likely would pose no impacts on archeological resources as investigations have revealed no archeological resources within this previously disturbed area.

The development of new trails would likely reduce the incidence of social trails at the site, thereby minimizing the risk of inadvertent damage to or collection of artifacts or vandalism of archeological sites. Continued site monitoring and visitor education programs emphasizing the significance and fragility of such resources and how visitors can reduce their impacts on archeological resources would discourage vandalism and inadvertent impacts and thus minimize adverse impacts. The actions under this alternative would result in negligible, long-term impacts on archeological resources.

The staff of Sand Creek Massacre National Historic Site would continue to work to develop partnerships with History Colorado; Kiowa County, Colorado; and the Cheyenne and Arapaho tribes to ensure that archeological resources would be protected to the greatest extent possible. The National Park Service would partner with willing landowners to protect archeological resources on lands adjacent to the national historic site.

Cumulative Impacts. A variety of past, present, and reasonably foreseeable future actions have affected, and in the future could affect, archeological resources, both at Sand Creek Massacre National Historic Site and on adjacent lands. Artifact gathering; livestock grazing; farming; and development of roads, trails, and buildings have resulted in minor, adverse impacts on archeological resources at the national historic site.

The permanent, negligible, adverse impacts of this alternative, in conjunction with the minor, adverse impacts of past, present, and reasonably foreseeable future actions, would result in permanent minor, adverse, cumulative impacts on archeological resources. Any adverse impacts on archeological resources resulting from implementation of alternative B would be a small component of the minor, adverse, cumulative impacts.

Conclusion. Implementation of alternative B would result in long-term, negligible to minor, adverse impacts on archeological resources, which would be a very small component of the minor adverse, cumulative impacts.

Impacts Under Alternative C

Actions under alternative C that could potentially impact archeological resources include development of visitor facilities and interpretive panels surrounding the Sand Creek battleground marker on the monument overlook summit. Previous archeological surveys have not revealed the presence of archeological resources. The visitor trail between the development zone and the monument overlook would be established on the existing trail between these two sites. The installation of interpretive panels on this trail could impact archeological resources in this area, although previous investigations have not revealed evidence of archeological resources here. As required, additional archeological investigations would precede any ground-disturbing activities associated with these construction projects as well as monitoring archeological resources during construction. New and expanded construction in the development zone in section 30, including tree plantings and other landscape improvements, likely would not impact archeological resources as investigations have revealed no archeological resources within this previously disturbed area.

The lack of new trail development in the resource preservation zone might increase the risk of social trails at the site created by visitors who might choose to explore the site without authorization, thereby increasing the risk of inadvertent damage to or collection of artifacts or vandalism of archeological sites. Continued site monitoring and visitor education programs emphasizing the significance and fragility of such resources and how visitors can reduce their impacts on archeological resources would discourage vandalism and inadvertent impacts and thus minimize adverse impacts. The actions under this alternative would result in negligible, long-term impacts on archeological resources.

The staff of Sand Creek Massacre National Historic Site would continue to work to develop partnerships with History Colorado; Kiowa County, Colorado; and the Cheyenne and Arapaho tribes to ensure that archeological resources would be protected to the greatest extent possible. The National Park Service would partner with willing landowners to protect archeological resources on lands adjacent to the national historic site.

Cumulative Impacts. A variety of past, present, and reasonably foreseeable future actions have affected, and in the future could affect, archeological resources, both at Sand Creek Massacre National Historic Site and on adjacent lands. Livestock grazing; farming; and the development of roads, trails, and buildings have resulted in minor, adverse impacts on archeological resources at the historic site.

The long-term, negligible to minor, beneficial impacts of this alternative, in conjunction with the minor, adverse impacts of past, present, and reasonably foreseeable future actions, would result in long-term, minor, beneficial, cumulative impacts on archeological resources. Any adverse impacts on archeological resources resulting from implementation of alternative C would be a very small component of the minor, adverse, cumulative impacts.

Conclusion. Implementation of alternative C would result in long-term, negligible to minor, beneficial impacts on archeological resources, which would be a small component of the minor, adverse, cumulative impacts.

Impacts Under Alternative D

Actions under alternative D that could potentially impact archeological resources include the development of new roads along the southern boundary fence parallel to County Road W, the road

and parking area on the western boundary of the site in sections 24 and 25, the small parking area in the southeast corner of the site, and the new trails in sections 24 and 25 and along the berm of Chivington Canal. Previous archeological surveys have not revealed the presence of archeological resources. As required, additional archeological investigations would precede any ground-disturbing activities associated with these construction projects. Development of visitor facilities and interpretive panels surrounding the Sand Creek battleground marker on the monument overlook summit potentially could pose adverse impacts on archeological resources, although previous investigations have not detected evidence of artifacts. New and expanded construction in the development zone in section 30, including tree plantings and other landscape improvements, likely would not impact archeological resources as investigations have revealed no archeological resources within this previously disturbed area.

As in alternative B, the development of new trails would likely reduce the incidence of social trails at the site, thereby minimizing the risk of inadvertent damage to or collection of artifacts or vandalism of archeological sites. However, the configuration of the loop trail in sections 24 and 25 could prompt some visitors to walk between the two trails, opening social trails on previously undisturbed ground. Continued site monitoring and visitor education programs emphasizing the significance and fragility of such resources and how visitors can reduce their impacts on archeological resources, could discourage vandalism and inadvertent impacts, thus minimizing adverse impacts. The actions under this alternative would result in negligible to minor, long-term, adverse impacts on archeological resources.

The staff of Sand Creek Massacre National Historic Site would continue to work to develop partnerships with History Colorado; Kiowa County, Colorado; and the Cheyenne and Arapaho tribes to ensure that archeological resources would be protected to the greatest extent possible. The National Park Service would partner with willing landowners to protect archeological resources on lands adjacent to the national historic site.

Cumulative Impacts. A variety of past, present, and reasonably foreseeable future actions have affected, and in the future could affect, archeological resources, both at Sand Creek Massacre National Historic Site and on adjacent lands. Livestock grazing and the development of roads, trails, and buildings have resulted in minor, adverse impacts on archeological resources at Sand Creek Massacre National Historic Site.

The long-term, negligible to minor, adverse impacts of this alternative, in conjunction with the minor, adverse impacts of past, present, and reasonably foreseeable future actions, would result in permanent, minor, adverse cumulative impacts on archeological resources. Any beneficial impacts on archeological resources resulting from implementation of alternative D would be a small component of the minor, adverse, cumulative impacts.

Conclusion. Implementation of alternative D would result in long-term, negligible to minor, adverse impacts on archeological resources, which would be a very small component of the minor, adverse, cumulative impacts.

Impacts Under Alternative E (NPS Preferred Alternative)

Actions under alternative E that could potentially impact archeological resources include the development of a new road in section 30 connecting the road in the main development zone with the road to the monument overlook, a new road in sections 24 and 25 to provide visitor access to the bluff above Sand Creek, the parking area near the western boundary of the site in sections 24

and 25, and the new trail along the bluff line in sections 24 and 25. Previous archeological surveys have not revealed the presence of archeological resources. As required, additional archeological investigations would precede any ground-disturbing activities associated with these construction projects. Development of visitor facilities and interpretive panels surrounding the Sand Creek battleground marker on the monument overlook summit potentially could cause adverse impacts to archeological resources, although previous investigations have not detected evidence of artifacts. New and expanded construction in the development zone in section 30, including tree plantings and other landscape improvements, likely would not impact archeological resources as investigations have revealed no archeological resources within this previously disturbed area. The closure to visitor access at the Sand Creek stream channel, the cottonwood groves, and the immediate floodplain, with the application of the sensitive resource zone would provide additional protection for many of the site's archeological resources.

The development of the new trail would likely reduce the incidence of social trails at the site, thereby minimizing the risk of inadvertent damage to or collection of artifacts or vandalism of archeological site. Continued site monitoring and visitor education programs emphasizing the significance and fragility of such resources and how visitors can reduce their impacts on archeological resources, would discourage vandalism and inadvertent impacts and thus minimize adverse impacts. The actions under this alternative would result in long-term, negligible to minor, adverse impacts on archeological resources.

The staff of Sand Creek Massacre National Historic Site would continue to work to develop partnerships with History Colorado; Kiowa County, Colorado; and the Cheyenne and Arapaho tribes to ensure that archeological resources would be protected to the greatest extent possible. The National Park Service would partner with willing landowners to protect archeological resources on lands adjacent to the national historic site.

Cumulative Impacts. A variety of past, present, and reasonably foreseeable future actions have affected, and in the future could affect, archeological resources, both at Sand Creek Massacre National Historic Site and on adjacent lands. Livestock grazing; farming; and the development of roads, trails, and buildings have resulted in minor, adverse impacts on archeological resources at Sand Creek Massacre National Historic Site.

The long-term, negligible to minor, adverse impacts of this alternative, in conjunction with the minor, adverse impacts of past, present, and reasonably foreseeable future actions, would result in permanent, minor, adverse, cumulative impacts on archeological resources. Any impacts on archeological resources resulting from implementation of alternative E would be a very small component of the minor, adverse, cumulative impact.

Conclusion. Implementation of alternative E would result in permanent, negligible to minor, adverse impacts on archeological resources, which would be a very small component of the minor to moderate, cumulative, adverse impacts.

ETHNOGRAPHIC RESOURCES

Applying CEQ regulations for NEPA analysis, the thresholds for the intensity of impacts on ethnographic resources are defined as follows:

Negligible: Impacts would be at the lowest levels of detection and barely perceptible. Impacts would neither alter resource conditions, such as traditional access or site

preservation, nor alter the relationship between the resource and the associated group's body of practices and beliefs. For purposes of section 106, the determination of effect would be no adverse effect.

Minor: Adverse impacts would be slight but noticeable and would neither appreciably alter resource conditions, such as traditional access or site preservation, nor alter the relationship between the resource and the associated group's body of beliefs and practices. Beneficial impacts would include the implementation of limited measures to restore natural components of the ethnographic landscape or enhance opportunities for traditional cultural practices or observances. For purposes of section 106, the determination of effect would be no adverse effect.

Moderate: Adverse impacts would be apparent and would alter resource conditions or interfere with traditional access, site preservation, or the relationship between the resource and the associated group's beliefs and practices, even though the group's practices and beliefs would survive. Beneficial impacts would include the implementation of larger-scale measures to restore natural components of the ethnographic landscape, with a greater emphasis on enhancing opportunities for traditional cultural practices or observances. For purposes of section 106, the determination of effect would be adverse effect.

Major: Adverse impacts would alter resource conditions. Proposed actions would block or greatly affect traditional access, site preservation, or the relationship between the resource and the associated group's body of beliefs and practices to the extent that the survival of a group's beliefs and/or practices would be jeopardized. Beneficial impacts would include the implementation of extensive measures to restore natural components of the ethnographic landscape, with substantial emphasis on enhancing opportunities for traditional cultural practices or observances. For purposes of section 106, the determination of effect would be adverse effect.

Impacts Under Alternative A (No Action)

Under the no-action alternative, existing conditions would remain unchanged. There would be no construction-related impacts on resources. Natural systems and features, the scale and visual relationships among landscape features, as well as the national historic site's topography, vegetation, circulation features, and land use patterns, would be unaltered. Development and visitor activities would be managed in a way that would avoid impacts on the tangible and intangible qualities that are integral to the Cheyenne and Arapaho peoples' associations with the site. These include broad expanses of high plains, grasslands environment, extensive vistas that are largely unobstructed by modern intrusions (houses and farm buildings, power poles and powerlines, grain silos, oil and gas rigs, or wind turbines).

Archeological sites, topographic features, cottonwood groves, and wetlands adjacent to or easily accessible from visitor use areas or trails would 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, would discourage vandalism and inadvertent impacts and thus minimize adverse impacts. Actions under this alternative would result in negligible to minor, long-term or permanent, beneficial impacts on resources.

To appropriately preserve and protect components of the ethnographic landscape, all preservation efforts, including stabilization of vulnerable topographic features, would be undertaken in

accordance with *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes* (1996). Stabilization and preservation would have no adverse effects on resources.

Cumulative Impacts. A variety of past, present, and reasonably foreseeable future actions have affected and could in the future affect resources at Sand Creek Massacre National Historic Site. Actions associated with livestock grazing and farming, such as reduction of grasslands; construction of farm buildings, fences, and roads; the introduction of nonnative plants and animals; and development of NPS facilities, affected the stream channel of Sand Creek, the surrounding landscape, and the associated viewshed and have resulted in minor, long-term or permanent, adverse impacts on the ethnographic landscape at Sand Creek Massacre National Historic Site. Similar impacts can be anticipated from ongoing development outside the national historic site's boundaries.

As described previously, implementation of the no-action alternative could result in negligible, long-term, impacts on resources. The negligible impacts associated with the no-action alternative, in combination with the minor, permanent, adverse impacts of other past, present, and reasonably foreseeable future actions, would result in negligible to minor, adverse, cumulative impacts. However, the no-action alternative would be expected to contribute only minimally to the adverse cumulative impacts. Thus, any adverse impacts on resources resulting from implementation of the no-action alternative would be a very small component of the minor, adverse, cumulative impacts.

Conclusion. Implementation of the no-action alternative would result in long-term, negligible adverse impacts, which would be a very small component of the minor, adverse, cumulative impact.

Impacts Under Alternative B

Development proposed under alternative B could impact the site's ethnographic landscape. Construction of roads, parking areas, trails, shade shelters, interpretive signs, and comfort stations would introduce modern elements that would adversely impact the integrity of the 1864 landscape. Development and visitor activities would be managed in a way that would avoid impacts on the tangible and intangible qualities that are integral to the Cheyenne and Arapaho peoples' associations with the site. These include broad expanses of high plains, grasslands environment, extensive vistas that are largely unobstructed by modern intrusions (houses and farm buildings, power poles and powerlines, grain silos, oil and gas rigs, or wind turbines).

Natural systems and features; the scale and visual relationships among landscape features; as well as the national historic site's topography, vegetation, circulation features, and land use patterns would be unaltered.

The impact of new roads, parking areas, and trails would have less impact on the landscape given their lower profile. The installation of shade shelters, interpretive signs, and comfort stations could impact archeological sites and topographic features. The cottonwood groves and wetlands could be more easily accessible from visitor use areas or trails and would 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 would discourage vandalism and inadvertent impacts and thus minimize adverse impacts. Actions under this alternative would result in negligible, long-term or permanent, impacts on resources.

To appropriately preserve and protect components of resources, all preservation efforts, including stabilization of vulnerable topographic features, would be undertaken in accordance with *The Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995). Stabilization and preservation would have no adverse effects on resources.

Cumulative Impacts. A variety of past, present, and reasonably foreseeable future actions have affected and could in the future affect resources at Sand Creek Massacre National Historic Site. Livestock grazing, farming, road construction, trails, and buildings, and development of NPS facilities, have resulted in permanent, minor, adverse impacts on the ethnographic landscape at Sand Creek Massacre National Historic Site. Similar impacts can be anticipated from ongoing development outside the national historic site's boundaries.

As described previously, implementation of alternative B could result in permanent, negligible, adverse impacts on resources. The negligible impacts associated with alternative B, in combination with the minor, permanent, adverse impacts of other past, present, and reasonably foreseeable future actions would result in minor, adverse, cumulative impacts. Alternative B would be expected to contribute only minimally to the adverse cumulative impacts. Thus, any adverse impacts on resources resulting from implementation of alternative B would be a very small component of the minor, adverse, cumulative impacts.

Conclusion. Implementation of alternative B would result in permanent, negligible, adverse impacts, which would be a very small component of the minor, adverse cumulative impacts.

Impacts Under Alternative C

Development proposed under alternative C would have a minimal impact on the site's ethnographic landscape. Construction of shade shelters, interpretive signs, and comfort stations would introduce modern elements that would adversely impact the integrity of the 1864 landscape. Development and visitor activities would be managed in a way that would avoid impacts on the tangible and intangible qualities that are integral to the Cheyenne and Arapaho peoples' associations with the site. These include broad expanses of high plains, grasslands environment, extensive vistas that are largely unobstructed by modern intrusions (houses and farm buildings, power poles and powerlines, grain silos, oil and gas rigs, or wind turbines).

Natural systems and features, the scale and visual relationships among landscape features, as well as the national historic site's topography, vegetation, circulation features, and land use patterns would be unaltered.

There would be no new roads, parking areas, or trails developed under this alternative. The installation of shade shelters, interpretive signs, and comfort stations could impact archeological sites and topographic features. The cottonwood groves and wetlands could be more easily accessible from visitor use areas or trails and would 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 would discourage vandalism and inadvertent impacts and thus minimize adverse impacts. Actions under this alternative would result in negligible, long-term or permanent impacts on resources.

To appropriately preserve and protect components of the ethnographic landscape, all preservation efforts, including stabilization of vulnerable topographic features would be undertaken in

accordance with *The Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995). Stabilization and preservation would have no adverse effects on resources.

Cumulative Impacts. A variety of past, present, and reasonably foreseeable future actions have affected and could in the future affect resources at Sand Creek Massacre National Historic Site. Livestock grazing, farming, road construction, trails, buildings, and development of NPS facilities have resulted in permanent, minor to moderate, adverse impacts on the ethnographic landscape at Sand Creek Massacre National Historic Site. Similar impacts can be anticipated from ongoing development outside the national historic site's boundaries.

As described previously, implementation of alternative C could result in long-term, negligible impacts on resources. The negligible impacts associated with alternative C, in combination with the permanent, minor, adverse impacts of other past, present, and reasonably foreseeable future actions, would result in minor to moderate, adverse, cumulative impacts. However, alternative C would be expected to contribute minimally to the adverse cumulative impacts. Thus, any adverse impacts on resources resulting from implementation of alternative C would be a very small component of the minor to moderate, adverse, cumulative impact.

Conclusion. Implementation of alternative C would result in permanent, negligible, adverse impacts, which would be a very small component of the minor to moderate, adverse, cumulative impacts.

Impacts Under Alternative D

Development proposed under alternative D could impact the site's ethnographic landscape. Construction of roads, parking areas, trails, shade shelters, interpretive signs, and comfort stations would introduce modern elements that would adversely impact the integrity of the 1864 landscape. Development and visitor activities would be managed in a way that would avoid impacts on the tangible and intangible qualities that are integral to the Cheyenne and Arapaho peoples' associations with the site. These include broad expanses of high plains, grasslands environment, extensive vistas that are largely unobstructed by modern intrusions (houses and farm buildings, power poles and powerlines, grain silos, oil and gas rigs, or wind turbines).

Natural systems and features, the scale and visual relationships among landscape features, as well as the national historic site's topography, vegetation, circulation features, and land use patterns would be unaltered.

The impact of new roads, parking areas, and trails would have less impact on the landscape given their lower profile. The installation of shade shelters, interpretive signs, and comfort stations could impact archeological sites and topographic features. The cottonwood groves and wetlands could be more easily accessible from visitor use areas or trails and would 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 would discourage vandalism and inadvertent impacts and thus minimize adverse impacts. Actions under this alternative would result in negligible to minor, long-term or permanent, adverse impacts on resources.

To appropriately preserve and protect components of the ethnographic landscape, all preservation efforts, including stabilization of vulnerable topographic features, would be undertaken in

accordance with *The Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995). Stabilization and preservation would have no adverse effects on resources.

Cumulative Impacts. A variety of past, present, and reasonably foreseeable future actions have affected and could in the future affect resources at Sand Creek Massacre National Historic Site. Livestock grazing, farming, road construction, trails, buildings, and development of NPS facilities have resulted in permanent, minor, adverse impacts on the ethnographic landscape at Sand Creek Massacre National Historic Site. Similar impacts can be anticipated from ongoing development outside the national historic site's boundaries.

As described previously, implementation of alternative D could result in long-term, negligible to minor, adverse impacts on resources. The negligible to minor adverse impacts associated with this alternative, in combination with the minor to moderate, permanent, adverse impacts of other past, present, and reasonably foreseeable future actions, would result in minor to moderate, adverse, cumulative impacts. However, alternative D would be expected to contribute minimally to the adverse cumulative impacts. Thus, any adverse impacts on resources resulting from implementation of alternative D would be a very small component of the minor to moderate, adverse, cumulative impacts.

Conclusion. Implementation of alternative D would result in permanent, negligible to minor, adverse impacts, which would be a very small component of the minor to moderate, adverse cumulative impacts.

Impacts Under Alternative E (NPS Preferred Alternative)

Development proposed under alternative E could impact the site's ethnographic landscape. Construction of roads, parking areas, trails, shade shelters, interpretive signs, and comfort stations would introduce modern elements that would have a minimally adverse impact on the integrity of the 1864 landscape. Development and visitor activities would be limited to less than 5% of the site and would be managed in a way that would avoid impacts on the tangible and intangible qualities that are integral to the Cheyenne and Arapaho peoples' associations with the site. These include broad expanses of high plains, grasslands environment, extensive vistas that are largely unobstructed by modern intrusions (houses and farm buildings, power poles and powerlines, grain silos, oil and gas rigs, or wind turbines).

Natural systems and features, the scale and visual relationships among landscape features, as well as the national historic site's topography, vegetation, circulation features, and land use patterns would be unaltered.

The impact of new roads, parking areas, and trails would have less impact on the landscape given their lower profile and the very small development footprint on the overall landscape. The installation of shade shelters, interpretive signs, and comfort stations could impact archeological sites and topographic features. The cottonwood groves and wetlands could be more easily accessible from visitor use areas or trails and would 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 would discourage vandalism and inadvertent impacts and thus minimize adverse impacts. Actions under this alternative would result in long-term, negligible to minor, adverse impacts on resources.

To appropriately preserve and protect components of the ethnographic landscape, all preservation efforts, including stabilization of vulnerable topographic features, would be undertaken in accordance with *The Secretary of the Interior's Standards for the Treatment of Historic Properties* (1995). Stabilization and preservation would have no adverse effects on resources.

Cumulative Impacts. A variety of past, present, and reasonably foreseeable future actions have affected and could in the future affect resources at Sand Creek Massacre National Historic Site. Livestock grazing, farming, road construction, trails, and buildings, and development of NPS facilities have resulted in minor to moderate, long-term or permanent, adverse impacts on the ethnographic landscape at Sand Creek Massacre National Historic Site. Similar impacts can be anticipated from ongoing development outside the national historic site's boundaries.

As described previously, implementation of alternative E could result in long-term, negligible to minor, adverse impacts on resources. The impacts associated with alternative E, in combination with the minor to moderate, permanent, adverse impacts of other past, present, and reasonably foreseeable future actions, would result in negligible to minor, adverse, cumulative impacts. Alternative E would be expected to contribute only minimally to the adverse cumulative impacts. Thus, any adverse impacts on resources resulting from implementation of alternative E would be a very small component of the minor to moderate, adverse, cumulative impacts.

Conclusion. Implementation of alternative E would result in long-term, negligible to minor, adverse impacts, which would be a very small component of the minor to moderate, cumulative, adverse impacts.

MUSEUM COLLECTIONS

Museum collections (historic objects, artifacts, works of art, archival documents, and natural history specimens) that are generally ineligible for listing in the national register are not subject to section 106 of the National Historic Preservation Act. Potential impacts on museum collections are described in terms of duration—short-term (less than one year), long term (one year or longer), or permanent. Identified impacts are also described in terms of intensity (the degree or severity of impacts is either negligible, minor, moderate, or major). The definitions of impact intensity for museum collections follow:

Negligible: Impacts are at the lowest levels of detection—barely measurable with no perceptible consequences, either adverse or beneficial, to museum collections.

Minor: Adverse impacts would affect the integrity of few items in the museum collection but would not degrade the usefulness of the collection for future research and interpretation. Minor beneficial impacts would include minor improvements of collections facilities, or transfer of collections to such a repository, and a consequent enhanced level of protection for artifacts.

Moderate: Impacts would affect the integrity of many items in the museum collection and diminish the usefulness of the collection for future research and interpretation. Moderate beneficial impacts would include more extensive improvements of collections facilities and a substantially enhanced level of protection for artifacts.

Major: Impacts would affect the integrity of most items in the museum collection and destroy the usefulness of the collection for future research and interpretation. Major

beneficial impacts would include the development of state-of-the-art collections facilities to provide the highest possible level of protection for artifacts.

Impacts Under Alternative A (No Action)

Under the no-action alternative, there would be no changes to existing management practices for the national historic site's museum and archival collections. The majority of the collection would continue to be stored and protected at the Western Archeological and Conservation Center in Tucson, Arizona, with a small portion of the collection at Bent's Old Fort National Historic Site. The current level of environmental, security, and fire protection standards in the facilities is adequate. This situation would continue to have long-term, negligible, beneficial impacts on collections.

Cumulative Impacts. Although other past, present, and reasonably foreseeable future actions may affect museum collections in the area, alternative A would have no new impacts on museum collections and therefore would not contribute to the effects of other actions. Consequently, there would be no cumulative impacts to museum collections under alternative A.

Conclusion. Continued management under the no-action alternative would result in long-term, negligible impacts on museum collections. There would be no cumulative impacts on the national historic site's resources and values.

Impacts Under Alternative B

Under alternative B, most of the national historic site's museum and archival collections would remain in storage at the Western Archeological and Conservation Center. The portion of the collection currently stored at Bent's Old Fort National Historic Site would remain there.

Future archival collections related to the history of Sand Creek Massacre National Historic Site would be collected and stored at the research center in Eads, Colorado. This new archival facility would provide curatorial storage and protection for the additional archive collection. The new facility would also provide exhibit space where objects in the collection would be featured in interpretive displays in the new visitor center. Artifacts recovered in future archeological investigations would be stored at the Western Archeological and Conservation Center. These actions would result in long-term, minor to moderate beneficial impacts on collections.

Cumulative Impacts. Past actions at the national historic site, such as the collection of artifacts through archeological research, restoration/rehabilitation projects, acquisition of artifacts and archival materials, and development of the current curatorial space, have had long-term, minor, beneficial impacts on museum collections at Sand Creek Massacre National Historic Site. Combined with the actions described under this alternative, the cumulative impact would be long term, moderate, and beneficial. Alternative B would contribute a measurable beneficial increment to the cumulative impact.

Conclusion. Implementation of alternative B would result in long-term, minor to moderate, beneficial impacts on museum collections. Combined with the long-term, minor, beneficial impacts of other past, present, or reasonably foreseeable actions, the cumulative impacts would be long term, moderate, and beneficial.

Impacts Under Alternative C

Under alternative C, most of the national historic site's museum and archival collections would remain in storage at the Western Archeological and Conservation Center. The portion of the collections currently stored at Bent's Old Fort National Historic Site would remain there.

Future archival collections related to the history of the Sand Creek Massacre would be collected and stored at the research center in Eads, Colorado. This new archival facility would provide curatorial storage and protection for the additional archive collection. The new facility would also provide exhibit space where objects in the collection would be featured in interpretive displays in the new visitor center. Artifacts recovered in future archeological investigations would be stored at the Western Archeological and Conservation Center. These actions would result in long-term, minor to moderate, beneficial impacts on collections.

Cumulative Impacts. Past actions at the national historic site, such as the collection of artifacts through archeological research, restoration/rehabilitation projects, acquisition of artifacts and archival materials, and development of the current curatorial space, have had long-term, minor, beneficial impacts on the museum collections at Sand Creek Massacre National Historic Site. Combined with the actions described under this alternative, the cumulative impacts would be long term, moderate, and beneficial. Alternative C would contribute a measurable beneficial increment to the cumulative impacts.

Conclusion. Implementation of alternative C would result in long-term, minor to moderate, beneficial impacts on museum collections. Combined with the long-term, minor, beneficial impacts of other past, present, or reasonably foreseeable actions, the cumulative impacts would be long term, moderate, and beneficial.

Impacts Under Alternative D

Under alternative D, most of the national historic site's museum and archival collections would remain in storage at the Western Archeological and Conservation Center. The portion of the collections currently stored at Bent's Old Fort National Historic Site would remain there.

Future archival collections related to the history of the Sand Creek Massacre would be collected and stored at the research center in Eads, Colorado. This new archival facility would provide curatorial storage and protection for the additional archive collection. The new facility would also provide exhibit space where objects in the collection would be featured in interpretive displays in the new visitor center. Artifacts recovered in future archeological investigations would be stored at the Western Archeological and Conservation Center. These actions would result in long-term, minor to moderate, beneficial impacts on collections.

Cumulative Impacts. Past actions at the national historic site, such as the collection of artifacts through archeological research, restoration/rehabilitation projects, acquisition of artifacts and archival materials, and development of the current curatorial space, have had long-term, minor, beneficial impacts on the museum collections at Sand Creek Massacre National Historic Site. Combined with the actions described under this alternative, cumulative impacts would be long term, moderate, and beneficial. Alternative D would contribute a measureable beneficial increment to the cumulative impacts.

Conclusion. Implementation of alternative D would result in long-term, minor to moderate beneficial impacts on museum collections. Combined with the long-term, minor, beneficial impacts of other past, present, or reasonably foreseeable actions, the cumulative impact would be long term, moderate, and beneficial.

Impacts Under Alternative E (NPS Preferred Alternative)

Under alternative E, most of the national historic site's museum and archival collections would remain in storage at the Western Archeological and Conservation Center. The portion of the collections currently stored at Bent's Old Fort National Historic Site would remain there.

Future archival collections related to the history of the Sand Creek Massacre would be collected and stored at the research center in Eads, Colorado. This new archival facility would provide curatorial storage and protection for the additional archive collection. The new facility would also provide exhibit space where objects in the collection would be featured in interpretive displays in the new visitor center. Artifacts recovered in future archeological investigations would be stored at the Western Archeological and Conservation Center. These actions would result in long-term, minor to moderate, beneficial impacts on collections.

Cumulative Impacts. Past actions in the national historic site, such as the collection of artifacts through archeological research, restoration/rehabilitation projects, acquisition of artifacts and archival materials, and development of the current curatorial space, have had long-term, minor, beneficial impacts on the museum collections at Sand Creek Massacre National Historic Site. Combined with the actions described under this alternative, the cumulative impacts would be long term, moderate, and beneficial. Alternative E would contribute a measurable beneficial increment to the cumulative impacts.

Conclusion. Implementation of alternative E would result in long-term, minor to moderate, beneficial impacts on museum collections. Combined with the long-term, minor, beneficial impacts of other past, present, or reasonably foreseeable actions, the cumulative impact would be long term, moderate, and beneficial.

NATURAL RESOURCES

Analysis of natural resources was based on research, knowledge of park resources, and the best professional judgment of planners, biologists, hydrologists, and botanists who have experience with similar types of projects. Information on the park's natural resources was gathered from several sources. As appropriate, additional sources of data are identified under each topic heading.

Where possible, map locations of sensitive resources were compared with the locations of proposed developments and modifications. Predictions about short-term and long-term site impacts were based on previous studies of visitor and facilities development impacts on natural resources. Sociological studies comparing the deterrent effects of signs versus ranger presence on sites were also considered in this analysis.

WATER RESOURCES

Water resources in the analysis include surface flow, water quality, subsurface water, floodplains, and wetlands. For the most part, potential impacts of actions comprising the alternatives cannot be defined relative to site-specific locations. Consequently, water quality impacts of the alternatives were assessed qualitatively.

Negligible – The proposed action may have an effect on water quality or the timing or intensity of flows, but it would not be readily measurable or detectable.

Minor – The action would have measurable effects on water quality or the timing or intensity of flows. Effects could include increased or decreased loads of sediment, debris, chemical or toxic substances, or pathogenic organisms.

Moderate – The action would have clearly detectable effects on water quality or the timing or intensity of flows and potentially would affect organisms or natural ecological processes.

Major – The action would have substantial effects on water quality or the timing or intensity of flows and potentially would affect organisms or natural ecological processes.

Impacts Under Alternative A (No Action)

There would be no new actions affecting water resources including surface and subsurface water under this alternative. Current actions that are likely to continue include the periodic removal of debris in the creek's floodplain. The removal of organic material affects the movement of water when the creek is flowing and would result in the minor, beneficial impact of restoring hydrology.

Only a small portion of the national historic site has been developed for operations and visitor services. This alternative would have no new impacts on the broader water resources because it would continue the current management.

Cumulative Impacts. Prior to NPS management, the area that is now the national historic site was used mostly for agricultural operations, primarily livestock grazing. Some areas were used for

growing crops that used water drawn from Sand Creek or pumped from wells. These actions reduced available surface water and possibly lowered the shallow water table.

Since NPS management practices were introduced, agricultural land use practices have ceased, causing a minor beneficial impact. Road construction and other park development have caused a slight increase in the impermeability of land surfaces. Past and current development and land use has resulted in long-term, localized, minor disturbance of water resources.

Because alternative A would have no new effect on water resources, there would be no new cumulative effects.

Conclusion. Implementing the no-action alternative would have no new effects on water resources of the historic site. There would be no new cumulative effects.

Impacts Under Alternative B

Some actions under alternative B could affect water resources. If implemented, this alternative would increase the number of roads and trails. The impacts would come from the construction and use of 4.1 miles of new trails, 1.5 miles of access roads, and two proposed small parking areas in this alternative. One trail would be in the floodplain near the creek, but would be on an existing administrative road. The others would be naturally surfaced and would reduce the surface permeability and increase stormwater runoff and erosion near the parking areas, roads, and trails during storm events. Consequently, this alternative would have short- and long-term, minor, adverse impacts on water resources.

Cumulative Impacts. Prior to NPS management, the area that is now the national historic site was used mostly for agricultural operations, primarily livestock grazing. Some areas were used for growing crops that used water drawn from Sand Creek or pumped from wells. These actions reduced the available surface water and possibly lowered the shallow water table.

The construction of roads and other park development has caused a slight increase in the impermeability of land surfaces by increasing stormwater runoff and erosion near roads, parking areas, and trails in the national historic site boundary, which would be a negligible adverse impact.

The negligible adverse impacts of alternative B, when combined with the negligible adverse impacts of other past, present, and foreseeable actions would have long-term, minor, adverse cumulative effects on water resources. This alternative would have a modest contribution to the overall cumulative effect.

Conclusion. Implementing alternative B would have short-term and long-term, minor, adverse impacts on water resources of the historic site from construction and use of additional roads and trails. There would be minor, adverse cumulative effects on water resources.

Impacts Under Alternative C

There would be one action that could affect water resources under this alternative. If implemented, this alternative would result in impacts from construction and use of an additional 0.25-mile access road. The road would be naturally surfaced and would negligibly reduce surface permeability and storm runoff when compared to the no action alternative. No new activity would occur in the

floodplain near the creek. This alternative would have short- and long-term, negligible, adverse impacts on water resources.

Cumulative Impacts. Prior to NPS management, the area that is now the national historic site was used mostly for agricultural operations, primarily livestock grazing. These actions reduced the available surface water and possibly lowered the shallow water table.

Road construction and other park development has caused a slight increase in the impermeability of the surface lands by increasing stormwater runoff and erosion near roads, parking areas, and trails at the national historic site boundary, which would be a negligible adverse impact. Past and current development and land use practices have resulted in localized, minor, adverse impacts on water resources.

The negligible adverse impacts of alternative C, when combined with the minor adverse impacts of other past, present, and foreseeable actions would have minor, adverse cumulative effects on water resources. This alternative would have a slight contribution to the overall cumulative effect.

Conclusion. Implementing alternative C would have short- and long-term, negligible, adverse impacts on water resources of the historic site from construction and use of an additional connector road. There would be minor and adverse project-related cumulative effects on water resources.

Impacts Under Alternative D

There would be some actions that could affect water resources under alternative D. If implemented, this alternative would increase the number of roads and trails. The impacts would come from the construction and use of 3.2 miles of new trails, 1.5 miles of access roads, and two proposed small parking areas under this alternative. These would be naturally surfaced and would reduce the surface permeability and storm runoff in the historic site a small amount when compared to the no-action alternative. No new activity would occur in the floodplain near the creek.

Alternative D would have short- and long-term, minor, adverse impacts on water resources.

Cumulative Impacts. Prior to NPS management of the national historic site, the area was used mostly for agricultural operations, primarily livestock grazing. These actions reduced the available surface water and possibly lowered the shallow water table.

Road construction and other park development has caused a slight increase in the impermeability of surface lands by increasing stormwater runoff and erosion near roads, parking areas, and trails, which would be a negligible adverse impact. Past and current development and land use has resulted in localized, minor, adverse impacts on water resources.

The minor adverse impacts of alternative D, when combined with the minor adverse impacts of other past, present, and foreseeable actions, would have minor adverse cumulative effects on water resources. This alternative would have a small contribution to the overall cumulative effect.

Conclusion. Implementing alternative D would have short- and long-term adverse impacts on water resources of the national historic site from construction and use of additional trails and roads. There would be minor adverse cumulative effects on water resources.

Impacts Under Alternative E (NPS Preferred Alternative)

There would be some actions that could affect water resources under this alternative. If implemented, this alternative would increase the number of roads and trails. Adverse impacts would result from the construction and use of 1.8 miles of new trails, 1.5 miles of access roads, and one small parking area proposed in this alternative. These would be naturally surfaced and would reduce the surface permeability and storm runoff in the national historic site a small amount when compared to the no-action alternative.

No new activity would occur in the floodplain near the creek. Implementation of the sensitive resources zone, only in this alternative, would provide additional protection for lowlands on the national historic site. This would be a long-term, minor, beneficial impact on water resources.

This alternative would have short- and long-term, minor, adverse impacts on water resources.

Cumulative Impacts. Prior to NPS management of the national historic site, the land was used mostly for agricultural operations, primarily livestock grazing. These actions reduced the available surface water and possibly lowered the shallow water table.

Road construction and other park development has caused a slight increase in the impermeability of surface lands at the national historic site by increasing stormwater runoff and erosion near roads, parking areas, and trails, which would be a negligible adverse impact. Past and current development and land use has resulted in localized, minor, adverse impacts on water resources.

The minor adverse impacts of alternative E, when combined with the minor adverse impacts of other past, present, and foreseeable actions would have minor adverse cumulative effects on water resources. This alternative would have a small contribution to the overall cumulative effect.

Conclusion. Implementing alternative E would have short- and long-term, minor, adverse impacts on water resources of the national historic site from construction and use of additional roads and trails. There would be minor and adverse project-related cumulative effects on water resources.

SOILS

Methodology

Negligible: Impacts on soil resources may occur, but are not detectable based on standard scientific methodologies. Impacts result in frequency, magnitude, and duration measurements that are well within the natural range of variability.

Minor: Low level of impact because either (1) the activity would occur in a geologic or soil layer not known to contain unique features and the volume of disturbance would be small, or (2) the activity would occur in a soil layer containing unique features, but the volume of disturbance would be nearly indiscernible. Monitoring would likely detect changes or loss of the features, and the loss of associated contextual information would be minimal. Frequency, magnitude, and duration measurements are expected to remain within the natural range of variability, possibly showing small, short-term disruptions.

Moderate: An impact would be considered moderate if either (1) the activity would occur in a soil layer not known to contain unique features and the volume of disturbance would

be large, or (2) the activity would occur in a soil layer known to contain unique features, but the volume of disturbance would be small. Monitoring would identify the most affected soil features, but some features and/or associated contextual information would be lost. Frequency, magnitude, and duration measurements are expected to be outside the natural range of variability.

Major: Major impacts would occur if it is in a soil layer containing unique features and the volume of disturbance would be large. Even with monitoring, many features and/or associated contextual information would likely be lost. Frequency, magnitude, and duration measurements are expected to be outside the natural range of variability.

Duration of Impacts:

Short-term: Impacts that are expected to last less than one year.

Long term: Impacts that are expected to last more than one year.

Impacts Under Alternative A (No Action)

There would be no new actions affecting soils under this alternative. Only a small portion of the national historic site has been developed for operations and visitor services, and therefore, the continuation of current management under this alternative would have no new effect on broader soil resources. This is important because some of the soils are susceptible to wind erosion because of their sandy nature and sparse vegetation.

Cumulative Impacts. Prior to NPS management of the national historic site, the area was used mostly for agricultural operations. Some areas were used for growing crops under which the top layers of soil were repeatedly disturbed but left in place. Most areas were used for livestock grazing, which maintained the soil resources as primarily intact. Road construction, park development, and use of a few trails has caused resource disturbance in the national historic site boundaries. Past and current development and land use has resulted in long-term, localized, minor disturbance of soils in a few distinct areas.

Because alternative A would not affect soil resources, there would be no new project-related cumulative effects.

Conclusion. Implementing the no-action alternative would have no effect on soils of the historic site. There would be no new project-related cumulative effects.

Impacts Under Alternative B

Implementing alternative B would result in some disruption of native soils. The impacts would result from construction and the use of 4.4 miles of trails, 1.5 miles of new access roads, and two small parking areas proposed in this alternative. The construction of these roads and trails would cause short-term disruption of soil layering and some possible loss of soil from wind and water erosion during construction. The continued use of the trails and roads would result in long-term trampling and compaction of the soils in these areas. The total area of impact would be about 5 acres of 23,000 acres, which is less than 1% of soils within the national historic site boundary. Thus,

alternative B would have both short-term and long-term, minor, adverse impacts on native soils in the national historic site.

Cumulative Impacts. Prior to NPS management of the national historic site, the area was used mostly for agricultural operations. Some areas were used for growing crops under which the top layers of soil were repeatedly disturbed but left in place. Most areas were used for livestock grazing, which maintained the soil resources as primarily intact. The construction of roads, park development, and use of a few trails has caused soil disturbances. Use of motorized vehicles at the national historic site has probably been reduced since transfer to the National Park Service. Past and current development and land use has caused erosion and loss of vegetation, which resulted in long-term, localized, minor disturbance of soils in a few distinct areas.

Alternative B would have both short-term and long-term moderate adverse impacts and when added to the localized minor disturbance of other past, present, and future actions would result in minor adverse cumulative effects. This alternative would have a modest contribution to cumulative effects.

Conclusion. Implementing alternative B would have both short- and long-term, moderate, adverse impacts on native soils in the national historic site. Overall cumulative effects would be minor and adverse.

Impacts Under Alternative C

Implementing alternative C would result in a small disruption of native soils. The construction of the new 0.25-mile connecting road would cause short-term disruption of soil layering and some possible loss of soil from wind and water erosion. The continued use of the roads would result in long-term compaction of the soils. Alternative C would have both short- and long-term, minor, adverse impacts on native soils in the national historic site.

Cumulative Impacts. Prior to NPS management of the national historic site, the area was used mostly for agricultural operations. Some areas were used for growing crops under which the top layers of soil were repeatedly disturbed, but left in place. Most areas were used for livestock grazing, which maintained the soil resources as primarily intact. Road construction, park development, and use of a few trails has caused resource disturbance in the national historic site. Use of motorized vehicles has probably been reduced since the lands were transferred to the National Park Service. Past and current development and land use has resulted in long-term, localized, minor disturbance of soils in a few distinct areas.

Alternative C would have both short- and long-term, minor, adverse impacts and when combined with the localized minor disturbance of other past, present, and future actions would result in minor, adverse, cumulative effects. This alternative would have a small contribution to the cumulative effects.

Conclusion. Implementing alternative C would have both short- and long-term, minor, adverse impacts on native soils of the national historic site from one short road. Overall cumulative effects would be minor and adverse.

Impacts Under Alternative D

Implementing alternative D would result in some disruption of native soils. The impacts would come from the construction and use of 3.2 miles of trails, 1.5 miles of new access roads, and two small parking areas proposed in this alternative. The total area of impact would be about 4 acres. The construction of these roads and trails would cause short-term disruption of soil layering and some possible loss of soil from wind and water erosion during construction. The continued use of the trails and roads would result in long-term trampling and compaction of the soils in those features. Thus, alternative D would have both short-term and long-term, minor, adverse impacts on native soils in the national historic site.

Cumulative Impacts. Prior to NPS management, the area that is now the national historic site was used mostly for agricultural operations. Some areas were used for growing crops under which the top layers of soil were repeatedly disturbed but left in place. Most areas were used for livestock grazing, which maintained the soil resources as primarily intact. The construction of roads, park development, and use of a few trails has caused soil disturbances. Use of motorized vehicles at the national historic site has probably been reduced since transfer to the National Park Service. Past and current development and land use has resulted in long-term, localized, minor disturbance of soils in a few distinct areas.

Alternative D would have both short-term and long-term, minor, adverse impacts, and when combined with the minor disturbance of other past, present, and future actions, would result in minor, adverse, cumulative impacts. This alternative would have a modest contribution to cumulative impacts.

Conclusion. Implementing alternative D would have both short-term and long-term, minor, adverse impacts on native soils in the national historic site. Overall cumulative effects would be minor and adverse.

Impacts Under Alternative E (NPS Preferred Alternative)

Implementing alternative E would result in some disruption of native soils. The impacts would 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. The total area of impact would be about 3.7 acres. The construction of these roads and trails would cause short-term disruption of soil layering and some possible loss of soil from wind and water erosion during construction. The continued use of the trails and roads would result in long-term trampling and compaction of soils in those features. Thus, alternative E would have both short-term and long-term, minor, adverse impacts on native soils in the national historic site.

Implementation of the sensitive resources zone, only in this alternative, would provide additional protection for lowlands on the national historic site. This would be a long-term, minor, beneficial impact on soil resources.

Cumulative Impacts. Prior to NPS management, the area that is now the national historic site was used mostly for agricultural operations. Some areas were used for growing crops under which the top layers of soil were repeatedly disturbed but left in place. Most areas were used for livestock grazing, which maintained the soil resources as primarily intact. The construction of roads, park development, and use of a few trails has caused soil disturbance. Use of motorized vehicles at the national historic site has probably been reduced since transfer to the National Park Service. Past

and current development and land use has resulted in long-term, localized, minor disturbance of soils in a few distinct areas.

Alternative E would have both minor adverse and minor beneficial impacts and when combined with the minor disturbance of other past, present, and future actions would result in minor, adverse, cumulative effects. This alternative would have a modest contribution to cumulative effects.

Conclusion. Implementing alternative E would have both short-term and long-term, minor, adverse impacts and long-term, minor, beneficial impacts on native soils in the national historic site. Overall, cumulative effects would be minor and adverse.

VEGETATION

Methodology

Potential impacts from implementing the alternatives are described using the following thresholds of severity.

Negligible: Impacts would have no measurable or perceptible changes in plant community size, integrity, or continuity. Impacts to the composition and function of ecologically sensitive areas are not detectable.

Minor: Impacts would be measurable or perceptible, but would be localized within a relatively small area. The overall viability of the plant community would not be affected and, if left alone, would recover. Impacts are detectable, but the severity and timing of changes are not expected to be outside the natural variability and are not expected to have any widespread effects on biological, abiotic, or other ecologically sensitive components. Certain ecosystem patterns may experience localized disruptions. Key processes and habitat for all species remains functional.

Moderate: Impacts would cause a change in the plant community (e.g., abundance, distribution, quantity, or quality); however, the impact would remain localized. Impacts are detectable, and the severity and timing of changes are expected to be outside the natural variability. Ecosystem patterns may be permanently disrupted or there may be loss on a limited spatial scale. Key ecosystem processes may experience disruptions that are outside natural variability, but then return to within the normal range. Habitat for all species remains functional.

Major: Impacts to the plant community would be substantial and highly noticeable. Impacts would be easily detectable, and the severity and timing of changes are expected to be outside natural variability. In extreme cases, species may be extirpated from the area. Ecosystem processes may be disrupted, and habitat for certain species may become nonfunctional.

Duration of Impacts:

Short-term: Impacts that are expected to last during the period of construction, plus vegetation recovery time or 12 months.

Long term: Impacts that are expected to last more than 12 months.

Impacts Under Alternative A (No Action)

Only a small portion of the national historic site has been developed for operations and visitor services. No additional development would occur under this alternative and therefore the broader vegetation communities would not be impacted under the continuation of current management. This is important because the appearance of an undisturbed landscape is part of the visitor experience. There would be no actions in this alternative that would have a new effect on vegetation in the national historic site.

Cumulative Impacts. The construction and use of buildings, roads, and trails is the only current cause of natural resource disturbance within the historic site boundaries. Surrounding lands have been used for agricultural operations such as livestock grazing or crops, which has altered the native vegetation communities. Agricultural activity can reduce vegetation and biodiversity allowing nonnative species to thrive. These actions have resulted in long-term and localized losses of vegetation in a few distinct areas of the national historic site. This is a minor adverse impact.

Because alternative A would have no effect on vegetation there would be no new project-related cumulative effects.

Conclusion. Implementing this alternative would have no new effect on vegetation. There would be no new project-related cumulative effects.

Impacts Under Alternative B

Implementing alternative B would result in some disruption of existing vegetation. The construction of additional trails, the new connecting road, and the east-side access road would cause loss of vegetation on about 5 acres. The continued use of the trails and roads would result in long-term trampling and continual exclusion of vegetation in those areas. Thus, alternative B would have long-term, minor, adverse impacts on vegetation in the national historic site.

Cumulative Impacts. The construction and use of buildings, roads, and trails is the only current cause of natural resource disturbance within the historic site boundaries. Surrounding lands have been used for agricultural operations such as livestock grazing or crops, which has altered the native vegetation communities. Agricultural activity can reduce vegetation and biodiversity allowing nonnative species to thrive. These actions have resulted in long-term but localized losses of vegetation in a few distinct areas of the national historic site. This is a minor adverse impact.

Alternative B would have long-term, minor, adverse impacts on vegetation, and when combined with the minor adverse and minor beneficial impacts of other past, present, and future actions would result in minor, adverse, cumulative impacts. This alternative would have a modest contribution to cumulative impacts.

Conclusion. Implementing alternative B would have long-term, minor, adverse impacts on vegetation communities in the national historic site. Overall cumulative effects would be minor and adverse.

Impacts Under Alternative C

Implementing alternative C would result in minimal disruption of existing vegetation. Construction of the new connecting road would cause loss of vegetation on about 0.6 acre. The continued use of the road would result in long-term trampling and continual exclusion of vegetation. Thus, alternative C would have long-term, minor, adverse impacts on vegetation in the national historic site.

Cumulative Impacts. The construction and use of buildings, roads, and trails is the only current cause of natural resource disturbance within the historic site. Surrounding lands have been used for agricultural operations such as livestock grazing or crops, which has altered the native and historic vegetation communities. These actions have resulted in long-term and localized losses of vegetation in a few distinct areas of the national historic site. This is a minor adverse impact.

Past, present, and future resource management (such as managing wildland fire, controlling the spread of invasive species, and protecting native species) has and would result in long-term, minor, beneficial impacts to vegetation.

Alternative C would have long-term, minor, adverse impacts on vegetation, and when combined with the minor, adverse, and minor beneficial impacts of other past, present, and future actions, would result in minor, adverse, cumulative impacts. This alternative would have a slight contribution to cumulative impacts.

Conclusion. Implementing alternative C would have a long-term, minor, adverse impact on vegetation communities in the national historic site. Overall cumulative effects would be minor and adverse.

Impacts Under Alternative D

Implementing alternative D would result in some disruption of existing vegetation. The impacts would come from construction of 3.2 miles of trails, 1.5 miles of new access roads, and two small parking areas proposed in this alternative. The total area of impact would be about 4 acres. The construction and use of these roads and trails would cause the loss of vegetation in those areas. Thus, alternative D would have localized, long-term, minor, adverse impacts on vegetation resources in the national historic site.

Cumulative Impacts. The construction and use of buildings, roads, and trails is the only current cause of natural resource disturbance within the historic site boundaries. Surrounding lands have been used for agricultural operations such as livestock grazing or crops, which has altered the native and historic vegetation communities. These actions have resulted in long-term and localized losses of vegetation in a few distinct areas of the national historic site. This is a minor adverse impact.

Past, present, and future resource management (such as managing wildland fire, controlling the spread of invasive species, and protecting native species) has and would result in long-term, minor beneficial impacts to vegetation.

Alternative D would have long-term minor adverse impacts and when combined with the minor disturbance of other past, present, and future actions would result in minor adverse cumulative effects. This alternative would have a modest contribution to the cumulative effects.

Conclusion. Implementing alternative D would have long-term minor adverse impacts on vegetation in the national historic site. Overall cumulative effects would be minor and adverse.

Impacts Under Alternative E (NPS Preferred Alternative)

Implementing alternative E would result in some disruption of vegetation. The impacts would come from the construction and use of 1.8 miles of trails, 1.5 miles of new access roads, and one small parking area proposed in this alternative. The total area of impact would be about 3.7 acres. The construction of these roads and trails would cause the long-term loss of individual plants in those localized areas. This would have long-term minor adverse impacts on vegetation in the national historic site.

Implementation of the sensitive resources zone, only in this alternative, would provide additional protection for lowlands on the national historic site. This would be a long-term minor beneficial impact on vegetation resources.

Cumulative Impacts. The construction and use of buildings, roads, and trails is the only current cause of natural resource disturbance within the historic site boundaries. Surrounding lands have been used for agricultural operations such as livestock grazing or crops, which has altered the native and historic vegetation communities. These actions have resulted in long-term and localized losses of vegetation in a few distinct areas of the national historic site. This is a minor adverse impact.

Past, present, and future resource management (such as managing wildland fire, controlling the spread of invasive species, and protecting native species) has and would result in long-term, minor, beneficial impacts to vegetation.

Alternative E would have minor, adverse, and beneficial impacts and when combined with the minor disturbance of other past, present, and future actions would result in minor, adverse, cumulative effects. This alternative would have a small contribution to the cumulative effects.

Conclusion. Implementing alternative E would have short-term, minor, adverse impacts and a long-term, minor, beneficial impact on vegetation in the national historic site. Overall cumulative effects would be minor and adverse.

WILDLIFE

Methodology

Potential impacts from implementing the alternatives are described using the following thresholds of severity.

Negligible: There would be no observable or measurable impacts to native species, their habitats, or the natural processes sustaining them. Any effects would be well within natural fluctuations.

Minor: Impacts would be detectable, but they would not be expected to be outside the natural range of variability or have any lasting effects on native species, their habitats, or the natural processes sustaining them. Population numbers, genetic variability, and other demographic factors for species might have small changes, but they would remain stable and viable. Occasional responses to disturbance by some individuals could be expected. Sufficient habitat would remain functional to maintain viability of native species.

Moderate: Impacts on native species, their habitats, or the natural processes sustaining them would be detectable, and they could be temporarily outside the natural range of variability. Population numbers, genetic variability, and other demographic factors for species might change, but would be expected to rebound to pre-impact numbers and to remain stable and viable over time. Frequent responses to disturbance by some individuals could be expected. Sufficient habitat would remain functional to maintain viability of native species.

Major: Impacts on native species, their habitats, or the natural processes sustaining them would be detectable, and they would be expected to be outside the natural range of variability. Population numbers, genetic variability, and other demographic factors for species might experience substantial changes. Frequent responses to disturbance by many individuals would be expected. Loss of habitat might affect the viability of at least some native species.

Duration of Impacts:

Short term: Impacts that are expected to last during the period of temporary disturbance such as construction, or about three months

Long term: Impacts that are expected to last longer than three months.

Impacts Under Alternative A (No Action)

Under this alternative, visitor use and agency operations would continue to cause low levels of disturbance to some individuals. Because resident wildlife species are likely to become accustomed to the current use, the result would be a continuation of localized, short-term, negligible, adverse impacts to wildlife. There would be no new actions or development under this alternative that would affect wildlife or habitat.

Cumulative Impacts. Before the national historic site's establishment in 2007, the area was privately owned and used as ranch land. Ranch land operations would have disturbed potential habitat for all wildlife.

Although small, Sand Creek Massacre National Historic Site may serve as a refuge for wildlife, providing long-term beneficial effects to wildlife. Ongoing resource management (such as controlling the spread of invasive species and protecting native species) would result in continued long-term, minor, beneficial impacts to wildlife and habitats.

There is minimal development in the national historic site such as roads and administrative buildings, which continue to cause some fragmentation of the grassland habitat. Hunting occurs on surrounding lands, but this is at such a low level that the impact is likely negligible.

When the negligible adverse impacts of alternative A are combined with the minor, adverse, and beneficial impacts of other actions, the resulting cumulative effects would be negligible and beneficial. This alternative would have a slight continuing contribution.

Conclusion. Implementing the no-action alternative would result in the continuation of short-term, negligible, adverse impacts from continuing visitor use and management activities. The cumulative effect would be negligible and beneficial.

Impacts Under Alternative B

Under alternative B, park development would have the highest potential to affect wildlife. The construction of additional roads and trails would cause short-term, moderate, adverse impacts by disrupting habitat and displacing individuals. After construction, the use of the roads and trails would cause long-term, minor, adverse impacts by fragmenting habitat and affecting natural wildlife movement. This would cause displacement of individual animals, but would diminish over time as wildlife becomes accustomed to people on the trails. The construction of additional park facilities would occur in developed areas and would have negligible adverse effects on wildlife.

Cumulative Impacts. Before the national historic site's establishment in 2007, the area was privately owned and used as ranch land. Ranch land operations would have disturbed potential habitat for all wildlife.

Although small, Sand Creek Massacre National Historic Site may serve as a refuge for wildlife, providing long-term beneficial effects. Ongoing resource management (such as controlling the spread of invasive species and protecting native species) would result in continued long-term, minor, beneficial impacts to wildlife and habitats.

There is minimal development in the national historic site such as roads and administrative buildings, which continue to cause some fragmentation of the grassland habitat. Hunting occurs on surrounding lands, but is at such a low level that impacts are likely negligible.

When the adverse impacts of alternative B are combined with the minor, adverse, and beneficial impacts of other actions, the resulting cumulative effects would be negligible and beneficial. This alternative would have a modest contribution.

Conclusion. Implementing alternative B would result in short-term, moderate, adverse impacts and long-term, minor, adverse impacts from new construction. The cumulative effect would be negligible and beneficial.

Impacts Under Alternative C

Implementing alternative C would result in minimal disruption of wildlife and wildlife habitat. Construction of the new connecting road would cause short-term, minor, adverse impacts from displacement of individual animals. Long-term adverse effects would be minimal because the new road segment would be short and connect two existing roads.

Alternative C would have short-term, minor, adverse impacts and long-term, negligible, adverse impacts on wildlife at the national historic site.

Cumulative Impacts. Before the national historic site's establishment in 2007, the area was privately owned and used as ranch land. Ranch land operations would have disturbed potential habitat for all wildlife.

Although small, Sand Creek Massacre National Historic Site may serve as a refuge for wildlife, providing long-term beneficial effects. Ongoing resource management (such as controlling the spread of invasive species and protecting native species) would result in continued long-term, minor, beneficial impacts to wildlife and habitats.

There is minimal development in the national historic site such as the roads and administrative buildings that continue to cause some fragmentation of grassland habitat. Hunting occurs on surrounding lands, but is at such a low level that the impact is likely negligible.

When the adverse impacts of alternative C are combined with the minor, adverse, and beneficial impacts of other actions, the resulting cumulative effects would be negligible and beneficial. This alternative would have a slight contribution.

Conclusion. Implementing alternative C would result in short-term, minor, adverse impacts from new construction and long-term, negligible, adverse impacts. The cumulative effect would be negligible and beneficial.

Impacts Under Alternative D

Alternative D would propose some park development with the potential to affect wildlife. The construction of additional roads and trails would cause short-term, moderate, adverse impacts by disrupting habitat and displacing individuals. After construction, the use of the roads and trails would cause long-term, minor, adverse impacts by fragmenting habitat and affecting natural wildlife movement. This would also cause displacement of individual animals, but this would diminish over time as wildlife becomes accustomed to people on the trails. The construction of additional park facilities would occur in developed areas and would have negligible adverse effects.

Cumulative Impacts. Before the national historic site's establishment in 2007, the area was privately owned and used as ranch land. Ranch land operations would have disturbed potential habitat for all wildlife.

Although small, Sand Creek Massacre National Historic Site may serve as a refuge for wildlife, providing long-term beneficial effects. Ongoing resource management (such as controlling the spread of invasive species and protecting native species) would result in continued long-term, minor, beneficial impacts to wildlife and habitats.

There is minimal development in the national historic site such as roads and administrative buildings, which continue to cause some fragmentation of grassland habitat. Hunting occurs on surrounding lands, but is at such a low level that impacts are likely negligible.

When the adverse impacts of alternative D are combined with the minor, adverse, and beneficial impacts of other actions, the resulting cumulative effects would be negligible and beneficial. This alternative would have a small contribution.

Conclusion. Implementing alternative D would result in short-term, moderate, adverse impacts and long-term, minor, adverse impacts from new construction. The cumulative effect would be negligible and beneficial.

Impacts Under Alternative E (NPS Preferred Alternative)

Alternative E would propose some park development with the potential to affect wildlife. The construction of additional roads and trails would cause short-term, moderate, adverse impacts by disrupting habitat and displacing individuals. After construction, use of the roads and trails would cause long-term, minor, adverse impacts by fragmenting habitat and affecting natural wildlife movement. This would cause displacement of individual animals, but would diminish over time as wildlife becomes accustomed to people on the trails. The construction of additional park facilities would occur in developed areas and would have negligible adverse effects.

The implementation of the sensitive resources zone would further protection of natural resources, including wildlife habitat, within that zone. This would be a long-term, minor, beneficial impact.

Cumulative Impacts. Before the national historic site's establishment in 2007, the area was privately owned and used as ranch land. Ranch land operations would have disturbed potential habitat for all wildlife.

Although small, Sand Creek Massacre National Historic Site may serve as a refuge for wildlife, providing long-term beneficial effects. Ongoing resource management (such as controlling the spread of invasive species and protecting native species) would result in continued long-term, minor, beneficial impacts to wildlife and habitats.

There is minimal development in the national historic site such as roads and administrative buildings, which continue to cause some fragmentation of grassland habitat. Hunting occurs on surrounding lands, but is at such a low level that impacts are likely negligible.

When the adverse and beneficial impacts of alternative E are combined with the minor, adverse, and beneficial impacts of other past, present, and future actions, the resulting cumulative effects would be negligible and beneficial. This alternative would have a small contribution.

Conclusion. Implementing alternative E would result in short-term, moderate, adverse impacts from new construction. It would also have long-term, minor, beneficial impacts from protective zoning. The cumulative effect would be negligible and beneficial.

ACOUSTIC ENVIRONMENT AND SOUNDSCAPES

Impacts Under Alternative A (No Action)

Because there is no change from current management, alternative A contains no actions that would impact the existing acoustic environment and soundscape within the national historic site. Sounds at the site would remain primarily natural, interrupted only occasionally by human-made noise such as commercial jet overflights, car engines, or loud conversation. It would be the intention of site management to keep noise levels at their current low level. Actions common to all alternatives have the potential to reduce on-site human-caused sounds.

Cumulative Impacts. Studies reveal that noise is audible in the national historic site between 33% and 36% of the time in both winter and summer. These levels are the park baseline and sound impacts from proposed actions would be measured against this baseline.

Alternative A would have no effect and when combined with the impacts of other actions, would have no cumulative effect.

Conclusion. Implementing alternative A would have no new effect on the existing acoustic environment and soundscape. Because there would be no effect, there would be no project-related cumulative effect.

Impacts Under Alternative B

Alternative B contains actions that would impact the acoustic environment and soundscape within the national historic site. This alternative would most likely result in increased visitation and more disbursement of people throughout the historic site; therefore, more noise would occur in more places. Noise levels would increase with additional vehicles (car engines, car doors) and people (loud conversations). The development of new roads would bring noise to new locations in the park and increase the potential for more vehicles on-site. Roads are one of the most pervasive sources of noise in national park system units. Noise could top the baseline levels up to 50% of the time on busy weekends or special events. Construction of roadways, trails, and buildings would 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. The overall result would be an intermittent, moderate, adverse impact.

Sounds at the site would remain mostly natural, interrupted only occasionally by human-made noise such as commercial jet overflights, car engines, or loud conversation. Actions common to all alternatives have the potential to reduce on-site human-caused sounds.

Cumulative Impacts. Studies reveal that noise is audible in the national historic site between 33% and 36% of the time in both winter and summer. These levels are the park baseline and sound impacts from proposed actions would be measured against this baseline. The most common source of noise was commercial jet overflights. Natural sources such as wind in vegetation, birds, and insects were also commonly audible. Other natural sounds in the park unit include those related to wildlife, such as sounds made by birds, coyotes, frogs, and crickets.

Alternative B would have a moderate adverse effect on the acoustic environment and soundscape, and, when combined with the impacts of other actions, would have a minor, adverse, cumulative effect.

Conclusion. Implementing alternative B would have a moderate adverse effect on soundscapes. There would be a minor, adverse, cumulative effect.

Impacts Under Alternative C

Alternative C contains no actions that would permanently impact the acoustic environment and soundscape within the national historic site. Construction of roadways, trails, and buildings will temporarily negatively impact the acoustic environment and soundscape. There would be no construction of amenities that would cause a noticeable increase in visitation. Sounds at the site would remain primarily natural, interrupted only occasionally by human-made noise such as commercial jet overflights, car engines, or loud conversation. It would be the intention of management to keep noise levels at their current low level. Actions common to all alternatives have the potential to reduce on-site human-caused sounds.

Cumulative Impacts. Studies reveal that noise is audible in the national historic site between 33% and 36% of the time in both winter and summer. These levels are the park baseline and sound impacts from proposed actions would be measured against this baseline.

Alternative C would have only temporary impacts that likely result in no effect and, when combined with the impacts of other actions, would have no cumulative effect.

Conclusion. Implementing alternative C would have no new effect on acoustic environment and soundscapes. Because there would be no effect, there would be no project-related cumulative effect.

Impacts Under Alternative D

Alternative D contains actions that would impact the acoustic environment and soundscape within the national historic site. This alternative would most likely result in increased visitation and more disbursement of people throughout the historic site; therefore, more noise would occur in more places. Noise levels would increase with additional vehicles (car engines, car doors) and people (loud conversations). The development of new roads would bring noise to new locations in the park and increase the potential for more vehicles on-site. Roads are one of the most pervasive sources of noise in national park system units. Noise levels could top baseline levels up to 10% more on busy weekends or special events. Construction of roadways, trails, and buildings would 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. The overall result would be an intermittent, minor, adverse impact.

Sounds at the site would remain mostly natural, interrupted only occasionally by human-made noise. Actions common to all alternatives have the potential to reduce on-site human-caused sounds.

Cumulative Impacts. Studies reveal that noise is audible in the national historic site between 33% and 36% of the time in both winter and summer. These levels are the park baseline and sound impacts from proposed actions would be measured against this baseline. The most common source of noise was commercial jet overflights. Natural sources such as wind in vegetation, birds, and insects were also commonly audible. Other natural sounds in the park unit include those related to wildlife such as sounds made by birds, coyotes, frogs, and crickets.

Alternative D would have a minor adverse effect and, when combined with the impacts of other actions, would have a minor, adverse, cumulative effect.

Conclusion. Implementing alternative D would have a minor adverse effect on soundscapes. There would be a minor, adverse, cumulative effect.

Impacts Under Alternative E (NPS Preferred Alternative)

Alternative E contains some actions that would impact the acoustic environment and soundscapes within the national historic site. This alternative would slightly increase the disbursement of people throughout the historic site; therefore, more noise would occur in more places. Noise levels would increase with additional vehicles (car engines, car doors) and people (loud conversations). The development of new roads would bring noise to new locations in the park and increase the potential for more vehicles on-site. Roads are one of the most pervasive sources of noise in national park system units. 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. The overall result would be an intermittent, minor, adverse impact.

Sounds at the site would remain mostly natural, interrupted only occasionally by human-made noise. Actions common to all alternatives have the potential to reduce on-site human-caused sounds.

Cumulative Impacts. Studies reveal that noise is audible in the national historic site between 33% and 36% of the time in both winter and summer. These levels are the park baseline and sound impacts from proposed actions would be measured against this baseline. The most common source of noise was commercial jet overflights. Natural sources such as wind in vegetation, birds, and insects were also commonly audible. Other natural sounds in the park unit include those related to wildlife such as sounds made by birds, coyotes, frogs, and crickets.

Alternative E would have a minor adverse effect and, when combined with the impacts of other actions, would have a minor, adverse, cumulative effect.

Conclusion. Implementing alternative E would have a minor adverse effect on soundscapes. There would be a minor, adverse, cumulative effect.

VISITOR USE AND EXPERIENCE

METHODOLOGY

The analysis of potential effects of the alternatives on visitor use and experience is based on how visitor use and experience would change with the addition or removal of facilities and the application of the alternative management prescriptions. Impacts were evaluated using the no-action alternative as a baseline for comparison with each alternative. The analysis is based on how proposed management strategies would affect the following:

- visitor ability to experience the park unit's primary natural and cultural resources, including their natural setting (e.g., vistas, natural sounds/smells/scenes, wildlife)
- freedom to experience the park at one's own pace (e.g., degree of spontaneity, individualized itinerary, ease of carrying personal belongings)
- access and ease of movement throughout the national historic site (e.g., travel mode choice, reliability, affordability, timeliness, availability of facilities, access to places of interest, convenience, minimal congestion)
- personal mobility for people with disabilities
- facilitation of high quality visitor opportunities (e.g., access to diverse recreation opportunities, potentially new recreation activities, tranquil/contemplative environments—place and pace different from everyday environment, opportunities for social interaction with family/friends, opportunities to meet new people)

The thresholds of change for the intensity of an impact are defined as follows:

Negligible: Visitors would likely be unaware of any effects associated with implementation of the alternative.

Minor: Changes in visitor use or experience would be slight but detectable, would affect few visitors, and would not appreciably limit or enhance experiences identified as fundamental to the park unit's purpose and significance.

Moderate: Some characteristics of visitor use and experience would change and many visitors would likely be aware of the effects associated with implementation of the alternative; some changes to experiences identified as fundamental to the park unit's purpose and significance would be apparent.

Major: Multiple characteristics of visitor experience would change, including experiences identified as fundamental to the park unit's purpose and significance; most visitors would be aware of the effects associated with implementation of this alternative.

Type of Impact:

Adverse impacts are those that would restrict visitor programs or opportunities or access (how most people would visit the site).

Beneficial impacts are those that increase or improve the variety of opportunities or access.

Duration of Impacts:

Short-term: Impacts that are expected to occur during one visit only.

Long-term: Impacts that are expected to occur during more than one visit (i.e., longer than one year).

IMPACTS UNDER ALTERNATIVE A (NO ACTION)

The no-action alternative would result in no new impacts to visitor use and experience at Sand Creek Massacre National Historic Site. Visitors are able to visit the site and would continue to experience the park at one's own pace, either via individual exploration of the trail to the monument and the reflective opportunities at the overlook, or guided walks of small groups by a park ranger. Visitors would continue to receive orientation and opportunity to receive information via NPS rangers who greet them upon arrival. The opportunity to encounter many other visitors at the site would remain low, allowing for the contemplative aspects of the site.

Many of these visitors expect to receive traditional National Park Service experiences, such as a visitor center featuring exhibits, in-depth literature and sales items, and regular interpretive programs. Park headquarters in Eads, Colorado, provides basic information, but currently there exists no place to access a comprehensive interpretation of the Sand Creek Massacre. Visitors are often left wanting more, especially with the long drive on rough roads to access the isolated site. Duration of stay at the site would remain short due to limited opportunities for in-depth interpretive programs and media. The viewshed and ethnographic landscape, key in imagining and reflecting on historic events, would remain unimpeded. Alternative A would have no effect on visitor use or experience.

Cumulative Impacts. Visitation to, and curiosity about, Sand Creek Massacre National Historic Site has increased since the park opened to the public in 2007. The site is becoming more well-known, attracting regional, national and international visitors. First-time and repeat visitors arrive at a stark site with minimal development (a contact station, half-mile trail to commemorative monument, and a half dozen interpretive wayside exhibits, with minimal ranger services).

Limited on-site interpretive opportunities to more fully comprehend the massacre, its resounding significance, and the role the ethnographic landscape played in the massacre falls short of the park unit's legislative intent to enhance cultural understanding of the site and "assist in minimizing the chances of similar events in the future." In combination with past, present, and reasonably foreseeable future actions, alternative A would have no project-related cumulative effect on visitor use and experience.

Conclusion. Alternative A would continue operations under the interim site management plan, with little or no new development of interpretive media and services to comprehend the site, especially as park visitation numbers increase. With no changes, this alternative would have no effect.

IMPACTS UNDER ALTERNATIVE B

Under alternative B, the greatest variety and depth of interpretive media, programs, and services would be offered on-site and off-site. On-site, nearly 4 miles of additional trails would be developed for visitors to access key landscape areas that are currently closed to the public, which are essential in understanding events as they transpired on November 29, 1864. Specifically, the expanded trail development from the memorial to the eastern border of the site enables visitors to view the place in the creekbed where the tragedy occurred. The trail provides the chronological sequence of events to be revealed and interpreted, enhancing the visitor's ability to gain an intimate perspective of the events of that day and how victims survived through the use of landscape features. The additional access to trails, and ultimately to the oral histories, would draw more visitors to the site, provide opportunities to stay longer, and pique greater interest in exploring related subjects beyond the Sand Creek Massacre.

At the southwest corner of the site, a mile-long trail along Chivington Canal would provide even more opportunities for independent exploration using literature and/or low-profile exhibits or by ranger-guided tours that further examine the landscape and its role in the history of settlement in the region.

Greater efforts would be made to reach out to schools, research groups, park neighbors, service organizations, and special interest groups to expand awareness of the profound impacts the Sand Creek Massacre had on westward expansion, development of the United States, and American Indian policy promulgating a cyclical historical pattern of conquest and defeat. With that, new opportunities for “lessons learned” and healing is possible for diverse groups, including the descendants of Sand Creek victims and contemporary tribes. This alternative would focus efforts on making the site and event more accessible to tribal youth—an underpinning of their enduring heritage.

Visitors would continue to experience the park unit independently and reflectively, there being the likelihood of not encountering large groups. Thus, visitors are likely to stay at the site longer having more options available for exploration—new trails and interpretive programs/media. Contact with park rangers would increase under this alternative, providing context, facts, and interpretation otherwise unavailable. Alternative B, with the greatest opportunity for interpretation and education at the site, would have minor, beneficial, long-term impacts on the quality of visitor use and experience.

Cumulative Impacts. Archeological surveys continue to reveal additional information and evidence of particular events during and surrounding the Sand Creek Massacre. This new data constantly updates the scientific body of knowledge regarding the event. Under alternative B, this data would be more readily incorporated into interpretive media and ranger-guided tours at the site, especially as newly accessible areas, such as trails along the bluff and Chivington Canal, would be developed.

The greater outreach efforts by park staff to academic, research, and special interest communities as well as communities adjacent to the site would greatly increase awareness of the site and ultimately, attract more visitors to Sand Creek Massacre National Historic Site. Under alternative B, there would be more interpretive services, accessible terrain, and opportunities to explore the significance and values of the site. Once new user groups arrive, they could maximize their potential to experience a deeper understanding and appreciation of the cultural and natural resource values of the site, not just the massacre, but the broader context of events taking place across the United States and their impacts upon native peoples and settlers nationwide. The events

of the Sand Creek Massacre may be broadened to include other cultural groups experiencing similar events in a global context. Thus the opportunity for visitors to access and resonate with “universal concepts” and potential for minimizing similar incidents like those that occurred at Sand Creek are greatly enhanced. In combination with the impacts from past, present, and reasonably foreseeable future actions, alternative B would have a negligible, long-term, regional, beneficial, cumulative impact on visitor use and experience.

Conclusion. With the most expansive presentation of interpretive services, educational opportunities, and access to the broader landscape, alternative B would best fulfill the legislative intent for the site. Alternative B would have a minor, long-term, beneficial, regional impact on visitor use and experience. The cumulative effect would be negligible and beneficial.

IMPACTS UNDER ALTERNATIVE C

Alternative C offers little more than the no-action alternative (alternative A) as development of additional interpretive media and services would not occur. Access to the site would remain confined to the current developed area, including the contact station and the half-mile trail leading to the monument and bluff overlooking Sand Creek. An additional 0.3-mile trail would be developed near the overlook. Benches and shade shelters would be built, providing visitors more comfort as they reflect upon the site’s history.

Duration of stay would remain less than an hour without additional visitor opportunities and services. Encounters with other visitors and with rangers would remain low, which is advantageous if visitors want solely a reflective, contemplative experience.

Alternative C, remaining focused on “remembrance and reflection,” would offer a few additional opportunities to visitors and thus have a negligible, long-term beneficial impact on visitor use and experience.

Cumulative Impacts. As local, tribal, regional, national, and international interest in Sand Creek Massacre continues to increase, visitors would see an undeveloped site with minimal opportunities to gain a greater understanding of the massacre, the events leading up to it, and how the tragedy spurred national controversy and contributed to American Indian policy, the consequences of which were borne by American Indians and settlers nationwide. With the long approach to Sand Creek on a long and isolated dirt county road, visitors may experience disappointment at the lack of interpretive media and programs on-site. Those who wish for a solitary, contemplative experience and minimum contact with others, however, might be satisfied with the “independent” and contemplative experience. Alternative C serves one type of visitor experience and only partially fulfills legislative intent; a new research and learning center off-site in the town of Eads has yet to be developed. In combination with past, present, and reasonably foreseeable future actions, alternative C would have a negligible, adverse, cumulative impact on visitor use and experience.

Conclusion. Alternative C would offer few additional opportunities to visitors, but would provide the greatest opportunities for reflection and commemoration, at the expense of interpretive media, visitor services, and programs that would enhance visitor experience and understanding of the site. Alternative C would have a regional, long-term, negligible, beneficial impact on visitor experience. There would be a negligible, adverse, cumulative effect.

IMPACTS UNDER ALTERNATIVE D

Alternative D provides equal opportunities for visitor use and experience via additional interpretive services and media and places for commemoration. New opportunities for visitors to access the historic site at the western border via an additional 3 miles of trails would provide access to places where critical events occurred on November 29, 1864. Visitors can connect the two trail branches into a loop, including the dirt road on the western border of the national historic site. Not only does this increase interpretive opportunities, but the contemplative experience as well. All development would no longer be confined to the current 0.5-mile trail and the monument overlook. Positive results under alternative D would include a greater distribution of visitors over a wider area, affording more independence in exploring the site with more walking opportunities, and greater access to the site overall, providing an increased and in-depth understanding of the history of the Sand Creek Massacre.

Interpretive media would be provided in a moderate, low-profile fashion for visitors to take advantage of if they desire. Additional interpretation and access to the site would naturally provide more opportunities to reflect on the events of the day and the broader context in which the events occurred.

The development of facilities to support this alternative, such as shade shelters, benches, comfort stations, and parking areas, would enhance both comprehensive understanding and contemplative aspects of the site, and would provide a long-term, regional, minor, beneficial impact on the quality of visitor use and experience.

Cumulative Impacts. With the pending development of a research and learning center in Eads, Colorado, 25 miles from the site, there continues to be no single place to gain a comprehensive understanding and broader context of the site. Alternative D moderately meets and provides the visitor with more opportunities to understand, reflect upon, and gain access to, the site. This alternative provides a moderate range of opportunity that would balance visitors' varied desires for interpretation and reflection. The combination of offerings, although in moderate degree, would satisfy, at least minimally, visitor expectations upon arrival after the long drive to the site. Duration of visitor stay, especially after the commitment to reach the site, would likely increase. Encounters with other visitors and rangers would be flexible—from minimal to moderate contact—based on the desired experiences and independent explorations of the visitor.

With consideration to the range of visitors' desires to have access to additional interpretive and contemplative opportunities on-site, visitor expectations and satisfaction would likely increase from the currently available opportunities. In combination with past, present, and reasonably foreseeable future actions, alternative D would have a long-term, minor, beneficial, cumulative impact on the quality of visitor use and experience.

Conclusions. With a balance in providing opportunities for greater comprehension of the Sand Creek Massacre on-site and increased reflective opportunities, alternative D would have a long-term, minor, beneficial impact on visitor use and experience. The cumulative effect would be minor and beneficial.

IMPACTS UNDER ALTERNATIVE E (NPS PREFERRED ALTERNATIVE)

This alternative recognizes the importance of, and places greatest emphasis on preserving sensitive resources on-site. The additional sensitive resource zone honors and affords descendants, other

tribal members, and all individuals affected by the massacre, the respect of protecting resources and landscape areas that contributed to the massacre. Located in the Sand Creek bottom, where the sequence of tragic events occurred, this space would be closed to general public access to protect the highly sensitive cultural and natural resources. Although access to the creek would be restricted, there would be a new opportunity to travel from the monument/memorial along the bluff overlooking the monument, offering an additional 1.5-mile trail—enabling visitors to observe from above—the site where the sequence of events unfolded on November 29, 1864. Low-profile interpretive media (self-guided tour with literature or small exhibits) and/or ranger-guided tours would substantially enhance visitor understanding of the event. Natural resource information, the role the landscape played in the event, and the post-massacre evolution of the site would be more accessible and interpreted at the site, allowing visitors to connect to and draw their own conclusions about Sand Creek Massacre National Historic Site.

With the holistic approach of equally recognizing, interpreting, and protecting both natural and cultural resources on-site, visitors would receive a comprehensive and balanced interpretation of Sand Creek Massacre National Historic Site, while sensitive resources that are key to understanding the site receive protection. Alternative E affords the greatest long-term protection of resources that contribute to the understanding of the continuing legacy of the Sand Creek Massacre. Under alternative E, there would be a long-term, minor, beneficial impact on visitor use and experience.

Cumulative Impacts. Archeological surveys are ongoing at Sand Creek Massacre National Historic Site, revealing artifacts and evidence to establish increased knowledge of the sequence of events leading to, during, and following the event. In addition to surveys, contemporary tribal members who have received oral histories about the site have added to the body of knowledge of the Sand Creek Massacre. This dual body of information, which continues to grow, will paint a clearer picture of events for all visitors. Protection of the natural and cultural resources, the historic through present-day landscape, and sensitive cultural features, are essential to gathering and preserving new insight into the events at Sand Creek.

While the site is attracting a greater number of visitors, from local residents to international travelers, this resource preservation alternative would essentially provide all future visitors with a more comprehensive and deeper understanding not just site-specifically, but also for a comprehensive broader context as the national and international backdrop. The additional information provided by archeological surveys would add to the comprehensive interpretation available at the research and learning center that would be developed in the future and open to the public. Although sensitive resources would be restricted from visitor access, their protection toward understanding and preserving the history and continuing story of Sand Creek and would greatly benefit visitors and heritage stewards who would carry the Sand Creek legacy well into the future. In combination with past, present, and reasonably foreseeable future actions, alternative E would have a minor, beneficial, cumulative impact on the quality of visitor use and experience.

Conclusions. With the best opportunity to add to the scientific body of knowledge and oral histories of the survivors of the Sand Creek Massacre, alternative E would have a long-term, minor, beneficial impact on visitor use and experience. The cumulative effect would be minor and beneficial.

SOCIOECONOMIC ENVIRONMENT

METHODOLOGY

The National Park Service applied logic, experience, and professional judgment to analyze impacts on the social and economic circumstances resulting from each alternative. Economic data, historic visitor use data, expected future visitor use, and future developments within the national historic site were all considered in identifying, discussing, and evaluating expected impacts.

Intensity of Impact:

Assessments of potential socioeconomic impacts were based on comparisons between the no-action alternative and each of the action alternatives. Potential impacts from implementing the alternatives are described using the following thresholds of intensity:

Negligible: The effects on socioeconomic conditions would be below or at the level of detection.

Minor: The effects on socioeconomic conditions would be slight but detectable, and only affect a small portion of the surrounding population. The impact would be considered slight and not detectable outside the affected area.

Moderate: The effects on socioeconomic conditions would be readily apparent. Any effects would result in changes to socioeconomic conditions on a local scale in the affected area.

Major: The effects on socioeconomic conditions would be readily apparent. Measurable changes in social or economic conditions at the county level would occur. The impact is severely adverse or exceptionally beneficial in the affected area.

Duration of Impacts:

Short-term: Impacts that are temporary in duration and typically transitional, associated with implementation of an action (e.g., related to construction activities) and last one year or less.

Long-term: Impacts that extend beyond one year (e.g., operational activities) or may have a permanent effect on the socioeconomic environment.

IMPACTS UNDER ALTERNATIVE A (NO ACTION)

Under the no-action alternative, management and operations of Sand Creek Massacre National Historic Site would continue as they are now. Implementing this alternative would continue the current inflow of federal dollars into the region in the form of employee wages and the purchase of supplies. This amount is estimated to be about \$863,000 per year and would be a continuation of long-term, minor, beneficial impacts as government expenditures enter the local economy.

The average length of time of a visit or length of stay in the region is unlikely to change under this alternative. Visitors would continue to visit the national historic site in the same manner and experience the same social conditions.

Cumulative Impacts. The social and economic situation in Kiowa County is based on agricultural production and is subject to the variability of prices and other factors such as weather conditions.

The presence of a national park system unit also influences the socioeconomic environment. The national historic site generates federal spending in the county in the form of employee wages, utility payments, and the purchases of supplies and services. The livelihoods of service-related businesses in the region, such as restaurants and motels, rely to some degree on the inflow of tourist dollars.

The total direct economic value of public recreation areas includes two sets of values: (1) the user benefit that people receive from their visit, and (2) the values capitalized in land near the national historic site. Economic studies have shown that the value of land can increase with the number of available outdoor recreation opportunities and the proximity to outdoor recreation space. Therefore, the continued presence of the national historic site is providing beneficial socioeconomic impacts.

The no-action alternative would have a continuing contribution of minor beneficial impacts to the above beneficial impacts of past, present, and future actions on socioeconomic conditions and, when considered in combination with other actions, would result in a minor, beneficial, cumulative effect.

Conclusion. Implementing the no-action alternative would result in the continuation of long-term, minor, beneficial impacts and a short-term, negligible to minor, beneficial impact as government expenditures flow into the local economy. The cumulative effect would be minor and beneficial.

IMPACTS UNDER ALTERNATIVE B

Alternative B includes new trails that would open new areas of the site to the public and increase available interpretation on-site. These actions would likely result in an increase in the number of visitors, at least for the period shortly after implementation of the alternative's actions. This would provide a short-term, minor, beneficial effect to the local economy as additional tourist dollars are spent in Kiowa County. For example, if visitation were to increase by 10% the first year, it would equate to about \$15,000 worth of additional visitor spending.

To implement this alternative, the national historic site staff would contract out for construction projects such as new trails, connecting roads, and trailside structures. There would be short-term, negligible to minor, beneficial impacts as government expenditures to local contractors and supply firms would enter the economy of Kiowa County.

The length of time of a visit would likely increase under this alternative because there would be more for the visitor to see and do. The average length of stay in the region is unlikely to change under this alternative.

Cumulative Impacts. The social and economic situation in Kiowa County is based on agricultural production (livestock and crops) and so is subject to the variability of prices and other factors such as weather conditions.

The presence of a national park system unit also influences the socioeconomic environment. The national historic site generates federal spending in the county in the form of employee wages and the payment of utility costs, and the purchase of supplies and services. The livelihood of service-related businesses in the region, such as restaurants and motels, rely on the inflow of tourist dollars. Although tourism is not the most important driving factor in the economy of southeast Colorado, a downward trend in national historic site visitation could adversely affect tourism-dependent businesses.

The total direct economic value of public recreation areas includes two sets of values: (1) the user benefit that people receive from their visit, and (2) the values capitalized in land near the national historic site. Economic studies have shown that the value of land can increase with the number of available outdoor recreation opportunities and the proximity to outdoor recreation space. Therefore, the continued presence of the national historic site would provide beneficial socioeconomic effects.

Alternative B would contribute minor beneficial impacts to the above beneficial impacts of past, present, and future actions on socioeconomic conditions and, when considered in combination with other actions, would result in a minor, beneficial, cumulative effect. This alternative would have a modest contribution to the overall cumulative effect.

Conclusion. Alternative B would result in additional short-term, minor to moderate, beneficial impacts from increased visitation and a short-term, minor, beneficial impact as government expenditures enter the local economy. The cumulative effect would be minor to moderate and beneficial.

IMPACTS UNDER ALTERNATIVE C

Under alternative C, management and operations of Sand Creek Massacre National Historic Site would continue essentially the same as they are now. Implementing this alternative would continue the inflow of federal dollars into the region in the form of employee wages and the purchase of supplies and materials. This inflow is estimated to be about \$863,000 per year and would be a continuation of long-term, minor, beneficial impacts as government expenditures enter the local economy.

The average length of time a visit stays in the area is unlikely to change under this alternative. Visitors would continue to visit the national historic site in the same manner and experience the same social conditions.

Cumulative Impacts. The social and economic circumstances in Kiowa County are based in agricultural production and so are subject to the variability of prices and other factors such as weather conditions.

The presence of a national park system unit also influences the socioeconomic environment. The national historic site generates federal spending in Kiowa County in the form of employee wages, utility costs, and purchases of supplies and services. The livelihood of service-related businesses in the region, such as restaurants and motels, rely to some degree on the inflow of tourist dollars. Although tourism is not the most important driving factor in the economy of southeast Colorado, a downward trend in national historic site visitation could adversely affect tourism-dependent businesses.

The total direct economic value of public national historic sites includes two sets of values: (1) the user benefit that people receive from their visit, and (2) the values capitalized in land near the national historic site. Economic studies have shown that the value of land can increase with the number of available outdoor recreation opportunities and the proximity to outdoor recreation space. Therefore, the continued presence of the national historic site is providing beneficial socioeconomic impacts.

Under alternative C, there would continue to be a contribution of minor beneficial impacts to the above beneficial impacts of past, present, and future actions on socioeconomic conditions and, when considered in combination with other actions, would result in a minor, beneficial, cumulative effect.

Conclusion. Implementing alternative C would result in the continuation of long-term, minor, beneficial impacts and a short-term, negligible to minor, beneficial impact as government expenditures enter the local economy. The cumulative effect would be minor and beneficial.

IMPACTS UNDER ALTERNATIVE D

Alternative D includes two new trails that would open new areas of the site to public access and increased interpretation available on-site. These actions would likely result in an increase in the number of visitors, at least for the period shortly after implementation of the alternative's actions. This would have a short-term, minor, beneficial effect on the local economy as additional tourist dollars are spent in the county. For example, if visitation were to increase by 10% the first year, it would equate to about \$15,000 worth of additional visitor spending.

To implement this alternative, the park would contract out for construction projects such as new trails, access roads, and trailside structures, which would provide short-term, negligible to minor, beneficial impacts as government expenditures support local contractors and supply firms.

The length of time of a visit would likely increase somewhat under this alternative because there would be more for the visitor to see and do. The average length of stay in the area is unlikely to change under this alternative. The remote location could increase the possibility of overnight stays.

Cumulative Impacts. The social and economic circumstances in Kiowa County are based on agricultural production (livestock and crops) and so are subject to the variability of prices and other factors such as weather conditions.

The presence of a national park system unit also influences the socioeconomic environment. The national historic site generates federal spending in the county in the form of employee wages, utility costs, and the purchases of supplies and services. The livelihood of service-related businesses in the area, such as restaurants and motels, rely on the inflow of tourist dollars. Although tourism is not the most important driving factor in the economy of southeast Colorado, a downward trend in national historic site visitation could adversely affect tourism-dependent businesses.

The total direct economic value of national historic sites includes two sets of values: (1) the user benefit that people receive from their visit, and (2) the values capitalized in land near the national historic site. Economic studies have shown that the value of land can increase with the number of available outdoor recreation opportunities and the proximity to outdoor recreation space. Therefore, the continued presence of the national historic site would provide beneficial socioeconomic effects.

This alternative would contribute minor beneficial impacts to the above beneficial impacts of past, present, and future actions on socioeconomic conditions and, when considered in combination with other actions, would result in a minor, beneficial, cumulative effect. This alternative would have a modest contribution to the overall cumulative effect.

Conclusion. Alternative D would result in additional short-term, minor, beneficial impacts from increased visitation and a short-term, negligible to minor, beneficial impact as government expenditures enter the local economy. The cumulative effect would be minor and beneficial.

IMPACTS UNDER ALTERNATIVE E (NPS PREFERRED ALTERNATIVE)

Alternative E includes one new trail that would open the western portion of the national historic site to the public and provide more interpretation on-site. These actions would likely result in a slight increase in the number of visitors, at least for the period shortly after the implementation of the alternative's actions. This would have 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.

To implement alternative E, the national historic site staff would contract out for construction projects such as the new trail, access roads, and trailside structures. This would cause 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 would likely increase slightly under this alternative because there would be more for the visitor to see and do. The average length of stay in the region is unlikely to change under this alternative.

Cumulative Impacts. The social and economic circumstances in Kiowa County are based on agricultural production (livestock and crops) and are subject to the variability of prices and other factors such as weather conditions.

The presence of a national park system unit also influences the socioeconomic environment. The national historic site generates federal spending in the county in the form of employee wages, utility costs, and the purchases of supplies and services. The livelihood of service-related businesses in the area, such as restaurants and motels, rely on the inflow of tourist dollars. Although tourism is not the most important driving factor in the economy of southeast Colorado, a downward trend in national historic site visitation could adversely affect tourism-dependent businesses.

The total direct economic value of national historic sites includes two sets of values: (1) the user benefit that people receive from their visit, and (2) the values capitalized in land near the recreation area. Economic studies have shown that the value of land can increase with the number of available outdoor recreation opportunities and the proximity to outdoor recreation space. Therefore, the continued presence of the national historic site is providing beneficial socioeconomic effects.

Alternative E would contribute negligible beneficial impacts to the above beneficial impacts of past, present, and future actions on socioeconomic conditions and, when considered in combination with other actions, would result in a minor, beneficial, cumulative effect. This alternative would have a small contribution to the overall cumulative effect.

Conclusion. Alternative E would result in additional short-term, negligible, beneficial impacts from increased visitation and a short-term, negligible, beneficial impact as government expenditures enter the local economy. The cumulative effect would be minor and beneficial.

NATIONAL PARK SERVICE OPERATIONS

METHODOLOGY

The analysis was conducted in terms of how historic site operations and facilities might vary under the different management alternatives. The analysis is qualitative rather than quantitative because of the conceptual nature of the alternatives. Consequently, professional judgment was used to reach reasonable conclusions as to the intensity, duration, and type of potential impact. The impact analysis evaluated the effects of the alternatives on staffing, infrastructure, visitor facilities, and services.

Intensity of Impact

Negligible: The effect on park operations would be at or below the lower levels of detection, and would not have an appreciable effect.

Minor: The effects would be detectable, but would be of a magnitude that would not have an appreciable effect on park operations.

Moderate: The effects would be readily apparent and would result in a substantial change in park operations in a noticeable manner.

Major: The effects would be readily apparent and would result in a substantial change in park operations in a noticeable manner and be markedly different from existing operations.

Duration of Impacts:

Short-term: Impacts that would be expected to last less than two years since most planning, design, and construction is generally completed within two years.

Long-term: Impacts that are expected to last more than two years.

Type of Impacts:

Beneficial impacts would improve NPS operations and/or facilities. Adverse impacts would negatively affect NPS operations and/or facilities and could hinder the staff's ability to provide adequate services and facilities to visitors and employees. Some impacts could be beneficial for some operations or facilities and adverse or neutral for others.

IMPACTS UNDER ALTERNATIVE A (NO ACTION)

Under the no-action alternative, management and operations of Sand Creek Massacre National Historic Site would continue as they are now. The park would continue to be managed on a day-to-day basis according to the interim management plan, but would be without the guidance of a comprehensive long-range plan. Existing facilities would continue to be operated and maintained as they are now.

At the time of this writing, there are seven permanent FTE funded positions. This would remain the staffing level under alternative A.

Alternative A would create no new impacts, but would result in the continuation of long-term, minor, adverse impacts to park operations at the national historic site.

Cumulative Impacts. In general, NPS staff members are faced with increasing workloads as a result of new governmental initiatives, program mandates, and reporting requirements.

Past and ongoing projects have had impacts on national historic site operations and facilities such as construction and maintenance of trails, fences, roads, and other infrastructure. Facilities (e.g., visitor centers, pavement, etc.) and utilities would continue to be repaired or replaced as needed when funds become available, resulting in minor to moderate adverse impacts over the long term.

The national historic site has been understaffed in the past, which led to constraints on the amount of management activities that could be accomplished. However, anticipated staff increases in 2014 would include maintenance positions to alleviate some of the maintenance difficulties now experienced—a long-term, moderate, beneficial effect.

While this alternative would not contribute any new effects to the minor adverse effects of other past, present, or foreseeable future actions, it would allow the continuation of minor, adverse, cumulative impacts. When combined with the adverse effects of other past, present, and foreseeable future actions, the cumulative effects would be minor and adverse.

Conclusion. The no-action alternative, if implemented, would cause no new impacts on national historic site operations and facilities, but would result in the continuation of long-term, minor, adverse impacts. Thus, the overall cumulative effect would be minor and adverse.

IMPACTS UNDER ALTERNATIVE B

Under alternative B, the underlying management and operations of Sand Creek Massacre National Historic Site would continue as they are now. Existing facilities would continue to be operated and maintained.

At the time of this writing, there are seven permanently funded FTE employees. This alternative would require the hiring of additional maintenance personnel, interpreters, and road and trail personnel.

Alternative B would require more interpretive staff, which would allow more of the history of the massacre to be disseminated through varied on-site and off-site educational and interpretive programs, media, and services. This alternative would create new impacts from the construction and continued maintenance needs all the existing roads and trails. These would represent minor adverse impacts.

Cumulative Impacts. In general, NPS staff members are faced with increasing workloads as a result of new NPS initiatives, program mandates, and reporting requirements.

Past and ongoing projects have had impacts on national historic site operations and facilities such as construction and maintenance of trails, fences, roads, and other infrastructure. Facilities (e.g.,

visitor centers, pavement, etc.) and utilities would continue to be repaired or replaced as needed when funds become available, resulting in minor to moderate adverse impacts over the long term. The historic site has been understaffed in the past, which led to constraints on the amount of management activities that could be accomplished.

While this alternative's minor adverse effects are combined with the minor adverse effects of other past, present, or foreseeable future actions, it would result in minor, adverse, cumulative impacts. When combined with the adverse effects of other past, present, and foreseeable future actions, the cumulative effects would be minor and adverse.

Conclusion. Alternative B, if implemented, would cause minor adverse impacts on historic site operations and facilities. Thus, the overall cumulative effect would be minor and adverse.

IMPACTS UNDER ALTERNATIVE C

Under alternative C, management and operations of Sand Creek Massacre National Historic Site would continue almost as they are now. Existing facilities would continue to be operated and maintained as they are now.

At the time of this writing, there are seven permanent funded FTE employees. A minimum amount of new park staff may be needed to be hired for maintenance and upkeep of the visitor center.

This alternative would create negligible adverse impacts to park operations at the national historic site.

Cumulative Impacts. In general, NPS staff members are faced with increasing workloads as a result of new NPS initiatives, program mandates, and reporting requirements.

Past and ongoing projects have had impacts on national historic site operations and facilities such as construction and maintenance of trails, fences, roads, and other infrastructure. Facilities (e.g., visitor centers, pavement, etc.) and utilities would continue to be repaired or replaced as needed when funds become available, resulting in minor to moderate adverse impacts over the long term.

The historic site has been understaffed in the past, which led to constraints on the amount of management activities that could be accomplished.

This alternative's negligible adverse impacts when combined with the minor adverse impacts of other past, present, or foreseeable future actions would be minor and adverse.

Conclusion. This alternative, if implemented, would cause negligible adverse impacts on national historic site operations and facilities, but would result in continuation of long-term, minor, adverse impacts. Thus, the overall cumulative effect would be minor and adverse.

IMPACTS UNDER ALTERNATIVE D

Under alternative D, management and operations of Sand Creek Massacre National Historic Site would continue almost as they are now. Existing facilities would continue to be operated and maintained as they are now.

At the time of this writing, there are seven permanent funded FTE positions. Additional personnel would need to be hired for maintenance and interpretation in the proposed visitor center. This alternative would create negligible adverse impacts to park operations at the national historic site.

Cumulative Impacts. In general, NPS staff members are faced with increasing workloads as a result of new NPS initiatives, program mandates, and reporting requirements.

Past and ongoing projects have had impacts on national historic site operations and facilities such as construction and maintenance of trails, fences, roads, and other infrastructure. Facilities (e.g., visitor centers, pavement, etc.) and utilities would continue to be repaired or replaced as needed when funds become available, resulting in minor to moderate adverse impacts over the long term.

The historic site has been understaffed in the past, which led to constraints on the amount of management activities that could be accomplished.

While this alternative would not contribute any new effects to the minor adverse effects of other past, present, or foreseeable future actions, it would allow the continuation of minor, adverse, cumulative impacts. When combined with the adverse effects of other past, present, and foreseeable future actions, the cumulative effects would be minor and adverse.

Conclusion. This alternative, if implemented, would cause no new impacts on national historic site operations and facilities, but would result in continuation of long-term, minor, adverse impacts. Thus, the overall cumulative effect would be minor and adverse.

IMPACTS UNDER ALTERNATIVE E (NPS PREFERRED ALTERNATIVE)

Under alternative E, management and operations of Sand Creek Massacre National Historic Site would continue almost as they are now. Existing facilities would continue to be operated and maintained as they are now. New amenities on-site would include a new trail, shade structure, visitor contact station, interpretive signs, and visitor facilities on the monument hill.

At the time of this writing, there are seven permanent funded FTE positions. Additional personnel would need to be hired for maintenance and interpretation in the proposed visitor center and perhaps field interpreters.

This alternative would create negligible-to-minor adverse impacts to park operations at the national historic site.

Cumulative Impacts. In general, NPS staff members are faced with increasing workloads as a result of new NPS initiatives, program mandates, and reporting requirements.

Past and ongoing projects have had impacts on national historic site operations and facilities such as construction and maintenance of trails, fences, roads, and other infrastructure. Facilities (e.g., visitor centers, pavement, etc.) and utilities would continue to be repaired or replaced as needed when funds become available, resulting in minor to moderate adverse impacts over the long term.

The historic site has been understaffed in the past, which led to constraints on the amount of management activities that could be accomplished.

This alternative would contribute negligible to minor adverse effects to the minor adverse effects of other past, present, or foreseeable future actions. The cumulative effects would be minor and adverse.

Conclusion. This alternative, if implemented, would cause negligible-to-minor impacts on national historic site operations and facilities, but would result in continuation of long-term, minor, adverse impacts. Thus, the overall cumulative effect would be minor and adverse.


Table 8 summarizes how NPS management actions would cumulatively affect each impact topic described in detail earlier in this chapter.

TABLE 8. ALTERNATIVES IMPACT SUMMARY

Alternative		A	B	C	D	E (NPS Preferred)
		<i>No Action</i>	<i>Increased education and interpretation</i>	<i>Enhanced opportunity for reflection, reverence, and remembrance</i>	<i>Increased interpretation and memorialization</i>	<i>Maximize resource preservation</i>
Cultural Resources	<i>Archeological</i>	negligible to minor beneficial	negligible adverse	negligible to minor beneficial	negligible to minor beneficial	minor beneficial
	<i>Ethnographic</i>	negligible to minor beneficial	negligible adverse	negligible to minor beneficial	negligible to minor beneficial	minor beneficial
	<i>Museum Collections</i>	negligible beneficial	minor to moderate beneficial	minor to moderate beneficial	minor to moderate beneficial	minor to moderate beneficial
Natural Resources	<i>Hydrology</i>	minor beneficial	minor adverse	minor adverse	minor adverse	minor beneficial
	<i>Soils</i>	no new effect	minor adverse	minor adverse	minor adverse	minor adverse
	<i>Vegetation</i>	no new effect	minor adverse	minor adverse	minor adverse	minor beneficial
	<i>Wildlife</i>	negligible adverse	minor adverse	minor adverse	minor adverse	minor beneficial
	<i>Natural Soundscapes</i>	no new effect	minor adverse	no new effect	minor adverse	minor adverse
Visitor Use and Experience		no new effect	negligible beneficial	negligible adverse	minor beneficial	minor beneficial
Socioeconomic Environment		minor beneficial	minor beneficial	minor beneficial	negligible to minor beneficial	negligible beneficial
NPS Operations		minor adverse	minor adverse	negligible adverse	negligible adverse	negligible to minor adverse

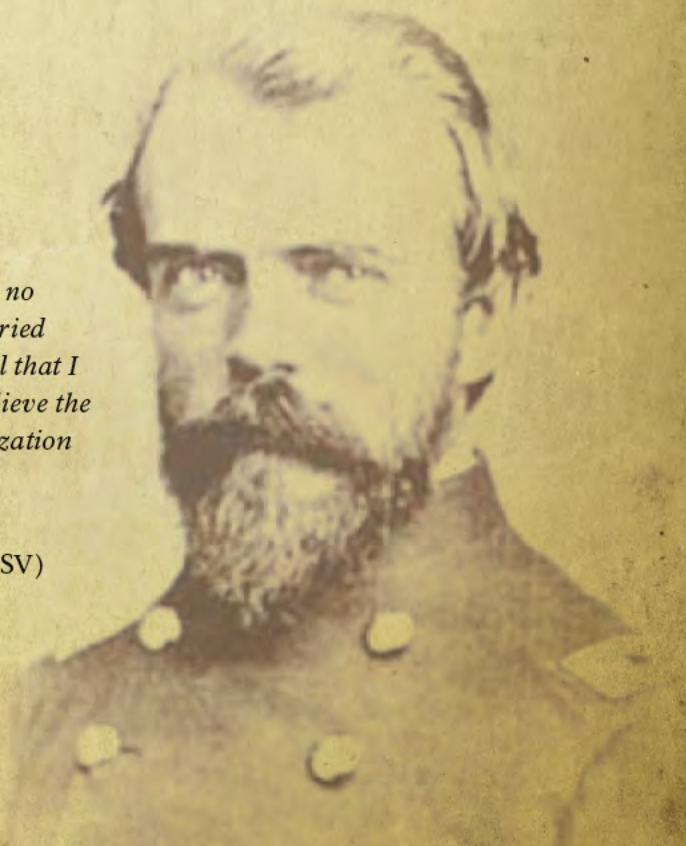
CHAPTER 5

CONSULTATION AND COORDINATION



Governor Evans... stated that... he had not punished the Indians sufficiently... He also said that if peace were made before [the Third Colorado Cavalry] had gone into the field, they would suppose at Washington that he had misrepresented matters, and that there never had been any necessity for the government to go to the expense of raising that regiment; that, therefore, there must be something for the third regiment to do. The Third Regiment was raised to kill Indians, and kill Indians it must.

Major Edward Wynkoop,
1st Colorado Cavalry (USV)



I heard Colonel Chivington give no orders in regard to prisoners. I tried to take none myself, but killed all that I could... I think and earnestly believe the Indian to be an obstacle to civilization and should be exterminated.

Major Jacob Downing,
1st Colorado Cavalry (USV)



He [Chivington] has whipped the peaceable Indians in the country.

Major Scott Anthony,
1st Colorado Cavalry



Although the troops have struck us, we throw it all behind and are glad to meet you in peace and friendship... We are different nations, but it seems as if we were but one people, whites and all...

Black Kettle, Cheyenne Chief, 1865



It will be a very hard thing to leave the country that God gave us. Our friends are buried there, and we hate to leave these grounds... There at Sand Creek—White Antelope, and many other chiefs lie there; our women and children lie there. Our lodges were destroyed there, and our horses were taken from us there, and I do not feel disposed to go right off to a new country and leave them.

Little Raven, Southern Arapaho Chief, 1865

PUBLIC AND AGENCY INVOLVEMENT

This General Management Plan / Environmental Assessment for Sand Creek Massacre National Historic Site represents the thoughts and ideas of the National Park Service, the national historic site staff, the Sand Creek committees and tribal members of the Northern Cheyenne Tribe, the Northern Arapaho Tribe, the Southern Cheyenne / Southern Arapaho Tribes of Oklahoma, official representatives of the State of Colorado and Kiowa County, Colorado, and the public. There were three primary ways the general public participated during the development of the plan: (1) participation in public meetings, (2) responding to newsletters, and (3) providing comments on the NPS Planning, Environment, and Public Comment (PEPC) website.

GENERAL MANAGEMENT PLANNING CONSULTATION PROCESS

Tribal consultation on Sand Creek began with tribal participation in the “Sand Creek Project Site Location Study” and the subsequent “Special History Study / Environmental Assessment” conducted in 2000. Tribal Sand Creek Committee members also consulted with the National Park Service in the development of the Interim Site Management Plan / Environmental Assessment completed in 2006.

Consultation on the general management plan for Sand Creek Massacre National Historic Site began with a meeting with Sand Creek tribal committee members in Eads, Colorado, in September 2007. The GMP team developed and distributed an initial public scoping newsletter in January 2007 and conducted several public meetings in Colorado, Montana, Oklahoma, and Wyoming from February to April 2008.

Additional consultation meetings were held in Lamar following the repatriation and burial of the remains of Sand Creek Massacre victims in June 2008. Follow-up consultations were held later that month with representatives of the Northern Cheyenne in Lame Deer, Montana, in June 2008 and at the Cheyenne tribal powwow in July 2008.

The consultation process continued with the initial management alternatives workshop held in Eads, Colorado, in September 2008. A second management alternatives workshop was held at the Colorado Historical Society in Denver in December 2009. Both workshops involved members of the National Park Service, the State of Colorado represented by members of the Colorado Historical Society, Kiowa County, Colorado; and member of all the Sand Creek tribal committees. This workshop was followed by a consultation meeting and confirmation of the range of management alternatives at the Colorado State Historical Society in January 2010.

The draft management alternatives were reviewed by the NPS staff and tribal committee members in the spring and summer of 2010. A draft management alternatives newsletter was developed and distributed for tribal committee review in the fall of 2010. Public review of the draft management alternatives began in early 2011. Public meetings on the management alternatives were held in February 2011 in Denver, Colorado, and in March 2011 in Concho, Oklahoma; Riverton, Wyoming; Eads, Colorado; and in Lame Deer, Montana. The Northern Arapaho Business Council was briefed on the general management plan in November 2011.

Following public review of the management alternatives and incorporation of public comments, the National Park Service hosted a workshop for the selection of the preferred alternative in Billings, Montana, in December 2011. Representatives of the National Park Service; the State of Colorado; and the Northern Arapaho, Northern Cheyenne, and the Southern Arapaho/Southern Cheyenne tribes participated in the two-day workshop to select the preferred alternative, which was approved by the National Park Service Intermountain Regional Directorate in January 2012.

Subsequent briefings on the general management plan were held with tribal representatives in January 2013. Members of the planning team also consulted with tribal representatives on the development of the historical time line for the events that preceded and followed the Sand Creek Massacre as well as the historical context of the massacre itself. The tribal committee representatives reviewed and approved the historical context and historical time line in a consultation meeting held in Billings, Montana, in December 2013.

Public meetings on the draft general management plan will be held in Boulder, Denver, and Eads, Colorado; Lame Deer, Montana; Wind River, Wyoming; and Concho, Oklahoma.

In addition to the formal meetings and consultations identified above, tribal committee members have provided input to the planning process through an ongoing series of conference calls organized by the superintendent and staff of Sand Creek Massacre National Historic Site.

Tribal collaboration has been an essential element of the planning process. Tribal representatives and members have provided input to the management alternatives and the overall plan. Tribal comments have been submitted through the consultation calls and in face-to-face meetings with NPS park staff and planning team members rather than through formal correspondence.

PUBLIC MEETINGS AND NEWSLETTERS

Public meetings and newsletters kept the public informed and involved in the planning process for Sand Creek Massacre National Historic Site. A mailing list was compiled that consisted of congressional representatives; state, county, and tribal government officials; tribal members; and interested citizens.

A notice of intent to prepare an environmental impact statement for the general management plan was published in the *Federal Register* on August 15, 2007. The initial public scoping newsletter was published and distributed in the fall of 2007. The National Park Service received a total of 32 written comments in response to this initial newsletter.

The National Park Service held a series of public meetings and tribal consultations on the general management planning process in 2008. These meetings were held in the town of Eads, Kiowa County, Colorado, on February 19; in Riverton Wyoming, near the Wind River Reservation on March 5; in Denver, Colorado, on April 2; and in Lame Deer, Montana, on the Northern Cheyenne Reservation in June and July.

Following the initial public involvement and scoping effort, a preliminary alternatives workshop was held in Eads, Colorado, in September 2008. Workshop participants included representatives of the National Park Service, Denver Service Center, Intermountain Region office; Sand Creek Massacre National Historic Site staff; Sand Creek committee members from the Northern Cheyenne Tribe, Northern Arapaho Tribe, and Southern Cheyenne / Southern Arapaho Tribes of

Oklahoma; and representatives of the State of Colorado and Kiowa County, Colorado. The workshop participants successfully developed the initial range of alternatives.

A second alternatives workshop was held at the Colorado Historical Society in Denver, Colorado, on December 14 and 15, 2009. This workshop involved representatives of all the agencies and tribes who had participated in the initial alternatives workshop in 2008. This group refined the initial alternatives and developed the final ranges of alternatives.

The National Park Service refined the range of alternatives developed at this workshop and consulted with the tribes, the State of Colorado, and Kiowa County, Colorado, to confirm consensus on the range of alternatives in the spring and summer of 2010. The National Park Service, in consultation with tribal representatives, the State of Colorado, and Kiowa County, developed an alternatives newsletter for public distribution in the fall of 2010. The newsletter was distributed to the public in January 2011. A series of public meetings on the draft management plan alternatives were held in February and March 2011 in Eads, Colorado; Denver, Colorado; Concho, Oklahoma; Riverton, Wyoming; and Lame Deer, Montana. Public comment was uniformly supportive of the range of alternatives and the proposed management actions.

Following the public review process for the draft management plan alternatives, the National Park Service conducted a Choosing by Advantages workshop in Billings, Montana, for selection of the planning team's preferred alternative on December 14 and 15, 2011. This workshop included representatives of the National Park Service, Denver Service Center, Intermountain Region; Sand Creek Massacre National Historic Site staff; Sand Creek committee members from the Northern Cheyenne Tribe, Northern Arapaho Tribe, and the Southern Cheyenne/Southern Arapaho Tribes of Oklahoma, and representatives of the State of Colorado. The county commissioners of Kiowa County were invited to the workshop, but were unable to attend.

Following the workshop, the planning team presented the recommended preferred alternative to the NPS Intermountain Region regional director on January 18, 2012. The regional director confirmed the selection of the preferred alternative. The National Park Service conducted follow-up briefings with all tribal representatives on the planning process following the selection of the NPS preferred alternative.

Based on the absence of significant impacts following a preliminary impact analysis, the National Park Service recommended a waiver of the environmental impact statement for the general management plan and permission to conclude the project with an environmental assessment. A notice of termination of the environmental impact statement (and preparation of an environmental assessment) was published in the *Federal Register* on October 2, 2014.

SECTION 7 CONSULTATION (ENDANGERED SPECIES ACT)

To comply with section 7 of the Endangered Species Act, the National Park Service coordinated informally with the U.S. Fish and Wildlife Service and the U.S. Department of the Interior. The list of threatened and endangered species (see appendix C) was compiled with the use of lists and information received from the U.S. Fish and Wildlife Service.

In accordance with the Endangered Species Act and relevant regulations in 50 CFR 402, the National Park Service determined that this general management plan was not likely to cause adverse effects on any federally listed threatened or endangered species. The National Park Service

sent a copy of this plan to the U.S. Fish and Wildlife Service with a request for written concurrence with that determination.

In addition, the National Park Service has committed to consult about future actions conducted under the framework described in this plan to ensure that such actions are not likely to adversely affect threatened or endangered species.

NATIVE AMERICAN CONSULTATION

As part of the general management planning process, the National Park Service 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 selection of the preferred alternative. The National Park Service conducted ongoing consultation meetings throughout the planning process.

SECTION 106 CONSULTATION

Agencies that have direct or indirect jurisdiction over historic properties are required by section 106 of the National Historic Preservation Act of 1966, as amended (16 USC 270 et seq.) to take into account the effect of any undertaking on properties eligible for listing in the National Register of Historic Places. To meet the requirements of 36 CFR 800, the National Park Service invited the Colorado Historical Society to participate as an active partner in the general management planning process. Representatives of this office participated in both alternatives development workshops and the Choosing By Advantages workshop. The Colorado Historical Society hosted the initial public involvement meeting in Denver in April 2008 and the second alternatives workshop in December 2009.

CHAPTER 6

APPENDIXES, REFERENCES, AND PREPARERS

Public Law 106-465
106th Congress

An Act

To authorize the Secretary of the Interior to establish the Sand Creek Massacre
National Historic Site in the State of Colorado.

Nov. 7, 2000

[S. 2950]

*Be it enacted by the Senate and House of Representatives of
the United States of America in Congress assembled,*

SECTION 1. SHORT TITLE.

This Act may be cited as the "Sand Creek Massacre National
Historic Site Establishment Act of 2000".

Sand Creek
Massacre
National Historic
Site
Establishment
Act of 2000.
16 USC 461 note.

SEC. 2. FINDINGS AND PURPOSES.

(a) FINDINGS.—Congress finds that—

(1) on November 29, 1864, a peaceful village of Cheyenne
and Arapaho Indians under the leadership of Chief Black
Kettle, along Sand Creek in southeastern Colorado territory
was attacked by approximately 700 volunteer soldiers com-
manded by Colonel John M. Chivington;

(2) more than 150 Cheyenne and Arapaho were killed in
the attack, most of whom were women, children, or elderly;

(3) during the massacre and the following day, the soldiers
committed atrocities on the dead before withdrawing from the
field;

(4) the site of the Sand Creek Massacre is of great signifi-
cance to descendants of the victims of the massacre and their
respective tribes, for the commemoration of ancestors at the
site;

(5) the site is a reminder of the tragic extremes sometimes
reached in the 500 years of conflict between Native Americans
and people of European and other origins concerning the land
that now comprises the United States;

(6) Congress, in enacting the Sand Creek Massacre
National Historic Site Study Act of 1998 (Public Law 105-
243; 112 Stat. 1579), directed the National Park Service to
complete a resources study of the site;

(7) the study completed under that Act—

(A) identified the location and extent of the area in
which the massacre took place; and

(B) confirmed the national significance, suitability, and
feasibility of, and evaluated management options for, that
area, including designation of the site as a unit of the
National Park System; and

(8) the study included an evaluation of environmental
impacts and preliminary cost estimates for facility development,
administration, and necessary land acquisition.

(b) PURPOSES.—The purposes of this Act are—



FORT LEAVENWORTH

Independence

MISSOURI

KANSAS

COLORADO

Council Grove

FORT LARNED

FORT DODGE

Bent's Fort

BRANCH

CUTOFF

MOUNTAIN

Ciudad de Santa Fe
de Montañas

CIMARRON

Solar Pass

FORT UNION

Santa Fe

Cimarron River

Canadian River

Red River

OKLAHOMA

NEW MEXICO

TEXAS

THE SANTA FE TRAIL

Rio Grande

APPENDIX A: ENABLING LEGISLATION

One Hundred Sixth Congress
of the
United States of America
AT THE SECOND SESSION

Begun and held at the City of Washington on Monday,
the twenty-fourth day of January, two thousand
An Act

To authorize the Secretary of the Interior to establish the Sand Creek Massacre National Historic Site in the State of Colorado.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the ‘Sand Creek Massacre National Historic Site Establishment Act of 2000’.

SEC. 2. FINDINGS AND PURPOSES.

(a) FINDINGS- Congress finds that--

- (1) on November 29, 1864, a peaceful village of Cheyenne and Arapaho Indians under the leadership of Chief Black Kettle, along Sand Creek in southeastern Colorado territory was attacked by approximately 700 volunteer soldiers commanded by Colonel John M. Chivington;
- (2) more than 150 Cheyenne and Arapaho were killed in the attack, most of whom were women, children, or elderly;
- (3) during the massacre and the following day, the soldiers committed atrocities on the dead before withdrawing from the field;
- (4) the site of the Sand Creek Massacre is of great significance to descendants of the victims of the massacre and their respective tribes, for the commemoration of ancestors at the site;
- (5) the site is a reminder of the tragic extremes sometimes reached in the 500 years of conflict between Native Americans and people of European and other origins concerning the land that now comprises the United States;
- (6) Congress, in enacting the Sand Creek Massacre National Historic Site Study Act of 1998 (Public Law 105-243; 112 Stat. 1579), directed the National Park Service to complete a resources study of the site;
- (7) the study completed under that Act--
 - (A) identified the location and extent of the area in which the massacre took place; and
 - (B) confirmed the national significance, suitability, and feasibility of, and evaluated management options for, that area, including designation of the site as a unit of the National Park System; and
- (8) the study included an evaluation of environmental impacts and preliminary cost estimates for facility development, administration, and necessary land acquisition.

(b) PURPOSES- The purposes of this Act are--

- (1) to recognize the importance of the Sand Creek Massacre as--
 - (A) a nationally significant element of frontier military and Native American history; and
 - (B) a symbol of the struggles of Native American tribes to maintain their way of life on ancestral land;
- (2) to authorize, on acquisition of sufficient land, the establishment of the site of the Sand Creek Massacre as a national historic site; and
- (3) to provide opportunities for the tribes and the State to be involved in the formulation of general management plans and educational programs for the national historic site.

SEC. 3. DEFINITIONS.

In this Act:

- (1) DESCENDANT- The term 'descendant' means a member of a tribe, an ancestor of whom was injured or killed in, or otherwise affected by, the Sand Creek Massacre.
- (2) MANAGEMENT PLAN- The term 'management plan' means the management plan required to be developed for the site under section 7(a).
- (3) SECRETARY- The term 'Secretary' means the Secretary of the Interior, acting through the Director of the National Park Service.
- (4) SITE- The term 'site' means the Sand Creek Massacre National Historic Site established under section 4(a).
- (5) STATE- The term 'State' means the State of Colorado.
- (6) TRIBE- The term 'tribe' means--
 - (A) the Cheyenne and Arapaho Tribes of Oklahoma;
 - (B) the Northern Cheyenne Tribe; or
 - (C) the Northern Arapaho Tribe.

SEC. 4. ESTABLISHMENT.

(a) IN GENERAL-

- (1) DETERMINATION- On a determination by the Secretary that land described in subsection (b)(1) containing a sufficient quantity of resources to provide for the preservation, memorialization, commemoration, and interpretation of the Sand Creek Massacre has been acquired by the National Park Service, the Secretary shall establish the Sand Creek Massacre National Historic Site, Colorado.
- (2) PUBLICATION- The Secretary shall publish in the Federal Register a notice of the determination of the Secretary under paragraph (1).

(b) BOUNDARY-

- (1) MAP AND ACREAGE- The site shall consist of approximately 12,480 acres in Kiowa County, Colorado, the site of the Sand Creek Massacre, as generally depicted on the map entitled, 'Sand Creek Massacre Historic Site', numbered, SAND 80,013 IR, and dated July 1, 2000.
- (2) LEGAL DESCRIPTION- The Secretary shall prepare a legal description of the land and interests in land described in paragraph (1).
- (3) PUBLIC AVAILABILITY- The map prepared under paragraph (1) and the legal description prepared under paragraph (2) shall be on file and available for public inspection in the appropriate offices of the National Park Service.

(4) BOUNDARY REVISION- The Secretary may, as necessary, make minor revisions to the boundary of the site in accordance with section 7(c) of the Land and Water Conservation Act of 1965 (16 U.S.C. 460l-9(c)).

SEC. 5. ADMINISTRATION.

- (a) IN GENERAL- The Secretary shall manage the site in accordance with--
- (1) this Act;
 - (2) the Act entitled 'An Act to establish a National Park Service, and for other purposes', approved August 25, 1916 (39 Stat. 535; 16 U.S.C. 1 et seq.);
 - (3) the Act of August 21, 1935 (16 U.S.C. 461 et seq.); and
 - (4) other laws generally applicable to management of units of the National Park System.
- (b) MANAGEMENT- The Secretary shall manage the site--
- (1) to protect and preserve the site, including--
 - (A) the topographic features that the Secretary determines are important to the site;
 - (B) artifacts and other physical remains of the Sand Creek Massacre; and
 - (C) the cultural landscape of the site, in a manner that preserves, as closely as practicable, the cultural landscape of the site as it appeared at the time of the Sand Creek Massacre;
 - (2)(A) to interpret the natural and cultural resource values associated with the site; and
 - (B) provide for public understanding and appreciation of, and preserve for future generations, those values; and
 - (3) to memorialize, commemorate, and provide information to visitors to the site to--
 - (A) enhance cultural understanding about the site; and
 - (B) assist in minimizing the chances of similar incidents in the future.
- (c) CONSULTATION AND TRAINING-
- (1) IN GENERAL- In developing the management plan and preparing educational programs for the public about the site, the Secretary shall consult with and solicit advice and recommendations from the tribes and the State.
 - (2) AGREEMENTS- The Secretary may enter into cooperative agreements with the tribes (including boards, committees, enterprises, and traditional leaders of the tribes) and the State to carry out this Act.

SEC. 6. ACQUISITION OF PROPERTY.

- (a) IN GENERAL- The Secretary may acquire land and interests in land within the boundaries of the site--
- (1) through purchase (including purchase with donated or appropriated funds) only from a willing seller; and
 - (2) by donation, exchange, or other means, except that any land or interest in land owned by the State (including a political subdivision of the State) may be acquired only by donation.
- (b) PRIORITY FOR ACQUISITION- The Secretary shall give priority to the acquisition of land containing the marker in existence on the date of enactment of this Act, which states 'Sand Creek Battleground, November 29 and 30, 1864', within the boundary of the site.

(c) COST-EFFECTIVENESS-

(1) IN GENERAL- In acquiring land for the site, the Secretary, to the maximum extent practicable, shall use cost-effective alternatives to Federal fee ownership, including--

(A) the acquisition of conservation easements; and

(B) other means of acquisition that are consistent with local zoning requirements.

(2) SUPPORT FACILITIES- A support facility for the site that is not within the designated boundary of the site may be located in Kiowa County, Colorado, subject to an agreement between the Secretary and the Commissioners of Kiowa County, Colorado.

SEC. 7. MANAGEMENT PLAN.

(a) IN GENERAL- Not later than 5 years after the date on which funds are made available to carry out this Act, the Secretary shall prepare a management plan for the site.

(b) INCLUSIONS- The management plan shall cover, at a minimum--

(1) measures for the preservation of the resources of the site;

(2) requirements for the type and extent of development and use of the site, including, for each development--

(A) the general location;

(B) timing and implementation requirements; and

(C) anticipated costs;

(3) requirements for offsite support facilities in Kiowa County;

(4) identification of, and implementation commitments for, visitor carrying capacities for all areas of the site;

(5) opportunities for involvement by the tribes and the State in the formulation of educational programs for the site; and

(6) opportunities for involvement by the tribes, the State, and other local and national entities in the responsibilities of developing and supporting the site.

SEC. 8. NEEDS OF DESCENDANTS.

(a) IN GENERAL- A descendant shall have reasonable rights of access to, and use of, federally acquired land within the site, in accordance with the terms and conditions of a written agreement between the Secretary and the tribe of which the descendant is a member.

(b) COMMEMORATIVE NEEDS- In addition to the rights described in subsection (a), any reasonable need of a descendant shall be considered in park planning and operations, especially with respect to commemorative activities in designated areas within the site.

SEC. 9. TRIBAL ACCESS FOR TRADITIONAL CULTURAL AND HISTORICAL OBSERVANCE.

(a) ACCESS-

(1) IN GENERAL- The Secretary shall grant to any descendant or other member of a tribe reasonable access to federally acquired land within the site for the purpose of carrying out a traditional, cultural, or historical observance.

(2) NO FEE- The Secretary shall not charge any fee for access granted under paragraph (1).

(b) CONDITIONS OF ACCESS- In granting access under subsection (a), the Secretary shall temporarily close to the general public one or more specific portions of the site in order to protect the privacy of tribal members engaging in a traditional, cultural, or historical

observance in those portions; and any such closure shall be made in a manner that affects the smallest practicable area for the minimum period necessary for the purposes described above.

(c) SAND CREEK REPATRIATION SITE-

(1) IN GENERAL- The Secretary shall dedicate a portion of the federally acquired land within the site to the establishment and operation of a site at which certain items referred to in paragraph (2) that are repatriated under the Native American Graves Protection and Repatriation Act (25 U.S.C. 300 et seq.) or any other provision of law may be interred, reinterred, preserved, or otherwise protected.

(2) ACCEPTABLE ITEMS- The items referred to in paragraph (1) are any items associated with the Sand Creek Massacre, such as--

- (A) Native American human remains;
- (B) associated funerary objects;
- (C) unassociated funerary objects;
- (D) sacred objects; and
- (E) objects of cultural patrimony.

(d) TRIBAL CONSULTATION- In exercising any authority under this section, the Secretary shall consult with, and solicit advice and recommendations from, descendants and the tribes.

SEC. 10. AUTHORIZATION OF APPROPRIATIONS.

There are authorized to be appropriated such sums as are necessary to carry out this Act.
Speaker of the House of Representatives.
Vice President of the United States and
President of the Senate.

APPENDIX B: CONSULTATION LETTERS



United States Department of the Interior



NATIONAL PARK SERVICE
Sand Creek Massacre National Historic Site
P.O. Box 249
Eads, CO 81036
719/438-5916

IN REPLY REFER TO:

September 6, 2007

Mr. Ben Ridgley
Northern Arapaho Representative for Sand Creek
P.O. Box 396
Ft. Washakie, WY 82514

Dear Ben:

The National Park Service invites the honor of your participation and support in initiating general management planning for Sand Creek Massacre National Historic Site. As you know, since prior to the establishment of Sand Creek as a unit of the National Park Service, the relationship between our agency and the Cheyenne and Arapaho Tribes has been a cornerstone of all collaborative planning efforts, intended to provide for the site's continued protection and appreciation.

Toward this end, preparation of a General Management Plan, or GMP - developed in consultation with the Cheyenne and Arapaho Tribes, involved stakeholders and the public - will serve as a blueprint for guiding preservation and development of the National Historic Site for the near future.

A primary purpose of the meeting is to introduce the process leading to the formulation of a GMP and begin to coordinate dates for public meetings. Please come to the meeting with suggestions for dates and locations of public meetings to be held in your communities. These will be published in our next GMP public newsletter.

Other topics of no less importance will include interment of sacred remains, management and stewardship efforts for the year ending, report on visitor statistics since the public opening of the site last June, management actions planned for the coming year, development of a policy about offerings left on the site, potential monuments and memorials at the site.

The meeting will begin at 9:00 a.m. on October 22, 2007, at the National Park Service Intermountain Regional Office, located at 12795 W. Alameda Pkwy, Lakewood, Colorado. A block of rooms has been reserved at the Sheraton Denver West, 360 Union Boulevard, Lakewood, Colorado. Please call the hotel at (303) 987-2000 and reserve your room for the night of October 21st.

Being new to the Sand Creek Massacre NHS, and being humbled to follow in the footsteps that came before, I am looking forward to meeting you and working together in the future. Should any questions arise before then, please feel free to call me at 719-438-5916.

Sincerely,

Alden Miller
Superintendent

cc :



United States Department of the Interior



NATIONAL PARK SERVICE
Sand Creek Massacre National Historic Site
P.O. Box 249
Eads, CO 81036
719/438-5916

IN REPLY REFER TO:

September 6, 2007

Mr. Gail Ridgley
Northern Arapaho Representative for Sand Creek
112 E Adams Ave
Riverton, WY 82501

Dear Gail:

The National Park Service invites the honor of your participation and support in initiating general management planning for Sand Creek Massacre National Historic Site. As you know, since prior to the establishment of Sand Creek as a unit of the National Park Service, the relationship between our agency and the Cheyenne and Arapaho Tribes has been a cornerstone of all collaborative planning efforts, intended to provide for the site's continued protection and appreciation.

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Sincerely,

Alden Miller
Superintendent

cc :



United States Department of the Interior



NATIONAL PARK SERVICE
Sand Creek Massacre National Historic Site
P.O. Box 249
Eads, CO 81036
719/438-5916

IN REPLY REFER TO:

September 6, 2007

Mr. Joe Big Medicine
Southern Cheyenne Sand Creek Representative
620 S. Weigle
Watonga, OK 73772

Dear Joe:

The National Park Service invites the honor of your participation and support in initiating general management planning for Sand Creek Massacre National Historic Site. As you know, since prior to the establishment of Sand Creek as a unit of the National Park Service, the relationship between our agency and the Cheyenne and Arapaho Tribes has been a cornerstone of all collaborative planning efforts, intended to provide for the site's continued protection and appreciation.

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Sincerely,

Alden Miller
Superintendent

cc: Governor Harvey Monetatchi
Gordon Yellowman, Director, Culture and Heritage Program
Kay Mackety, Finance Office



United States Department of the Interior



NATIONAL PARK SERVICE
Sand Creek Massacre National Historic Site
P.O. Box 249
Eads, CO 81036
719/438-5916

IN REPLY REFER TO:

September 6, 2007

Mr. Laird Cometsevah
Southern Cheyenne Sand Creek Representative
312 N. 17th
Clinton, OK 73601

Dear Laird:

The National Park Service invites the honor of your participation and support in initiating general management planning for Sand Creek Massacre National Historic Site. As you know, since prior to the establishment of Sand Creek as a unit of the National Park Service, the relationship between our agency and the Cheyenne and Arapaho Tribes has been a cornerstone of all collaborative planning efforts, intended to provide for the site's continued protection and appreciation.

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Sincerely,

Alden Miller
Superintendent

cc: Gordon Yellowman, Director, Culture and Heritage Program
Kay Mackety, Finance Office



United States Department of the Interior



NATIONAL PARK SERVICE
Sand Creek Massacre National Historic Site
P.O. Box 249
Eads, CO 81036
719/438-5916

IN REPLY REFER TO:

September 6, 2007

Mr. Otto Braided Hair
Director, Northern Cheyenne Sand Creek Office
PO Box 1350 BIA Bldg., Hwy 39
Lame Deer, MT 59043

Dear Otto:

The National Park Service invites the honor of your participation and support in initiating general management planning for Sand Creek Massacre National Historic Site. As you know, since prior to the establishment of Sand Creek as a unit of the National Park Service, the relationship between our agency and the Cheyenne and Arapaho Tribes has been a cornerstone of all collaborative planning efforts, intended to provide for the site's continued protection and appreciation.

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Sincerely,

Alden Miller
Superintendent

cc :



United States Department of the Interior

NATIONAL PARK SERVICE
Sand Creek Massacre National Historic Site
P.O. Box 249
Eads, CO 81036
719/438-5916



IN REPLY REFER TO:

September 6, 2007

Mr. Steve Brady
P.O. Box 542
Lame Deer, MT 59043

Dear Steve:

The National Park Service invites the honor of your participation and support in initiating general management planning for Sand Creek Massacre National Historic Site. As you know, since prior to the establishment of Sand Creek as a unit of the National Park Service, the relationship between our agency and the Cheyenne and Arapaho Tribes has been a cornerstone of all collaborative planning efforts, intended to provide for the site's continued protection and appreciation.

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Sincerely,

Alden Miller
Superintendent

cc :



United States Department of the Interior

NATIONAL PARK SERVICE
Sand Creek Massacre National Historic Site
P.O. Box 249
Eads, CO 81036
719/438-5916



IN REPLY REFER TO:

November 29, 2007

Ms. Georgianna Contiguglia, SHPO
Colorado Historical Society
1300 Broadway
Denver, CO 80203

Re: General Management Plan, Sand Creek National Historic Site

Dear Ms. Contiguglia:

The National Park Service (NPS) has begun the process of preparing a general management plan (GMP) and accompanying environmental impact statement (EIS) for Sand Creek Massacre National Historic Site, Kiowa County, Colorado. The GMP will provide National Park Service managers a comprehensive planning framework for managing the park over the next fifteen to twenty years. Consistent with the national historic site's purpose, significance, and legislative mandates, the plan will identify strategies for reaching desired resource conditions, visitor experiences, and the appropriate types of and locations for potential future development. The combined GMP/EIS will identify management issues and concerns, will present a reasonable range of management alternatives for addressing these issues, and will assess the impacts of each alternative on natural and cultural resources and other impact topics. The National Park Service requests your involvement. We are therefore taking this opportunity to initiate consultation with you in accordance with Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended, and with the National Environmental Policy Act of 1969 (NEPA).

We invite you to meet with us at your convenience and at a time and place of your choosing to discuss these planning issues if you should wish to. If you would like to arrange a meeting, please call me at (719) 438-5916 or write to me at the address above. I welcome your comments.

We will keep you informed of public meetings, to which you are invited, as the schedule is developed over the next several months and of other events and benchmarks as planning progresses over the next few years. At the appropriate time, we shall invite you to review and comment upon the draft plan.

Thank you in advance for your consideration. If you have any questions or require additional information, please contact me as mentioned above.

Sincerely,

Alden Miller
Superintendent
Sand Creek Massacre National Historic Site

Cc: Mr. Don L. Klima, Director, Advisory Council on Historic Preservation



United States Department of the Interior



NATIONAL PARK SERVICE
Sand Creek Massacre National Historic Site
P.O. Box 249
Eads, CO 81036
719/438-5916

IN REPLY REFER TO:

February 22, 2008
Mr. Ben Ridgley
Northern Arapaho Representative for Sand Creek
P.O. Box 396
Ft. Washakie, WY 82514

Dear Ben:

The National Park Service invites the honor of your participation and support in consultation regarding general management and repatriation planning for Sand Creek Massacre National Historic Site.

A primary purpose of the meeting is to consult with you regarding any concerns in preparation for the process leading to the formulation of a GMP ahead of the date for the Riverton public meeting.

Other topics of no less importance will include interment of sacred remains, ongoing management and stewardship efforts for the year ending, report on visitor statistics since the public opening of the site last June as well as upcoming operations, management actions underway for the current year, development of a policy about offerings left on the site, issues regarding potential monuments and memorials at the site.

The meeting will take place on Tuesday and Wednesday, February 26 & 27, 2008, at the National Park Service Intermountain Regional Office, located at 12795 W. Alameda Pkwy, Lakewood, Colorado.

I am looking forward to meeting with you and working together on these projects. Should any questions arise before then, please feel free to call me at 719-438-5916, or on my cell phone at 719-469-9259.

Sincerely,

Alden Miller
Alden Miller
Superintendent



United States Department of the Interior



NATIONAL PARK SERVICE
Sand Creek Massacre National Historic Site
P.O. Box 249
Eads, CO 81036
719/438-5916

IN REPLY REFER TO:

February 22, 2008
Mr. Ben Ridgley
Northern Arapaho Representative for Sand Creek
P.O. Box 396
Ft. Washakie, WY 82514

Dear Ben:

The National Park Service invites the honor of your participation and support in consultation regarding the General Management Plan (or GMP) public meeting for Sand Creek Massacre National Historic Site. As you know, since prior to the establishment of Sand Creek as a unit of the National Park Service, the relationship between our agency and the Cheyenne and Arapaho Tribes has been a cornerstone of all collaborative planning efforts, intended to provide for the site's continued protection and appreciation.

Toward this end, preparation of a General Management Plan - developed in consultation with the Tribes, involved stakeholders and the public - will serve as a blueprint for guiding preservation and development of the National Historic Site for the near future.

As previously discussed, the primary purpose of the meeting is to consult with you and others from the Northern Arapaho Tribe as well as any persons from the general public to hear input leading to the formulation of a GMP.

The meeting will take place March 5, 2008 (Wednesday) - 6:00 - 8:00 p.m. at the: Holiday Inn, 900 E. Sunset Dr., Riverton, Wyoming.

I am looking forward to meeting with you and working together on this project. Should any questions arise before then, please feel free to call me at 719-438-5916, or on my cell phone at 719-469-9259.

Sincerely,

Alden Miller
Alden Miller
Superintendent



United States Department of the Interior



NATIONAL PARK SERVICE
Sand Creek Massacre National Historic Site
P.O. Box 249
Eads, CO 81036
719/438-5916

IN REPLY REFER TO:

February 22, 2008
Mr. Gail Ridgley
Northern Arapaho Representative for Sand Creek
c/o Wind River Tribal College
533 Ethete Road
P.O. Box 8480
Ethete, WY 82520

Dear Gail:

The National Park Service invites the honor of your participation and support in consultation regarding general management and repatriation planning for Sand Creek Massacre National Historic Site.

A primary purpose of the meeting is to consult with you regarding any concerns in preparation for the process leading to the formulation of a GMP ahead of the date for the Riverton public meeting.

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I am looking forward to meeting with you and working together on these projects. Should any questions arise before then, please feel free to call me at 719-438-5916, or on my cell phone at 719-469-9259.

Sincerely,

Alden Miller
Alden Miller
Superintendent

The National Park Service cares for special places saved by the American people so that all may experience our heritage
EXPERIENCE YOUR AMERICA



United States Department of the Interior



NATIONAL PARK SERVICE
Sand Creek Massacre National Historic Site
P.O. Box 249
Eads, CO 81036
719/438-5916

IN REPLY REFER TO:

March 1, 2008
Mr. Gail Ridgley
Northern Arapaho Representative for Sand Creek
c/o Wind River Tribal College
533 Ethete Road
P.O. Box 8480
Ethete, WY 82520

Dear Gail:


The National Park Service invites the honor of your participation and support in consultation regarding the General Management Plan (or GMP) public meeting for Sand Creek Massacre National Historic Site. As you know, since prior to the establishment of Sand Creek as a unit of the National Park Service, the relationship between our agency and the Cheyenne and Arapaho Tribes has been a cornerstone of all collaborative planning efforts, intended to provide for the site's continued protection and appreciation.

Toward this end, preparation of a General Management Plan - developed in consultation with the Tribes, involved stakeholders and the public - will serve as a blueprint for guiding preservation and development of the National Historic Site for the near future.

As previously discussed, the primary purpose of the meeting is to consult with you and others from the Northern Arapaho Tribe as well as any persons from the general public to hear input leading to the formulation of a GMP.

The meeting will take place March 5, 2008 (Wednesday) - 6:00 - 8:00 p.m. at the: Holiday Inn, 900 E. Sunset Dr., Riverton, Wyoming.

I am looking forward to meeting with you and working together on this project. Should any questions arise before then, please feel free to call me at 719-438-5916, or on my cell phone at 719-469-9259.

Sincerely,

Alden Miller
Superintendent

The National Park Service cares for special places saved by the American people so that all may experience our heritage
EXPERIENCE YOUR AMERICA



United States Department of the Interior



NATIONAL PARK SERVICE
Sand Creek Massacre National Historic Site
P.O. Box 249
Eads, CO 81036
719/438-5916

IN REPLY REFER TO:

May 19, 2008

Mr. Ben Ridgley
Northern Arapaho Representative for Sand Creek
P.O. Box 396
Ft. Washakie, WY 82514

Dear Ben

General Management planning sessions with the Sand Creek Massacre NHS representatives are scheduled for May 31st, in Boulder, with Patty Limerick, Faculty Director and Chair of the Board of the Center of the American West at the University of Colorado.

Your attendance and representation is greatly appreciated at each of these events, and I look forward to visiting with you further.

Should any questions arise before then, please feel free to call me at 719-438-5916, or on my cell phone at 719-469-9259.

Sincerely,

Alden Miller
Alden Miller
Superintendent



United States Department of the Interior



NATIONAL PARK SERVICE
Sand Creek Massacre National Historic Site
P.O. Box 249
Eads, CO 81036
719/438-5916

IN REPLY REFER TO:

Aug 18, 2008

Mr. Steve Brady
Northern Cheyenne Sand Creek Representative
P.O. Box 542
Lame Deer, MT 59043

Dear Steve:

Thanks greatly for your continuing efforts in support of the Sand Creek Massacre National Historic Site. Following consultations held regarding the General Management Plan (GMP) process, the management alternatives workshop for the Sand Creek GMP is scheduled for September 23, 24, and 25, in Eads, Colorado.

The workshop will begin after lunch on Tuesday. This will allow Monday and part of Tuesday for travel for those who are traveling a great distance.

We'll prepare background materials for all participants before the workshop.

We'll check on rooms at the EconoLodge in Eads and let you know what is available, should you wish to stay there.

Your attendance and representation is greatly appreciated at this occasion, and I look forward to visiting with you further.

Should any questions arise before then, please feel free to call me at 719-438-5916, or on my cell phone at 719-469-9259.

Sincerely,

Alden Miller
Alden Miller
Superintendent



United States Department of the Interior



NATIONAL PARK SERVICE
Sand Creek Massacre National Historic Site
P.O. Box 249
Eads, CO 81036
719/438-5916

IN REPLY REFER TO:

Aug 18, 2008

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Northern Arapaho Representative for Sand Creek
P.O. Box 396
Ft. Washakie, WY 82514

Dear Ben

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Sincerely,

Alden Miller
Alden Miller
Superintendent



United States Department of the Interior



NATIONAL PARK SERVICE
Sand Creek Massacre National Historic Site
P.O. Box 249
Eads, CO 81036
719/438-5916

IN REPLY REFER TO:

Aug 18, 2008

Chief Gordon Yellowman
NAGPRA Representative
P.O. Box 38
Concho, OK 73022

Dear Chief Yellowman:

Thanks greatly for your continuing efforts in support of the Sand Creek Massacre National Historic Site. Following consultations held regarding the General Management Plan (GMP) process, the management alternatives workshop for the Sand Creek GMP is scheduled for September 23, 24, and 25, in Eads, Colorado.

The workshop will begin after lunch on Tuesday. This will allow Monday and part of Tuesday for travel for those who are traveling a great distance.

We'll prepare background materials for all participants before the workshop.

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Your attendance and representation is greatly appreciated at this occasion, and I look forward to visiting with you further.

Should any questions arise before then, please feel free to call me at 719-438-5916, or on my cell phone at 719-469-9259.

Sincerely,

Alden Miller
Alden Miller
Superintendent



United States Department of the Interior



NATIONAL PARK SERVICE
Sand Creek Massacre National Historic Site
P.O. Box 249
Eads, CO 81036
719/438-5916

IN REPLY REFER TO:

Aug 18, 2008

Mr. Otto Braided Hair
Northern Cheyenne Sand Creek Representative
P.O. Box 1350
Lame Deer, MT 59043

Dear Otto:

Thanks greatly for your continuing efforts in support of the Sand Creek Massacre National Historic Site. Following consultations held regarding the General Management Plan (GMP) process, the management alternatives workshop for the Sand Creek GMP is scheduled for September 23, 24, and 25, in Eads, Colorado.

The workshop will begin after lunch on Tuesday. This will allow Monday and part of Tuesday for travel for those who are traveling a great distance.

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Sincerely,

Alden Miller
Alden Miller
Superintendent



United States Department of the Interior

NATIONAL PARK SERVICE
Sand Creek Massacre National Historic Site
P.O. Box 249
Eads, CO 81036
719/438-5916



IN REPLY REFER TO:

August 21, 2008

Mrs. Frances Bowen
1620 N. Dwight St.
Pampa, TX 79065

Dear Mrs. Bowen,

The National Park Service (NPS) cordially invites you to a meeting on the development of the general management plan for Sand Creek Massacre National Historic Site.

The NPS recognizes that the landowners within the authorized boundary of Sand Creek Massacre NHS have a particular interest in issues at the national historic site that could also affect the conditions of their lands. These include transportation development, archeological resources, control of exotic and invasive plant species, and wildlife management. In light of that, we would like to meet with all landowners within the authorized boundaries to hear opinions and concerns about these issues. Your ideas will be considered as the National Park Service develops alternative strategies for the future management of this very significant site.

This meeting, which will be open to the public, will be held on September 17 at 7:00 p.m. in the Kiowa County Courthouse Meeting Room. We look forward to meeting with you and hearing your ideas and suggestions on these resource management issues. If you have any questions about the details of this meeting, please contact Superintendent Alden Miller at 719-438-5916.

Sincerely,

Alden Miller
Alden Miller
Superintendent



United States Department of the Interior



NATIONAL PARK SERVICE
Sand Creek Massacre National Historic Site
P.O. Box 249
Eads, CO 81036
719/438-5916

IN REPLY REFER TO:

Aug 27, 2008

Mr. Ben Ridgley
Northern Arapaho Representative for Sand Creek
P.O. Box 396
Ft. Washakie, WY 82514

Dear Ben

Thanks greatly for your continuing efforts in representing the Northern Arapaho Tribe's legislated partnership with the National Park Service in the management of the Sand Creek Massacre National Historic Site. We appreciate your work to further the development of interpretive signage along the route of the Sand Creek Massacre Trail in the State of Wyoming.

As we are aware, the Tribe's Cooperative Agreement with Sand Creek Massacre NHS includes funds for the Tribe's use in carrying out its many Sand Creek related responsibilities, including attendance at meetings that further the mutual interests of the Tribe and the NPS. It is certainly within the Tribe's discretion to make those funds available to Sand Creek representatives as deemed necessary and appropriate.

The modification discussed regarding the Cooperative Agreement in the amount of \$16,500 should be forthcoming with in the next few weeks for the fiscal year (FY) 2008; and we look forward to collaborating on sharing the status of funds and disbursements during the FY 2008 period.

As always I can be reached at 719-438-5916 (office), 719-469-9259 (cell phone), or Alden_Miller@NPS.Gov (email).

Please do not hesitate to let me know if you need additional information or if we can be of any further assistance.

Sincerely,

Alden Miller
Alden Miller
Superintendent



United States Department of the Interior



NATIONAL PARK SERVICE
Sand Creek Massacre National Historic Site
P.O. Box 249
Eads, CO 81036
719/438-5916

IN REPLY REFER TO:

September 18, 2008

Arapaho Business Council
PO Box 396
Fort Washakie WY 82514

Dear Chairman Addison and Business Council Membership:

Thanks greatly for your continuing efforts in support of the Sand Creek Massacre National Historic Site. Following consultations held regarding the General Management Plan (GMP) process, the management alternatives workshop for the Sand Creek GMP is scheduled for September 23, 24, and 25, in Eads, Colorado.

We will meet at the office in Eads during the morning on Tuesday to travel to and view the site and the location for the proposed shade shelter. Lunch will be provided at the Kiowa County Courthouse basement meeting room at noon on Tuesday. This will allow Monday for travel for those who are traveling a great distance.

We'll prepare background materials for all participants before the workshop.

Your attendance and representation is greatly appreciated at this occasion, and I look forward to visiting with you further.

Should any questions arise before then, please feel free to call me at 719-438-5916, or on my cell phone at 719-469-9259.

Sincerely,

Alden Miller
Alden Miller
Superintendent



United States Department of the Interior

NATIONAL PARK SERVICE
Sand Creek Massacre National Historic Site
P.O. Box 249
Eads, CO 81036
719/438-5916



IN REPLY REFER TO:

October 11, 2009

Mr. Ron Volk
14430 Avocado Lane
Florissant, MO 63034

Dear Mr. Volk:

This letter is in response to your correspondence regarding the Sand Creek Massacre National Historic Site.

We thank you sincerely for your interest. We deeply regret that you were unable to enter and visit our site on August 27, 2009.

In understanding the mission with which we were entrusted, to both protect this park and provide for its continued appreciation, we appreciate and are concerned by your letter, humbled that you were unable to fully experience this portion of our heritage.

I can assure you I have looked into the matter personally and with grave disquiet. I have interviewed each of the staff on that day, including those who remained after closing to conduct activities pertinent to the establishment of our bookstore, as have two supervisors. We have taken active efforts, in-house, reinforced this on several occasions since, with all employees, to help ensure this concern does not arise again.

Given our staff's record of professionalism, it is utterly leveling, that such an issue has to come our attention. Each reported not exiting the site until well after closing, as is often the case. Although I cannot ascertain how this event might have occurred, we have sent a clear message that such a case is entirely unacceptable, and will through the supervisory process continue to reinforce this by all means at our disposal.

I sincerely invite you to contact me, via my office or cell phone number below, that I may learn more about the details of your experience. I very much do wish you to know that your concern is also mine, thus crucial to me, to my staff, and our profession.

Respectfully,

Alden Miller



United States Department of the Interior



NATIONAL PARK SERVICE
Sand Creek Massacre NHS
PO Box 249: 910 Wansted
Eads, CO 81036
719-438-5916

IN REPLY REFER TO:

November 2, 2009

Mr. Joe Fox, Jr.
Vice President
Northern Cheyenne Nation
Lame Deer, MT.

Dear Mr. Fox:

Thank you for your commitment to participate in the upcoming consultation meeting on the general management plan for Sand Creek Massacre National Historic Site. The meeting will be held on Monday, December 14, 2009 from 8:30 a.m. to 4:00 p.m. at the Colorado Historical Society, located at 1300 Broadway, Denver, Colorado.

The focus of the meeting will be the draft management alternatives for the national historic site. As you recall, the concepts for these management alternatives were developed at the consultation meeting in Eads Colorado, in September, 2008. This meeting included members of the tribal Sand Creek committees, the National Park Service, the State of Colorado, and representatives of Kiowa County. Following that meeting, members of the National Park Service planning team developed the management zones that combine with the alternative concepts to form the management alternatives for the site.

The objective for the upcoming meeting is to confirm that the draft management alternatives accurately reflect the intent and objectives of the alternative concepts developed at the consultation meeting in Eads. The draft management alternatives will then be distributed to the public for review and comment. Following that public process, the National Park Service will complete work on the draft general management plan and environmental impact statement for the national historic site.

We greatly appreciate your participation in this important step in planning for the future of Sand Creek Massacre National Historic Site. If you have any questions, please contact me at 719.438.5916.

Sincerely,

Alden Miller
Superintendent
Sand Creek Massacre National Historic Site



United States Department of the Interior



NATIONAL PARK SERVICE
Sand Creek Massacre National Historic Site
P.O. Box 249
Eads, CO 81036
719/438-5916

IN REPLY REFER TO:

November 2, 2009

Ms. Susan Collins
Colorado State Historical Society
1300 Broadway
Denver, CO 80203

Dear Ms. Collins,

Thank you for your commitment to participate in the upcoming consultation meeting on the general management plan for Sand Creek Massacre National Historic Site. The meeting will be held on Monday, December 14, 2009 from 8:30 a.m. to 4:00 p.m. at the Colorado Historical Society, located at 1300 Broadway, Denver, Colorado.

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We greatly appreciate your participation in this important step in planning for the future of Sand Creek Massacre National Historic Site. If you have any questions, please contact me at 719.438.5916.

Sincerely,

Alden Miller
Superintendent
Sand Creek Massacre National Historic Site



United States Department of the Interior

NATIONAL PARK SERVICE
Sand Creek Massacre National Historic Site
P.O. Box 249
Eads, CO 81036
719/438-5916



IN REPLY REFER TO:

January 27, 2010

Mr. Ben Ridgley
Northern Arapaho Sand Creek Committee
PO Box 396
Ft. Washakie, WY 82514

Dear Mr. Ridgely:

The National Park Service formally invites you to a consultation meeting on the general management plan for Sand Creek Massacre National Historic Site. The meeting will be held in Billings, Montana on Wednesday, February 10, 2010, from 8:30 a.m. to 4:30 p.m. at the office of the Montana/Wyoming Tribal Leaders Council, 222 N. 32th Street, Suite #401

The primary purpose of the meeting will be to brief tribal representatives on the draft management alternatives workshop that was held in Denver, Colorado on December 14, 2009.

The agenda for the upcoming meeting also includes:

1. Update on current management operations at Sand Creek Massacre NHS;
 - a) Resource management
 - b) Educational programs
 - c) Visitation
 - d) Staffing
2. Overview of the planning process to date for Sand Creek Massacre NHS;
 - a) Tribal and governmental consultation, public involvement
 - b) Development of management alternative concepts
 - c) Draft Management Alternatives workshop
3. Conclusions of the December 14 management alternatives meeting in Denver;
 - a) Confirmation of the draft management alternatives
 - b) Development of two new action alternatives
 - c) Development of new management zone
4. Next steps in the planning process

- a) Public review of draft management alternatives
- b) Site mapping workshop
- c) Alternative themes workshop
- d) Draft general management plan/environmental impact statement.

We greatly appreciate your participation in this important step in planning for the future of Sand Creek Massacre National Historic Site. If you have any questions, please contact me at 719.438.5916 or at Alden_Miller@nps.gov.

Sincerely,

Alden Miller
Alden Miller
Superintendent



United States Department of the Interior

NATIONAL PARK SERVICE
Sand Creek Massacre National Historic Site
P.O. Box 249
Eads, CO 81036
719/438-5916



IN REPLY REFER TO:

January 27, 2010

Mr. Gail Ridgely
Northern Arapaho Sand Creek Committee
112 E Adams Ave
Riverton, WY 82501

Dear Mr. Ridgely:

The National Park Service formally invites you to a consultation meeting on the general management plan for Sand Creek Massacre National Historic Site. The meeting will be held in Billings, Montana on Wednesday, February 10, 2010, from 8:30 a.m. to 4:30 p.m. at the office of the Montana/Wyoming Tribal Leaders Council, 222 N. 32th Street, Suite #401

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We greatly appreciate your participation in this important step in planning for the future of Sand Creek Massacre National Historic Site. If you have any questions, please contact me at 719.438.5916 or at Alden_Miller@nps.gov.

Sincerely,

Alden Miller
Alden Miller
Superintendent



United States Department of the Interior

NATIONAL PARK SERVICE
Sand Creek Massacre National Historic Site
P.O. Box 249
Eads, CO 81036
719/438-5916



IN REPLY REFER TO:

January 27, 2010

Mr. Harvey Spoonhunter
Chairman, Northern Arapaho Tribal Council

Dear Mr. Spoonhunter:

The National Park Service formally invites you to a consultation meeting on the general management plan for Sand Creek Massacre National Historic Site. The meeting will be held in Billings, Montana on Wednesday, February 10, 2010, from 8:30 a.m. to 4:30 p.m. at the office of the Montana/Wyoming Tribal Leaders Council, 222 N. 32th Street, Suite #401

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We greatly appreciate your participation in this important step in planning for the future of Sand Creek Massacre National Historic Site. If you have any questions, please contact me at 719.438.5916 or at Alden_Miller@nps.gov.

Sincerely,


Alden Miller
Superintendent



United States Department of the Interior

NATIONAL PARK SERVICE
Sand Creek Massacre National Historic Site
P.O. Box 249
Eads, CO 81036
719/438-5916



IN REPLY REFER TO:

January 27, 2010

Governor Janice Boswell
Cheyenne and Arapaho Tribes
Concho, OK 73022

Dear Governor Boswell:

The National Park Service formally invites you to a consultation meeting on the general management plan for Sand Creek Massacre National Historic Site. The meeting will be held in Billings, Montana on Wednesday, February 10, 2010, from 8:30 a.m. to 4:30 p.m. at the office of the Montana/Wyoming Tribal Leaders Council, 222 N. 32th Street, Suite #401

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Sincerely,

Alden Miller
Alden Miller
Superintendent



United States Department of the Interior

NATIONAL PARK SERVICE
Sand Creek Massacre National Historic Site
P.O. Box 249
Eads, CO 81036
719/438-5916



IN REPLY REFER TO:

January 27, 2010

Mr. Joe Fox, Jr.
Vice President, NCT
PO Box 128
Lame Deer, MT 59043

Dear Mr. Fox:

The National Park Service formally invites you to a consultation meeting on the general management plan for Sand Creek Massacre National Historic Site. The meeting will be held in Billings, Montana on Wednesday, February 10, 2010, from 8:30 a.m. to 4:30 p.m. at the office of the Montana/Wyoming Tribal Leaders Council, 222 N. 32th Street, Suite #401

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Sincerely,

Alden Miller
Alden Miller
Superintendent



United States Department of the Interior

NATIONAL PARK SERVICE
Sand Creek Massacre National Historic Site
P.O. Box 249
Eads, CO 81036
719/438-5916



IN REPLY REFER TO:

January 27, 2010

Mr. LaForce Lone Bear
Northern Cheyenne Sand Creek Committee
PO Box 1
Lame Deer, MT 59043

Dear Mr. Lone Bear:

The National Park Service formally invites you to a consultation meeting on the general management plan for Sand Creek Massacre National Historic Site. The meeting will be held in Billings, Montana on Wednesday, February 10, 2010, from 8:30 a.m. to 4:30 p.m. at the office of the Montana/Wyoming Tribal Leaders Council, 222 N. 32th Street, Suite #401

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We greatly appreciate your participation in this important step in planning for the future of Sand Creek Massacre National Historic Site. If you have any questions, please contact me at 719.438.5916 or at Alden_Miller@nps.gov.

Sincerely,

Alden Miller
Alden Miller
Superintendent



United States Department of the Interior

NATIONAL PARK SERVICE
Sand Creek Massacre National Historic Site
P.O. Box 249
Eads, CO 81036
719/438-5916



IN REPLY REFER TO:

January 27, 2010

Mr. Otto Braided Hair
Coordinator, NCT
PO Box 1350
Lame Deer, MT 59043

Dear Mr. Braided Hair:

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Sincerely,

Alden Miller
Alden Miller
Superintendent



United States Department of the Interior

NATIONAL PARK SERVICE
Sand Creek Massacre National Historic Site
P.O. Box 249
Eads, CO 81036
719/438-5916



IN REPLY REFER TO:

January 27, 2010

Mr. Steve Brady
Co-Chairman , Northern Cheyenne Sand Creek Massacre Site Committee
PO Box 542
Lame Deer, MT 59043

Dear Mr. Brady:

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- a) Public review of draft management alternatives
- b) Site mapping workshop
- c) Alternative themes workshop
- d) Draft general management plan/environmental impact statement.

We greatly appreciate your participation in this important step in planning for the future of Sand Creek Massacre National Historic Site. If you have any questions, please contact me at 719.438.5916 or at Alden_Miller@nps.gov.

Sincerely,

Alden Miller
Alden Miller
Superintendent



United States Department of the Interior



NATIONAL PARK SERVICE
Sand Creek Massacre National Historic Site
P.O. Box 249
Eads, CO 81036
719/438-5916

IN REPLY REFER TO:

January 29, 2010

Mr. Ben Ridgley
Northern Arapaho Sand Creek Committee
PO Box 396
Ft. Washakie, WY 82514

Dear Ben:

I am pleased to confirm our meeting regarding the General Management Plan for Sand Creek Massacre National Historic Site on Tuesday, February 2, 2010. I will meet with you and Tom Thomas at the National Park Service office in Lakewood at 1:30 pm.

I look forward to discussing the plan, general consultation issues and other items of interest on Tuesday.

Sincerely,

Alden Miller
Alden Miller
Superintendent



United States Department of the Interior

NATIONAL PARK SERVICE
Sand Creek Massacre NHS
PO Box 249: 910 Wansted
Eads, CO 81036
719-438-5916



IN REPLY REFER TO:

May 21, 2010

Leroy Spang, President, Northern Cheyenne Tribe
Members of the Northern Cheyenne Tribal Council

Dear President Spang and member of the tribal council,

The National Park Service formally requests a consultation meeting with the Northern Cheyenne tribal council on the general management plan for Sand Creek Massacre National Historic Site.

The purpose of the meeting will be to brief tribal council members on the draft management alternatives for Sand Creek Massacre NHS. The meeting will also give the National Park Service an opportunity to update the council on current management operations at Sand Creek Massacre NHS. As well, we will inform you about the next steps in the planning process.

We greatly appreciate your participation in this important step in planning for the future of Sand Creek Massacre National Historic Site. If you have any questions, please contact me at 719.438.5916 or at Alden_Miller@nps.gov.

Sincerely,

Alden Miller
Superintendent



United States Department of the Interior



NATIONAL PARK SERVICE
Sand Creek Massacre National Historic Site
P.O. Box 249
Eads, CO 81036
719/438-5916

IN REPLY REFER TO:

May 27, 2010

Leroy Spang, President, Northern Cheyenne Tribe

Dear President Spang,

As you know, the National Park Service is in the process of developing the general management plan for Sand Creek Massacre National Historic Site. Your participation is very important to the success of this planning effort. Please find enclosed a power point presentation of the draft management alternatives for the general management plan. Per the direction of Steve Brady and Otto Braided Hair from the Sand Creek Committee and Dan Carlson of the tribal council, we are providing this document to you for review and comment.

The power point slides provide an overview of the legislation that established Sand Creek Massacre NHS, the steps in the planning process for Sand Creek, the management zones, and the draft alternatives for management of the site. Five management zones have been developed for Sand Creek. These management zones are the building blocks for the draft management alternatives that are described in more detail in the power point presentation. These management alternatives were developed in partnership with members of the Sand Creek committees of the Northern Cheyenne, Northern Arapaho, and Southern Cheyenne/Southern Arapaho tribes, and representatives of the State of Colorado and Kiowa County, Colorado. Both the management zones and the draft management alternatives are based directly on the guidance that Congress provided in the legislation. The alternatives describe different ways to focus on the legislative mandates to: 1) memorialize and commemorate the events of the Sand Creek Massacre; 2) preserve and protect the site and its resources; 3) provide educational and interpretive opportunities for visitors; and 4) allow for traditional cultural observances. All of these mandates are represented to some degree in the draft alternatives.

Alternative A, is the "no-action alternative," also known as the continuation of existing conditions. Under this alternative, management of Sand Creek will continue under the interim management plan developed in 2007. This "no-action" alternative provides the baseline for analysis of the four action alternatives.

Alternative B would emphasize broad interpretation of the history and consequences of the Sand Creek Massacre and allow greater visitor access to the site with the development of additional trails. Alternative C would focus on commemoration and memorialization of the Sand Creek Massacre. Visitor access would be limited, with minimal trails and less interpretive material on the site.

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Alternative D would balance memorialization with visitor access. Trail development would be greater than in Alternative C, but less than in Alternative B.

Alternative E would place the greatest emphasis on resource preservation. The sensitive streambed of Sand Creek would be closed to all visitors.

Under all of the alternatives, development on the site would be minimal. The main visitor center for orientation and education would be located in Eads, Colorado. All of the action alternatives would make preservation of the site a top priority. In all of the action alternatives, at least 90% of the site would be included in the resource preservation zones.

Please submit your comments on the draft management alternatives by June 15 to Tom Thomas, project manager for the general management plan at:

Tom Thomas
National Park Service
Denver Service
12795 West Alameda Parkway
Lakewood, Colorado 80228
You may also email comments at:
Tom_Thomas@nps.gov

Following this review of the management alternatives, the National Park Service will distribute the draft management zones and management alternatives for public review and comment.

We greatly appreciate your participation in this important step in planning for the future of Sand Creek Massacre National Historic Site. If you have any questions, please contact me at 719.438.5916 or at Alden_Miller@nps.gov.

Sincerely,



Alden Miller
Superintendent
Sand Creek Massacre National Historic Site

APPENDIX C: SPECIES LISTS

BIRD SPECIES DETECTED ON SAND CREEK MASSACRE NATIONAL HISTORIC SITE

Below is a comprehensive list of bird species detected during inventories conducted, April 21, May 13, and June 27, 2005.

TABLE C-1. BIRD SPECIES OF SAND CREEK MASSACRE NATIONAL HISTORIC SITE

Common Name	Range Status	Breeding Habitat Class
Barn owl	Breeding and Wintering	Possibly Exists
Blue-winged teal	Breeding	Limited to None
Brewer's blackbird	Outside Normal Breeding Range ¹	Limited to None
Chestnut-sided warbler ^M	Outside Normal Breeding Range	—
Clay-colored sparrow ^M	Outside Normal Breeding Range	—
Cliff swallow	Breeding	Limited to None
Hermit thrush ^M	Outside Normal Breeding Range ¹	Limited to None (None)
Indigo bunting ^M	Outside Normal Breeding Range ¹	Limited to None
Lincoln's sparrow ^M	Outside Normal Breeding Range	—
Loggerhead shrike	Breeding	Possibly Exists
Northern harrier	Year-round	Possibly Exists
Rock pigeon ²	Year-round	Limited to None
Rock wren	Breeding	Limited to None
Scaled quail	Outside Normal Breeding Range ¹	Possibly Exists
Short-eared owl	Outside Normal Breeding Range ³	Limited to None
Spotted towhee	Outside Normal Breeding Range ¹	Limited to None
Swainson's thrush	Outside Normal Breeding Range	—
Vesper sparrow	Outside Normal Breeding Range ¹	Possibly Exists
White-crowned sparrow	Outside Normal Breeding Range	—
White-faced ibis ²	Outside Normal Breeding Range ¹	Limited to None
Yellow-headed blackbird ²	Breeding	Limited to None
Yellow-rumped warbler ²	Outside Normal Breeding Range	—

Source: Natural Resource Report NPS/SOPN/NRR-2013/Sand Creek

^M = Migrant (according to Hanni 2005)

¹Within 100 miles of breeding range edge

²Additional species detected during 2006 CNHP inventory

³Species is >100 miles from its breeding range edge based on BNA, but recent evidence suggests it is <100 miles from its breeding range edge (R. Lock, RMBO, pers. comm.)

TABLE C-2. AQUATIC INSECTS COLLECTED AT SAND CREEK MASSACRE NATIONAL HISTORIC SITE, COLORADO 2009

Ephemeroptera	Baetidae	<i>Callibaetis fluctuans</i>
	Caenidae	<i>Caenis amica</i>
Odonata	Aeshnidae	<i>Anax junius</i>
		<i>Rhionaeschna multicolor</i>
	Coenagrionidae	<i>Amphiagrion abbreviatum</i>
		<i>Argia alberta</i>
		<i>Enallagma civile</i>
		<i>Ischnura damula</i>
		<i>Ischnura denticollis</i>
		<i>Ischnura verticalis</i>
	Gomphidae	<i>Gomphus militaris</i>
	Lestidae	<i>Lestes unguiculatus</i>
	Libellulidae	<i>Celithemis eponina</i>
		<i>Erythemis simplicicollis</i>
		<i>Libellula composita</i>
		<i>Libellula luctuosa</i>
		<i>Libellula pulchella</i>
		<i>Pachydiplax longipennis</i>
		<i>Pantala flavescens</i>
		<i>Plathemis lydia</i>
		<i>Plathemis subornata</i>
		<i>Sympetrum corruptum</i>
		<i>Sympetrum obtrusum</i>
		<i>Sympetrum semicinctum</i>
		<i>Tamea lacerata</i>
Hemiptera	Belostomatidae	<i>Belostoma flumineum</i>
	Corixidae	<i>Corisella inscripta</i>
		<i>Corisella tarsalis</i>
		<i>Hesperocorixa laevigata</i>
		<i>Sigara alternata</i>
		<i>Trichocorixa verticalis interiores</i>
	Gerridae	<i>Gerris comatus</i>
		<i>Gerris marginatus</i>
	Hebridae	<i>Merragata hebroides</i>
	Mesoveliidae	<i>Mesovelia mulsanti</i>
	Notonectidae	<i>Buenoa margaritacea</i>
		<i>Notonecta undulata</i>
Coleoptera	Dytiscidae	<i>Agabus disintegratus</i>
		<i>Colymbetes sculptilis</i>
		<i>Copelatus chevrolati renovates</i>
		<i>Coptotomus longulus longulus</i>
		<i>Eretes explicitus</i>
		<i>Hygrotus impressopunctatus</i>

TABLE C-2. AQUATIC INSECTS COLLECTED AT SAND CREEK MASSACRE NATIONAL HISTORIC SITE, COLORADO 2009

		<i>Hygrotus nubilis</i>
		<i>Ilybius biguttulus</i>
		<i>Laccophilus fasciatus terminalis</i>
		<i>Laccophilus maculosus decipiens</i>
		<i>Laccophilus proximus</i>
		<i>Liodessus abjectus</i>
		<i>Rhantus gutticollis</i>
		<i>Neoporus undulatus</i>
		<i>Thermonectus intermedius</i>
		<i>Thermonectus nigrofasciatus ornatcollis</i>
		<i>Uvarus lacustris</i>
	Gyrinidae	<i>Dineutus assimilis</i>
		<i>Gyrinus parvus</i>
	Haliplidae	<i>Haliplus deceptus</i>
		<i>Haliplus tortilipenis</i>
		<i>Peltodytes edentulus</i>
		Hydrophilidae <i>Berosus fraternus</i>
		<i>Berosus hatchi</i>
		<i>Berosus infuscatus</i>
		<i>Berosus miles</i>
		<i>Berosus peregrinus</i>
		<i>Berosus stylifer</i>
		<i>Cercyon sp.</i>
		<i>Cymbiodyta</i>
		<i>Enochrus fimbriatus</i>
		<i>Enochrus hamiltoni</i>
		<i>Enochrus ochraceus</i>
		<i>Helophorus leechi</i>
		<i>Helophorus linearis</i>
		<i>Hydrochara leechi</i>
		<i>Hydrophilus triangularis</i>
		<i>Paracymus subcupreus</i>
		<i>Tropisternus columbianus</i>
		<i>Tropisternus lateralis nimbatus</i>
		<i>Tropisternus sublaevis</i>
	Scirtidae	<i>Cyphon</i>
Trichoptera	Hydropsychidae	<i>Cheumatopsyche lasia</i>
	Leptoceridae	<i>Oecetis inconspicua</i>
	Limnephilidae	<i>Limnephilus diversus</i>
Diptera	Chironomidae	<i>Chironomus</i>
		<i>Cladopelma</i>
		<i>Cricotopus</i>
		<i>Dicrotendipes</i>
		<i>Psectrocladius</i>

TABLE C-2. AQUATIC INSECTS COLLECTED AT SAND CREEK MASSACRE NATIONAL HISTORIC SITE, COLORADO 2009

		<i>Tanypus</i>
		Tanytarsus
	Culicidae	Ochlerotatus dorsalis
		Culex tarsalis
		Culiseta inornata
	Ephydriidae	Ephydra packardi
		Ochthera anatolikos
		Paralimna punctipennis
	Sciomyzidae	Dictya texensis
		Sepedon fuscipennis nobilis
		Tetanocera
	Stratiomyidae	Hedriodiscus binotatus
		Nemotelus communis
		Nemotelus
		Odontomyia inaequalis
	Tabanidae	Silvinus pollinosus
		Tabanus atratus Fabricius
		Tabanus quinquevittatus
		Tabanus similis
		Chrysops aestuans

TABLE C-3. COMPLETE LIST OF SPECIES PRESENT AT SITE

Common Names	Occurrence	Federal T&E Listed Status	State Listed Status
Mammals			
mule deer	Present		
white-tailed deer	Present		
coyote	Present	Species of Concern	
striped skunk	Present		
American badger	Present	Species of Concern	
raccoon	Present		
black-tailed jackrabbit	Present		
desert cottontail	Present		
North American porcupine	Present		
Ord's kangaroo rat	Present		
black-tailed prairie dog	Present	Resolved Taxon	
Birds			
red-tailed hawk	Present		
Swainson's hawk	Present	Resolved Taxon	

TABLE C-3. COMPLETE LIST OF SPECIES PRESENT AT SITE

Common Names	Occurrence	Federal T&E Listed Status	State Listed Status
northern harrier	Present	Species of Concern	
turkey vulture	Present	Species of Concern	
blue-winged teal	Present		
mallard	Present		
common nighthawk	Present		
mountain plover	Present	Resolved Taxon	State Species of Special Concern
killdeer	Present		
Eurasian collared-dove	Present		
mourning dove	Present		
yellow-billed cuckoo	Present		State Species of Special Concern
American kestrel	Present		
scaled quail	Present		
ring-necked pheasant	Present		
horned lark	Present		
blue grosbeak	Present		
indigo bunting	Present		
dickcissel	Present		
blue Jay	Present		
Cassin's sparrow	Present	Species of Concern	
grasshopper sparrow	Present	Species of Concern	
lark bunting	Present		
lark sparrow	Present		
Lincoln's sparrow	Present	Species of Concern	
spotted towhee	Present		
vesper sparrow	Present		
clay-colored sparrow	Present		
chipping sparrow	Present		
white-crowned sparrow	Present		
American goldfinch	Present		
house finch	Present		
barn swallow	Present		
cliff swallow	Present		
red-winged blackbird	Present		
Brewer's blackbird	Present		
Bullock's oriole	Present		
Baltimore oriole	Present		

TABLE C-3. COMPLETE LIST OF SPECIES PRESENT AT SITE

Common Names	Occurrence	Federal T&E Listed Status	State Listed Status
orchard oriole	Present		
brown-headed cowbird	Present		
common grackle	Present		
western meadowlark	Present		
loggerhead shrike	Present	Species of Concern	
northern mockingbird	Present		
brown thrasher	Present		
chestnut-sided warbler	Present		
yellow warbler	Present		
common yellowthroat	Present		
European starling	Present		
rock wren	Present		
house wren	Present		
hermit thrush	Present		
Swainson's thrush	Present		
eastern bluebird	Present		
American robin	Present		
western wood-pewee	Present		
Say's Phoebe	Present		
eastern kingbird	Present		
western kingbird	Present		
warbling vireo	Present		
great blue heron	Present	Species of Concern	
northern flicker	Present		
red-headed woodpecker	Present		
downy woodpecker	Present	Species of Concern	
short-eared owl	Present	Species of Concern	
burrowing owl	Present		State Threatened
great horned owl	Present		
barn owl	Present		
Reptiles			
bullsnake/gopher snake	Present		
lesser earless lizard	Present		
six-lined racerunner	Present		
plains rattlesnake	Present		
ornate box turtle	Present		

TABLE C-3. COMPLETE LIST OF SPECIES PRESENT AT SITE

Common Names	Occurrence	Federal T&E Listed Status	State Listed Status
Amphibians			
Woodhouse's toad	Present		
northern leopard frog	Present	Error in entry; not a legitimate taxon	State Species of Special Concern
tiger salamander	Present		
Fish			
plains killifish	Present		
Vascular Plants			
soft soapweed yucca	Present		
western ragweed	Present		
false tarragon	Present		
sand sagebrush	Present		
fringed sagebrush	Present		
Louisiana sagewort	Present		
wavyleaf thistle	Present		
bull thistle	Present		
Canada horsetail	Present		
fetid dogweed	Present		
Engelmann's daisy	Present		
rubber rabbitbrush	Present		
rubber rabbitbrush	Present		
western fleabane	Present		
streamside fleabane	Present		
firewheel	Present		
wax gumweed	Present		
curlycup gumweed	Present		
broom snakeweed	Present	Resolved Taxon	
cutleaf ironplant, ironplant, lacy tansyaster	Present		
common sunflower	Present		
prairie sunflower	Present		
hairy false goldenaster	Present		
Chalk Hill hymenopappus, chalkhill woollywhite, Chalkhill woollywhite	Present		
poverty sumpweed	Present		
prickly lettuce	Present		
dotted blazing star, dotted gayfeather	Present		
rush skeletonplant	Present		
lacy tansyaster	Present		

TABLE C-3. COMPLETE LIST OF SPECIES PRESENT AT SITE

Common Names	Occurrence	Federal T&E Listed Status	State Listed Status
tanseyleaf tansyaster	Present		
Engelmann's false goldenweed	Present	Species of Concern	
New Mexico groundsel	Present		
threetooth ragwort	Present		
othake, rayed palafoxia	Present		
redspike Mexican hat	Present		
green Mexican hat	Present		
lambstongue groundsel, lambstongue ragwort, lamb-tongue ragwort	Present		
giant goldenrod	Present		
white heath aster	Present		
Hopi tea greenthread	Present		
western salsify	Present		
corn gromwell	Present		
flatspine sticktight	Present		
flatspine stickseed	Present		
flatspine stickseed	Present		
fringed puccoon	Present		
western tansymustard	Present		
western wallflower	Present		
western wallflower	Present		
common pepperweed	Present		
smallflower groundcherry	Present		
sandyseed clammyweed	Present		
prostrate pigweed	Present		
redroot amaranth	Present		
common lambsquarters	Present		
mapleleaf goosefoot	Present		
Watson's goosefoot	Present		
kochia	Present		
prickly Russian thistle	Present		
spiny star	Present		
spiny star	Present		
brittle cactus	Present		
plains pricklypear cactus	Present		
heart's-delight, prairie snowball, snowball sand verbena, sweet sand verbena	Present		

TABLE C-3. COMPLETE LIST OF SPECIES PRESENT AT SITE

Common Names	Occurrence	Federal T&E Listed Status	State Listed Status
narrowleaf four o'clock	Present		
sandpuffs, smallflower sand verbena, small-flower sandpuffs	Present		
annual buckwheat	Present		
pale dock, smooth dock	Present		
curly dock	Present		
little hogweed	Present		
prairie spiderwort	Present		
evening starflower, gumbo-lily, tenpetal blazingstar, tenpetal mentzelia, tenpetal stickleaf	Present		
bractless blazingstar	Present		
Missouri gourd	Present		
scouringrush horsetail	Present		
iron ipomopsis, iron skyrocket	Present		
flaxflowered ipomopsis	Present		
Bodin's milkvetch	Present		
Canada milkvetch	Present		
ground plum milkvetch	Present		
great rushy milkvetch	Present		
Missouri milkvetch, Missouri milkvetch	Present		
purple locoweed, woolly loco, woolly locoweed, woolly milkvetch	Present		
narrowleaf milkvetch	Present		
James' holdback, James' rushpea	Present		
golden prairie clover	Present		
slender white prairie clover	Present		
Andean prairie clover, Andean prairieclover, largespike prairieclover	Present		
bigtop dalea, nine-anther dalea, nineanther prairie clover, nineanther prairieclover, nine-anther prairie-clover	Present		
dwarf prairie clover	Present		
purple prairie clover, purple prairieclover, violet dalea, violet prairie clover, violet prairie-clover	Present		
hairy prairieclover, silky prairie clover, silky prairieclover, silky prairie-clover	Present		

TABLE C-3. COMPLETE LIST OF SPECIES PRESENT AT SITE

Common Names	Occurrence	Federal T&E Listed Status	State Listed Status
wild licorice	Present		
low lupine, rusty lupine, small lupine	Present		
white sweetclover	Present		
yellow sweetclover	Present		
locoweed, silky crazyweed, silvery oxytrope, white crazyweed, white locoweed, white pointloco	Present		
palmleaf Indian breadroot	Present		
lemon scurfpea	Present		
slimflower scurfpea	Present		
silky sophora	Present		
Indianhemp	Present		
antelope horns milkweed	Present		
Engelmann's milkweed	Present		
broadleaf milkweed	Present		
showy milkweed	Present		
horsetail milkweed	Present		
green comet milkweed	Present		
Dalmatian toadflax	Present		
white penstemon	Present		
woolly plantain	Present		
fogfruit, wedgeleaf, wedgeleaf fogfruit	Present		
lanceleaf frogfruit	Present		
bracted vervain	Present		
prairie sandmat	Present		
thymeleaf sandmat	Present		
thymeleaf sandmat	Present		
matted sandmat	Present		
Texas croton	Present		
snow-on-the-mountain	Present		
orange flax, stiff flax, stiffstem flax	Present		
plains cottonwood	Present		
bush poppymallow	Present	Resolved Taxon	
winecup	Present		
scarlet globemallow	Present		

TABLE C-3. COMPLETE LIST OF SPECIES PRESENT AT SITE

Common Names	Occurrence	Federal T&E Listed Status	State Listed Status
halfshrub calylophus, halfshrub sundrop, serrateleaf eveningprimrose, yellow sundrops	Present		
scarlet gaura	Present		
velvetweed	Present		
whitest evening-primrose	Present		
crownleaf evening primrose, crownleaf eveningprimrose, crownleaf evening-primrose	Present		
threadleaf sedge	Present		
sun sedge	Present		
Nebraska sedge	Present		
clustered field sedge	Present		
sand flat sedge, schweinitz flatsedge, Schweinitz's flatsedge	Present		
American bulrush	Present		
cosmopolitan bulrush	Present		
softstem bulrush	Present		
mountain rush	Present		
Indian ricegrass	Present		
sand bluestem	Present		
prairie threeawn	Present		
purple threeawn	Present		
Fendler threeawn	Present		
sideoats grama	Present		
blue grama	Present		
hairy grama	Present		
field brome	Present		
cheatgrass	Present		
buffalograss	Present		
prairie sandreed	Present		
tumble windmill grass, Tumble Windmillgrass, windmillgrass	Present		
inland saltgrass	Present		
Canada wildrye	Present		
bottlebrush squirreltail	Present		
squirreltail	Present		
Virginia wildrye	Present		

TABLE C-3. COMPLETE LIST OF SPECIES PRESENT AT SITE

Common Names	Occurrence	Federal T&E Listed Status	State Listed Status
stinkgrass	Present		
sand lovegrass	Present		
needle and thread	Present		
foxtail barley	Present		
little barley	Present		
scratchgrass	Present		
ring muhly	Present		
annual witchgrass	Present		
vine mesquite	Present		
switchgrass	Present		
western wheatgrass	Present		
fringeleaf paspalum	Present		
galleta, James' galleta	Present		
plains bluegrass	Present		
Kentucky bluegrass	Present		
annual rabbitsfoot grass	Present		
blowout grass	Present		
tumblegrass	Present		
little bluestem	Present		
green bristlegrass	Present		
Indiangrass	Present		
prairie cordgrass	Present		
alkali sacaton	Present		
composite dropseed, dropseed	Present		
sand dropseed	Present		
sixweeks fescue	Present		
narrowleaf cattail, narrow-leaf cat-tail	Present		
broadleaf cattail	Present		
crested pricklypoppy	Present		
Carolina larkspur, plains larkspur, prairie larkspur	Present		
field bindweed	Present		
shaggy dwarf morning glory	Present		
bush morningglory, bush morning-glory	Present		
groundcherry, prairie groundcherry, prairie ground-cherry	Present		

TABLE C-3. COMPLETE LIST OF SPECIES PRESENT AT SITE

Common Names	Occurrence	Federal T&E Listed Status	State Listed Status
longleaf groundcherry	Present		
purple groundcherry	Present		
buffalobur nightshade	Present		
Insects			
summer azure	Present		
monarch	Present		
mourning cloak	Present		
familiar bluet	Present		
eastern pondhawk	Present		
bleached skimmer	Present		
widow skimmer	Present		
common whitetail	Present		
twelve-spotted skimmer	Present		
blue dasher	Present		

APPENDIX D: COST ESTIMATES FOR THE ACTION ALTERNATIVES

COST ESTIMATES FOR THE ACTION ALTERNATIVES

SAND CREEK COST ESTIMATES: ALTERNATIVE B	
PHASE 1	
MONUMENT AREA	Cost
Shade structure	\$78,000
Rock panels	\$21,300
Trail	\$13,600
Burial area rock panels	\$5,700
Rock wall bench	\$33,400
Parking area	\$46,600
Orientation panels	\$7,300
Overall revegetation	\$17,100
Road to monument	\$205,300
Remove section of existing road	\$25,300
TOTAL MONUMENT AREA	\$453,600
PHASE 2	
INTERPRETIVE TRAIL	Cost
Trail construction	\$382,000
Stop 2 (bench, interpretive panels w/stone base, hardened area)	\$8,200
Stop 3	\$8,200
Stop 4	\$8,200
TOTAL INTERPRETIVE TRAIL	\$406,600
PHASE 3	
VISITOR USE / OPERATIONS AREA	Cost
Parking lot	\$46,600
Road	\$30,000
Contact station / comfort station	\$160,500 + 100 sf = \$206,500
Gate	\$5,000
Accessible picnic area	\$5,300
Administrative parking area	\$12,700
Fuel tanks	\$20,100
Interpretive panels	\$7,700
TOTAL VISITOR USE / OPERATIONS AREA	\$333,900
PHASE 4	
WESTERN BOUNDARY ROAD	Cost
Road	\$597,200
Parking lot	\$46,600
New vault toilet	\$31,000
Orientation panels and stone veneer bases	\$23,700
TOTAL WESTERN BOUNDARY ROAD	\$698,500
PHASE 5	
EASTERN PARKING AREA	Cost
Parking lot	\$46,600
TOTAL EASTERN PARKING AREA	\$46,600

SAND CREEK COST ESTIMATES: ALTERNATIVE B	
PHASE 6	
CHIVINGTON TRAIL	COST
Trail	\$150,000
Footbridge	\$15,000
TOTAL CHIVINGTON TRAIL	\$165,000
ALTERNATIVE B TOTAL COSTS	\$2,104,200

SAND CREEK COST ESTIMATES: ALTERNATIVE C	
PHASE 1	
MONUMENT AREA	COST
Shade structure	\$78,000
Rock panels	\$21,300
Trail	\$13,600
Burial area rock panels	\$5,700
Rock wall bench	\$33,400
Parking area	\$46,600
Orientation panels	\$7,300
Overall revegetation	\$17,100
Road to monument	\$205,300
Remove section of existing road	\$25,300
TOTAL MONUMENT AREA	\$453,600
PHASE 2	
INTERPRETIVE TRAIL	COST
Trail	\$60,000
TOTAL INTERPRETIVE TRAIL	\$60,000
PHASE 3	
VISITOR USE / OPERATIONS AREA	COST
Parking lot	\$46,600
Road	\$17,000
Contact station / comfort station	\$160,500 + 100 sf = \$206,500
Gate	\$5,000
Road to monument	\$205,300
Remove section of existing road	\$25,300
Accessible picnic area	\$5,300
Administrative parking area	\$12,700
Fuel tanks	\$20,100
Interpretive panels	\$7,700
TOTAL VISITOR USE / OPERATIONS AREA	\$551,500
ALTERNATIVE C TOTAL COSTS	\$1,065,100

SAND CREEK COST ESTIMATES: ALTERNATIVE D	
PHASE 1	
MONUMENT AREA	COST
Shade structure	\$78,000
Rock panels	\$21,300
Trail	\$13,600
Burial area rock panels	\$5,700
Rock wall bench	\$33,400
Parking area	\$46,600
Orientation panels	\$7,300
Overall revegetation	\$17,100
Road to monument	\$205,300
Remove section of existing road	\$25,300
TOTAL MONUMENT AREA	\$453,600
PHASE 2	
INTERPRETIVE TRAIL	COST
Trail construction	\$232,000
Stop 2 (bench, interpretive panels w/stone base, hardened area)	\$8,200
Stop 3	\$8,200
Stop 4	\$8,200
TOTAL INTERPRETIVE TRAIL	\$256,600
PHASE 3	
VISITOR USE / OPERATIONS AREA	COST
Parking lot	\$46,600
Road	\$30,000
Contact station / comfort station	\$160,500 + 100 sf = \$206,500
Gate	\$5,000
Accessible picnic area	\$5,300
Administrative parking area	\$12,700
Fuel tanks	\$20,100
Interpretive panels	\$7,700
TOTAL VISITOR USE / OPERATIONS AREA	\$333,900
PHASE 4	
WESTERN BOUNDARY ROAD	COST
Road	\$597,200
Parking lot	\$46,600
New vault toilet	\$31,000
Orientation panels and stone veneer bases	\$23,700
TOTAL WESTERN BOUNDARY ROAD	\$698,500
PHASE 5	
EASTERN PARKING AREA	COST
Parking lot	\$46,600
TOTAL EASTERN PARKING AREA	\$46,600

PHASE 6	
CHIVINGTON TRAIL	COST
Trail	\$150,000
TOTAL CHIVINGTON TRAIL	\$150,000
ALTERNATIVE D TOTAL COSTS	\$1,939,200

SAND CREEK COST ESTIMATES: ALTERNATIVE E	
PHASE 1	
MONUMENT AREA	COST
Shade structure	\$78,000
Rock panels	\$21,300
Trail	\$13,600
Burial area rock panels	\$5,700
Rock wall bench	\$33,400
Parking area	\$46,600
Orientation panels	\$7,300
Overall revegetation	\$17,100
Road to monument	\$205,300
Remove section of existing road	\$25,300
TOTAL MONUMENT AREA	\$453,600
PHASE 2	
INTERPRETIVE TRAIL	COST
Trail construction	\$232,000
Stop 2 (bench, interpretive panels w/stone base, hardened area)	\$8,200
Stop 3	\$8,200
Stop 4	\$8,200
TOTAL INTERPRETIVE TRAIL	\$256,600
PHASE 3	
VISITOR USE / OPERATIONS AREA	COST
Parking lot	\$46,600
Road	\$17,000
Contact station / comfort station	\$160,500 + 100 sf = \$206,500
Gate	\$5,000
Accessible picnic area	\$5,300
Administrative parking area	\$12,700
Fuel tanks	\$20,100
Interpretive panels	\$7,700
TOTAL VISITOR USE / OPERATIONS AREA	\$320,900
PHASE 4	
WESTERN BOUNDARY ROAD	COST
Road	\$597,200
Parking lot	\$46,600
New vault toilet	\$31,000

SAND CREEK COST ESTIMATES: ALTERNATIVE E	
Orientation panels and stone veneer bases	\$23,700
TOTAL WESTERN BOUNDARY ROAD	\$698,500
ALTERNATIVE E TOTAL COSTS	\$1,729,600

APPENDIX E: LIST OF COMPLETED STUDIES TO DATE

Cultural Resource Management

- Site Location Study (2000)
- Special Resource Study
- Historical Research Interim Report 1 (1998)
- Historical Research Interim Report 2
- Historical Research Interim Report 3
- Special Study – Aerial Photography (1999)
- Archeological Reconnaissance (1998)
- Artifact Categories
- Geophysical Investigation (1999)
- Environmental History Report (2007)

Resource Management and Lands

Civil War Battlefields

- Civil War Battlefields Status and Boundary (2010)

Fire Planning

- Fire Management Plan (2012)
- Fire Management Plan April (2014)

General Management

- Alternatives Transportation Plan for the General Management Plan (2011)
- Plan for Repatriation Site Management at Sand Creek Massacre NHS (2014)
- Sand Legislative Establishment Records (2001-2007)
- NPS High Plains Group Law Enforcement Policy Audit (2013)
- Physical Security Assessment. NPS Sand Creek Massacre NHS (2013)

Site Planning

- Site Location Study (2000)

Interpretive and Education

- Interpretive Media Assessment
- Cheyenne Indian Massacre-Public File Only
- 51st Congress 2nd Session 1890-Public File Only
- Civil War-Craig Moore-Central File Only
- Civil War-Jeff Campbell-Central File Only
- Chief Laird Cometsevah (1931-2008) Research Collection Finding Aid
- Report of the John Evans Study Committee Northwestern University (2014)

Natural Resources

Aerial Photography

Analysis of Aerial Photography from 1936–37, 1954 and 1975

Acoustics

Final Acoustical Monitoring Report (2011)

Assessment Modification of the Cheyenne Low and High Military Operation Areas (2013)

Air Quality

Air Quality and Air Quality Related Values Monitoring Considerations for the Southern Plains Network (2005)

Southern Plains Network Vital Signs Monitoring Plan: Phase I Appendices (2005)

Dendrochronology

Riparian Forest Age Structure and Past Hydroclimactic Variability (2006)

Riparian Condition Assessment for Big Sandy Creek (2014)

Fauna

The Insects of the Sand Creek Massacre National Historic Site (2007)

Trip Report for Evaluation of Fish Species at SAND NHS (2006)

Birds of Sand Creek Massacre National Historic Site Inventory and Monitoring Final Report (2005)

Patterns and Processes of Dispersal of Black-Tailed Prairie Dogs in a Heavily Managed Landscape of the Great Plains (2012)

Status and History of Prairie Dogs in Colorado and at Sand Creek Massacre NHS (2009)

Prairie Dog Management Plan and Environmental Assessment (2008)

General

Science Status Report (2008)

Resource Scoping Meeting (2003)

Resource Stewardship Strategy

Prairie and Wetlands Focus Area Strategic Plan (2005)

Natural Resource Condition Assessment (2013)

Environmental History of Sand Creek Massacre National Historic Site (2009)

Geophysical and Hydrology

Potential Groundwater Sources for a Potable Water Supply at Sand Creek Massacre Site (2006)

Preliminary Assessment of Wetland, Riparian, Geomorphology and Flood Plain Conditions at SAND NHS (2005)

Geomorphic Assessment of Big Sandy Creek (2011)

Geomorphic and Hydrologic Assessment of the Historic Channel Position of Big Sandy Creek through SAND NHS (2012)

Pollen Analysis of Sediment Cores Recovered from SAND NHS (2007)

Geo-archaeological Assessment of the Sand Creek Massacre Site, Kiowa County, CO
(1999)
Geophysical Investigations at the Sand Creek Massacre Site, Colorado (1999)

Grazing

Disc from meeting
Livestock Grazing in National Parks-General Grazing-Central File Only

Mapping Project

Pre-Mapping Conference (2010)

Oil and Gas

Oil and Gas Development Potential Near and Within Sand Creek Massacre National
Historic Site

Paleontological Resources

Paleontological Resource Inventory and Monitoring Southern Plains Network (2003)

Vegetation and Communities

Riparian Assessment of Big Sandy Creek (2014)
Vegetation Inventory (2008)
Vegetation Monitoring Data Summary (2013)
Vegetation Classification and Mapping (2007)
Ecological Site Description (2004)
Exotic Plant Monitoring in the Southern Plains Network (2009)
Sand Creek Massacre NHS Plant List
Sand Creek Massacre NHS Restoration Plan (2010)
Sand Creek Massacre NHS Restoration Plan (2011)
Site Inventory Range of Natural Variability
Special Soil Survey Report (2006)
Unexpected Patterns of Sensitivity to Drought in Three Semi-Arid Grasslands - Oecologia -
by Karie Cherwin & Alan Knapp – (2011)
Site Inventory Range of Natural Variability
Vegetation Classification and Mapping, A Report for the Southern Plains Network (2007)
Special Soil Survey Report (2006)
Restoration Plan Lady Bird Johnson Wildflower Center (2011)
Unexpected Patterns of Sensitivity to Drought in Three Semi-Arid Grasslands Oecologia
(2011)

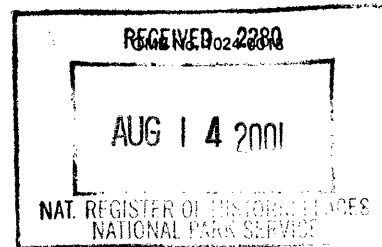
Threatened and Endangered Species

Vertebrate Species Inventory
Rare Species Inventory (2008)

**APPENDIX F: NATIONAL REGISTER OF HISTORIC PLACES
NOMINATION FORM**

United States Department of the Interior
National Park Service

1055



NATIONAL REGISTER OF HISTORIC PLACES REGISTRATION FORM

1. Name of Property

historic name: Sand Creek Massacre Site

other name/site number: 5SW28

2. Location

street & number: Near the intersection of County Road 54 and County Road W not for publication: N/A

city/town: Eads

vicinity: X

state: Colorado code: CO county: Kiowa code: 061 zip code: 81036

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1986, as amended, I hereby certify that this X nomination ___ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property X meets ___ does not meet the National Register Criteria. I recommend that this property be considered significant X nationally ___ statewide ___ locally. (See continuation sheet for additional comments.)

Georgina Cortez S.H.P.O. July 20, 2001
Signature of certifying official/Title Date

State Historic Preservation Office, Colorado Historical Society
State or Federal agency or bureau

In my opinion, the property ___ meets ___ does not meet the National Register criteria.

Signature of commenting or other official Date

State or Federal agency and bureau

4. National Park Service Certification

I, hereby certify that this property is:

- entered in the National Register
see continuation sheet
- determined eligible for the National Register
see continuation sheet
- determined not eligible for the National Register
see continuation sheet
- removed from the National Register
see continuation sheet
- other (explain)

Signature of the Keeper

Date of Action

Entered in the
National Register

9.28.01

Sand Creek Massacre Site
Name of Property

Kiowa County, CO
County and State

5. Classification

Ownership of Property: Private and public-local (county)

Category of Property: Site

Number of contributing resources previously listed in the National Register: 0

Name of related multiple property listing: N/A

Number of Resources within Property
Contributing Noncontributing

	6	building(s)
1	2	sites
	13	structures
	1	objects
1	22	Total

6. Function or Use

Historic Functions:

DOMESTIC/Camp
OTHER/Massacre Site
DEFENSE/Battle Site

Current Function:

AGRICULTURE/Agricultural Field
LANDSCAPE/Natural Features
DOMESTIC/Single Dwelling
DOMESTIC/Secondary Structures
AGRICULTURE/Irrigation Facility
CULTURE/Marker
TRANSPORTATION/Road-related

7. Description

Architectural Classification:

N/A

MATERIALS: N/A

Foundation:

Walls:

Roof:

Other:

Narrative Description:

(See continuation sheets)

Sand Creek Massacre Site
Name of Property

Kiowa County, CO
County and State

8. Statement of Significance

Applicable National Register Criteria: A & D
Criteria Considerations (Exceptions): N/A
Significant Person(s): N/A
Cultural Affiliation: Cheyenne and Arapaho Indians

Areas of Significance:
Ethnic Heritage (Native American)
Military
Archaeology (Historic-Aboriginal)
Period(s) of Significance: 1864
Significant Dates: November 29, 1864
Architect/Builder: N/A

Narrative Statement of Significance:

(See continuation sheets)

9. Major Bibliographic References

(See continuation sheets)

Previous documentation on file (NPS):

- preliminary determination of individual listing (36 CFR 67) has been requested.
- previously listed in the National Register
- previously determined eligible by the National Register
- designated a National Historic Landmark
- recorded by Historic American Buildings Survey # _____
- recorded by Historic American Engineering Record # _____

Primary Location of Additional Data:

- State Historic Preservation Office
- Other State agency
- Federal agency - National Park Service
- Local government
- Universities - U. of Colorado at Boulder and U. of Oklahoma
- Other - Denver Public Library

10. Geographical Data

Acreage of Property: 7,680 acres

UTM References:	Zone	Easting	Northing
1	13	712040	4274920
2	13	716860	4275040
3	13	716960	4271820
4	13	720330	4268710

(See continuation sheets)

Sand Creek Massacre Site
Name of Property

Kiowa County, CO
County and State

11. Form Prepared By

name/title: Pamela Holtman, graduate student of history at the University of Colorado at Denver
organization: N/A **date:** March 26, 2001
street & number: 1607 E. Geddes Cir. N. **telephone:** 303-794-1381
city or town: Centennial **state:** CO **zip code:** 80122-1451

Additional Documentation

Maps

(See the continuation sheets)

Photographs

(See the continuation sheets)

Property Owner(s)

(See the continuation sheets)

name/title: .
street & number: **telephone:**
city or town: **state:** **zip code:**

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 7 Page 1

Sand Creek Massacre Site
Kiowa County, Colorado

Narrative Description:

The majority of the following information is drawn verbatim from documentation prepared by the National Park Service – in consultation with the State of Colorado, the Cheyenne and Arapaho Tribes of Oklahoma, the Northern Cheyenne Tribe, and the Northern Arapaho Tribe – for the Sand Creek Massacre Project, which was mandated by Congress in 1998 through Public Law 105-243. The results of that project are published as *Sand Creek Massacre Project, Volume One: Site Location Study* and *Sand Creek Massacre Project, Volume Two: Special Resource Study and Environmental Assessment* (Denver: National Park Service, Intermountain Region, 2000).¹

The boundary of the Sand Creek Massacre site covers approximately 11.5 sections (7,680 acres) of land in Township 17 South, Ranges 45 and 46 West, Kiowa County, Colorado. This includes all or portions of Sections 10, 11, 12, 13, 14, 15, 23, 24, and 25 of Township 17 South, Range 46 West; and Sections 19, 29, 30, 31, and 32 of Township 17 South, Range 45 West. Encircling the site of a running engagement, this boundary extends approximately 5 ½ miles in length and two miles in width, distances that correspond with first-hand descriptions given by participants in the massacre. Sand Creek, officially known as Big Sandy Creek, is an intermittent stream that meanders with several twists and bends through the center of the area from northwest to southeast. The boundary encompasses all of the key elements of the Sand Creek Massacre, including the Cheyenne and Arapaho village site that was attacked, the sandpits area where most of the fighting and killing took place, the area of Indian flight, and the point from which Colonel John Chivington and his troops launched their attack upon the Indian encampment. The Sand Creek Massacre area has changed very little since November 29, 1864, and has a high degree of integrity.

The site lies in eastern Kiowa County within the High Plains section of the Great Plains-Palouse Dry Steppe Province ecoregion. This ecoregion stretches from northeastern Oklahoma north-northwesterly through Montana.² The site has gently rolling topography

¹For more complete information on the historical, archeological, and tribal information that was used to identify the location and extent of the Sand Creek Massacre site, see "Report on the Historical Documentation of the Location and Extent of the Sand Creek Massacre" by Jerome A. Greene, "Identifying the 1864 Sand Creek Massacre Site Through Archeological Reconnaissance" by Douglas D. Scott, and "The Sand Creek Massacre Site Location Study Oral History Project" by Alexa Roberts in *Sand Creek Massacre Project, Volume One: Site Location Study* (Denver: National Park Service, Intermountain Region, 2000).

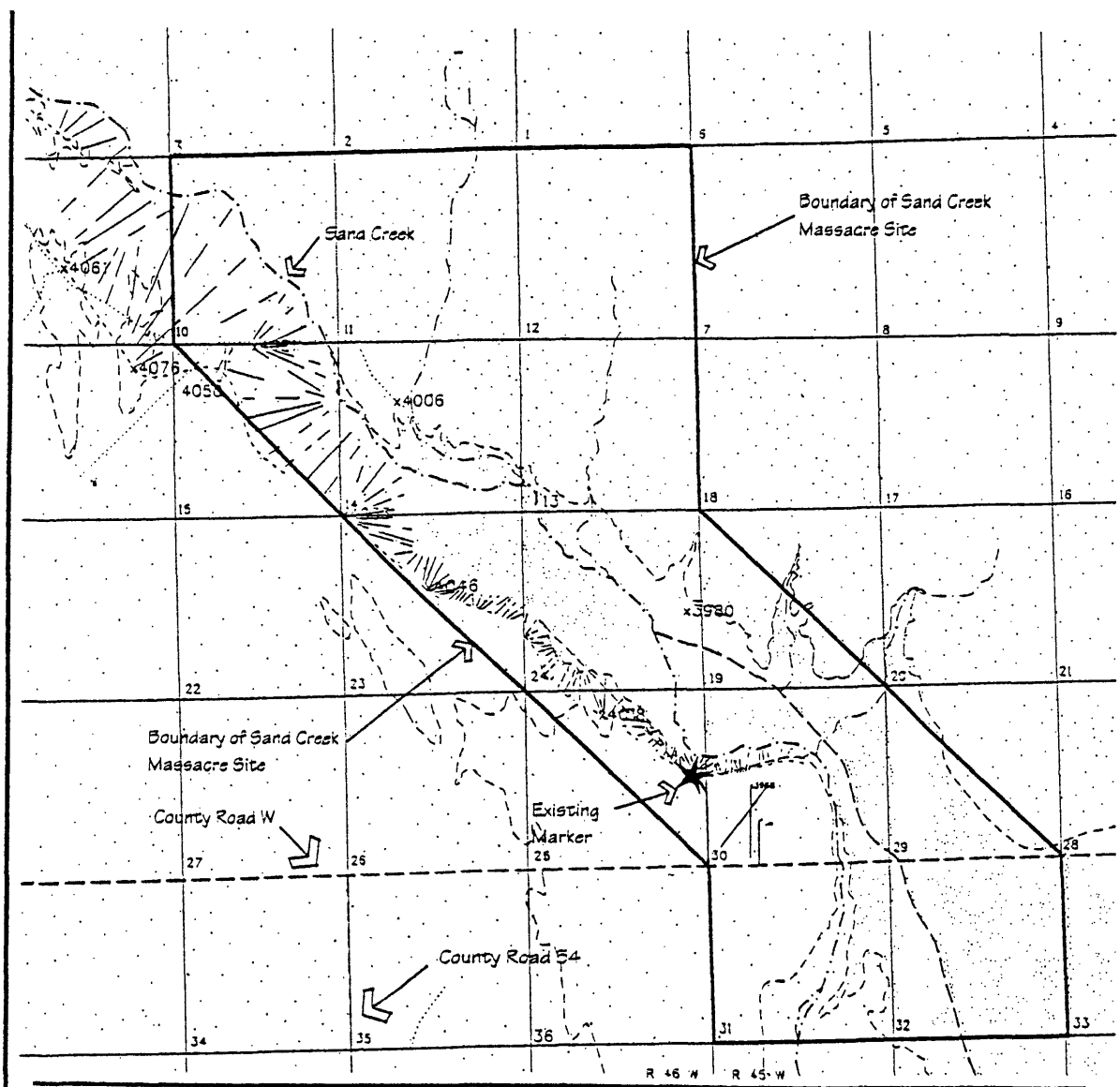
²Robert G. Bailey, *Ecoregions of the United States* (U.S. Department of Agriculture: Forest Service, 1994). As cited in *Sand Creek Massacre Project, Volume Two: Special Resource Study and Environmental Assessment*, p. 55.

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 7 Page 2

Sand Creek Massacre Site
Kiowa County, Colorado



Boundary of the Sand Creek Massacre Site

Sand Creek Massacre
Special Resource Study

US Department of the Interior
National Park Service



0 1/4 1/2 1 mile
Scale of Distances

LEGEND

- Sand Creek Massacre Site
- National Register Boundary

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 7 Page 3

Sand Creek Massacre Site
Kiowa County, Colorado

with elevations of approximately 3,960 feet above sea level (asl) along the creek, and elevations of bluffs to the west more than 4,000 feet asl and rising slopes to the east at more than 4,050 feet asl. The Sand Creek floodplain is terraced, but mostly level to gently sloping and varying from one-quarter to one-half mile in width through the site.³

The massacre site is approximately 180 miles southeast of Denver. The town of Chivington, which is nearly abandoned, is approximately 12 miles south of the massacre site. Eads, the county seat, is approximately 25 miles west-southwest of the massacre site. The area's primary access routes are U.S. Highway 287 and Colorado Highway 96, which intersect at the town of Eads. Highway 287 intersects with Interstate 70 at a point approximately 85 miles northwest of Eads. Highway 287 is also the primary access route between Eads and Lamar, which is about 40 miles south of the massacre site. The closest highway to the Sand Creek Massacre site is Colorado Highway 96, which passes through the town of Chivington. From Colorado Highway 96, the massacre site can be reached by traveling on unpaved secondary roads, specifically County Road 54 and County Road W. However, the Sand Creek Massacre site is located on private land and is not open to the public.

As documented in *Sand Creek Massacre Project, Volume One: Site Location Study*, historic documents, oral histories from tribal members, traditional tribal knowledge, and archeological surveys were used to determine the location and extent of the Sand Creek Massacre. The site location study was presented to Congress in July 2000; and U.S. Senator Ben Nighthorse Campbell, from Colorado, subsequently used it to sponsor legislation authorizing the establishment of the Sand Creek Massacre National Historic Site. President Bill Clinton signed the "Sand Creek Massacre National Historic Site Establishment Act," Public Law 106-465, on November 7, 2000.

The Sand Creek Massacre area has changed relatively little since November 29, 1864. Geomorphological studies indicate that the area landforms and topography, including Sand Creek, are substantially unchanged. In addition, man-made alterations of the area have not seriously compromised the area's natural features. These alterations include the remnants of the now-defunct Chivington Canal, the crumbling headworks of which are still located on Sand Creek. Two ranch complexes – one occupied and one abandoned – are within the massacre site boundary. Within the massacre site boundary are other remnants of the area's

³Amy Holmes and Michael McFaul, LaRamie Soils, "Geoarchaeological Assessment of the Sand Creek Massacre Site, Kiowa County, Colorado," October 1999, Laramie, Wyoming. As cited in *Sand Creek Massacre Project, Volume Two: Special Resource Study and Environmental Assessment*, p. 55.

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 7 Page 4

Sand Creek Massacre Site
Kiowa County, Colorado

agricultural use including fence lines, water tanks, windmills, and corrals. County Road W, which is an unpaved road, cuts through two miles of the southern portion of the massacre site. The only other roads within the massacre site boundary are secondary dirt roads that serve as residential and grazing access. A small Sand Creek Massacre historical marker placed by the local community is situated on a high ridge south along the Dawson South Bend (also referred to as the South Bend) upon ground which National Park Service historians believe Colonel John M. Chivington ordered his troops to begin their assault upon the Cheyenne and Arapaho Indians who were camped below along the Sand Creek streambed.

Historical, Tribal, and Archeological Evidence of the Sand Creek Massacre Site

The first archeological survey of the massacre site took place in 1997. In the early 1990s, amateur archeologists and metal detector hobbyists who had surveyed the South Bend but had not found artifacts associated with the Sand Creek Massacre, approached the Colorado Historical Society with their findings. In response, the Colorado Historical Society initiated a project to identify the location of the massacre site. In 1994, the Colorado Historical Society asked Professor Richard Ellis of Fort Lewis College in Durango, Colorado, to develop a project to verify the location of the Sand Creek Massacre. The project was funded by the State Historical Fund and directed by Professor Ellis. As a first step, Ellis and the Colorado Historical Society began consulting with descendants of Cheyenne victims of the Sand Creek Massacre, gaining their support and endorsement for the project. In 1997, Ellis asked archeologists Douglas Scott of the National Park Service, William Lees of the Oklahoma Historical Society, and Anne Bond of the Colorado Historical Society, in cooperation with other volunteers and metal-detector organizations, to conduct the reconnaissance-level archeological surveys for the project. The team surveyed the South Bend, as well as another large bend of Sand Creek, referred to variously as the Rhoades/Bowen Bend or the North Bend, which is in Cheyenne County approximately ten miles to the north of the South Bend. However, the Colorado Historical Society/Fort Lewis College project was unable to identify the location of the Sand Creek Massacre site. No 1864-era artifacts were found in the Rhoades/Bowen Bend; and only twelve 1864-era items were found in the South Bend, either through the 1997 survey or later by property owner William Dawson. The 1997 metal detecting inventory – which included the Dawson property in the Dawson South Bend and the Rhoades property in the North Bend – covered approximately 940 acres.

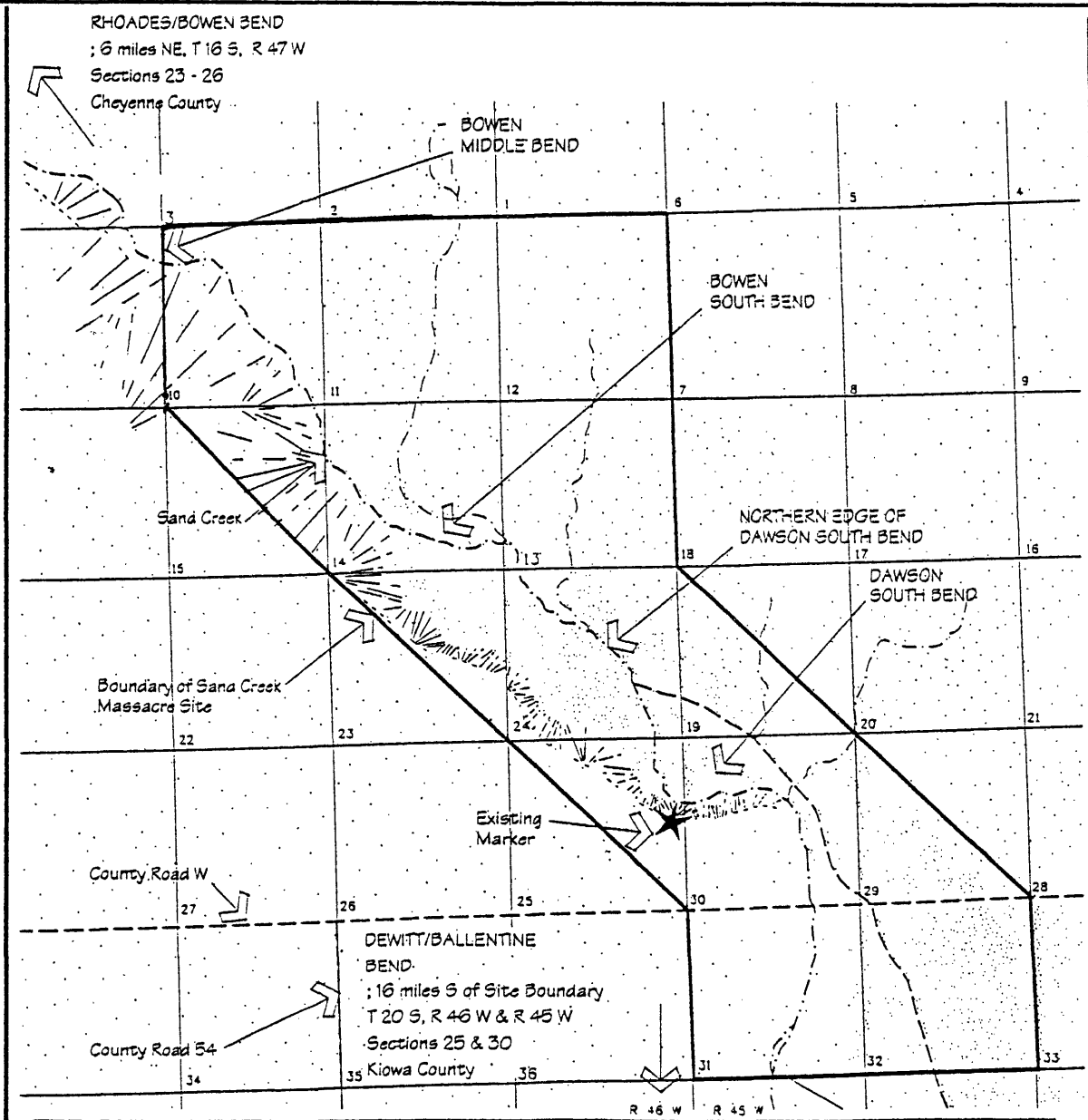
Following the passage of the “Sand Creek Massacre National Historic Site Study Act” on October 6, 1998, the National Park Service, Intermountain Region, initiated its search for the Sand Creek Massacre site. The major goal of the Sand Creek Massacre Site Location

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 7 Page 5

Sand Creek Massacre Site
Kiowa County, Colorado



Site Map of Place Names Used in the Documents

Sand Creek Massacre
Special Resource Study

US Department of the Interior
National Park Service

LEGEND



Sand Creek Massacre Site
National Register Boundary



0 1/4 1/2 1 mile

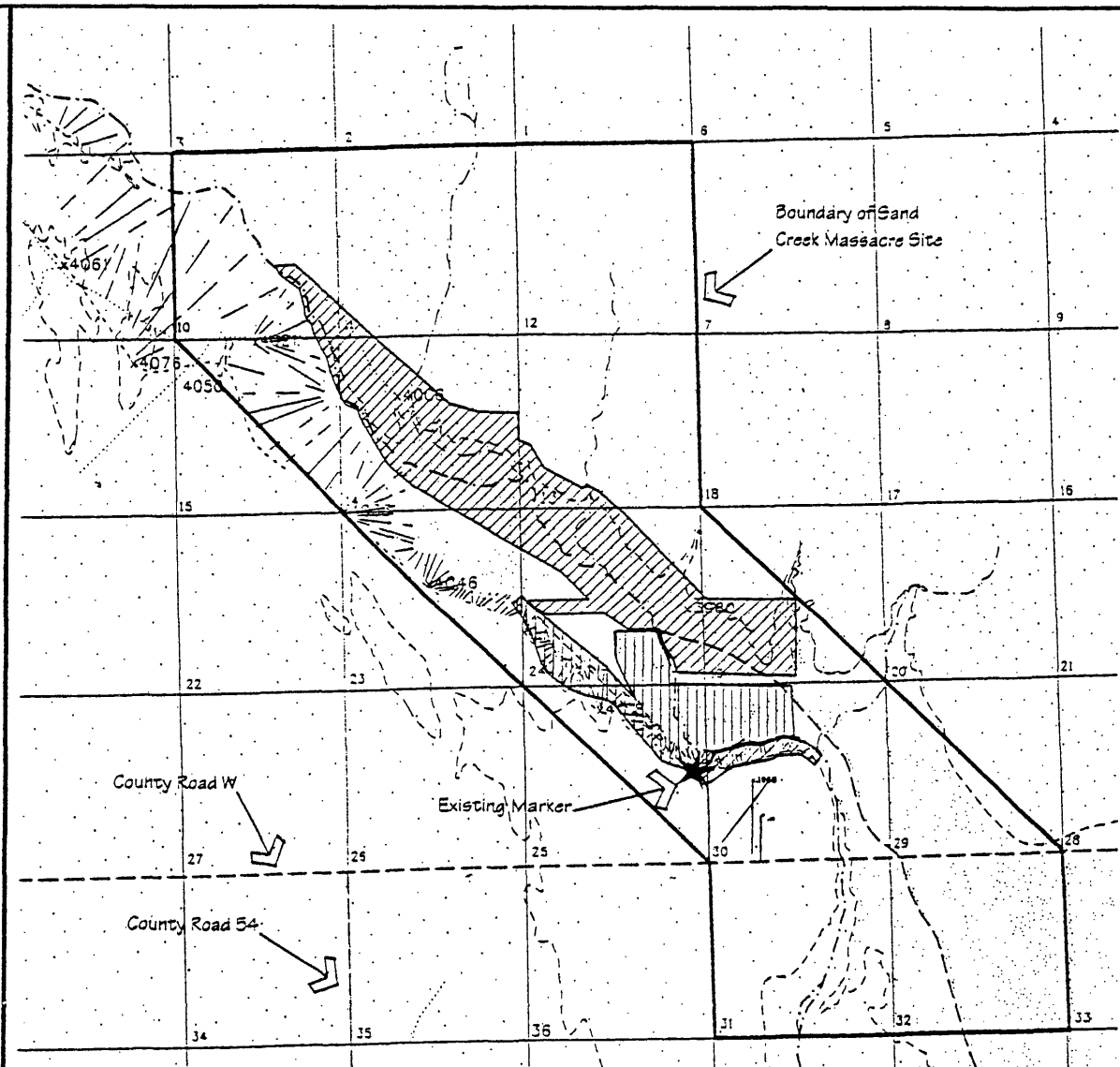
Scale of Distances

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 7 Page 6

Sand Creek Massacre Site
Kiowa County, Colorado



Archeological Survey Areas


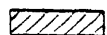
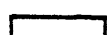
Sand Creek Massacre
Special Resource Study

US Department of the Interior
National Park Service



0 1/4 1/2 1 mile
Scale of Distances

LEGEND

-  1997 Inventory Area
-  1999 Inventory Area
-  Sand Creek Massacre Site
National Register Boundary

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 7 Page 7

Sand Creek Massacre Site
Kiowa County, Colorado

Study was to map the probable location and extent of the Sand Creek Massacre. As discussed in the project research design, the means by which this was to be accomplished were historical research, oral histories, traditional tribal methods, and archeological survey.

The archival search for information to identify the site of the Sand Creek Massacre involved an examination of written reports, diaries, and reminiscences of individuals who were present at the event; historical maps, particularly those contemporary with the period of the massacre, such as an 1868 map drawn by Lieutenant Samuel Bonsall; historical aerial photographic documentation; and various land records relating to the course of Sand Creek and possible changes in its configuration through the years. Employing these assorted documents, the search for the massacre site concentrated on the evaluation of evidence relating directly to: (A) the location and configuration of Sand Creek proper, together with certain of its affluents; (B) the distance traveled by Chivington's troops in advancing for their attack; (C) the trail, or route of approach of the troops from Fort Lyon; (D) the post-massacre bivouac site of Chivington's command; and (E) historical maps bearing directly on the place and events on November 29, 1864. As discussed by National Park Service historian Jerome Greene in *Sand Creek Massacre Project, Volume One: Site Location Study*, the archival record indicated that the Sand Creek Massacre took place in the area of the South Bend of Sand Creek, though not precisely at the bend. Rather, the evidence gleaned from the Bonsall map, two maps drawn by George Bent (a mixed blood Cheyenne survivor of the Sand Creek Massacre), and a host of participant testimony and other documents led Greene to conclude that the major resource property of the village was probably approximately one mile upstream of the "vee" of the Dawson South Bend.⁴

Other important sources of information used to identify the location of the Sand Creek Massacre were oral histories and traditional tribal methods. Between April 1999 and February 2000, 32 Cheyenne and Arapaho descendants of survivors of the Sand Creek Massacre gave oral history accounts of the massacre, which they permitted to be recorded and transcribed for the site location study. The Sand Creek Massacre oral history project specifically focused on information that would help identify the location of the massacre site. In particular, descendants were asked specific questions about topics such as geographic landforms, physical descriptions of the size and extent of the Indian encampment, and information on trails that led to the site. National Park Service

⁴Jerome A. Greene, "Report on the Historical Documentation of the Location and Extent of the Sand Creek Massacre Site," in *Sand Creek Massacre Project, Volume One: Site Location Study*, pp. 31-69.

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Section 7 Page 8

Sand Creek Massacre Site
Kiowa County, Colorado

ethnographer Alexa Roberts coordinated this recordation effort; her report on the project, which includes transcripts of the oral history interviews, is published in *Sand Creek Massacre Project, Volume One: Site Location Study*. In addition, Cheyenne and Arapaho elders and spiritual leaders also shared their traditional knowledge of the site. These traditional site location methods included sensing a spiritual presence or hearing the voices of women, children, horses, or other animals while present on the site, as well as the presence of certain sacred animals, like badger and eagle.

National Park Service archeologist Douglas D. Scott oversaw the field archeology for the Sand Creek Massacre Site Location Study. It was a premise of the methodology for the 1999 site location study that the Cheyenne and Arapaho village site, and possibly the sandpits area, might contain enough intact archeological artifacts through which the massacre site could be identified. The archeological field investigation was conducted between May 17-27, 1999, and Scott's report on the results of the archeological survey is published in *Sand Creek Massacre Project, Volume One: Site Location Study*. During the archeological survey, approximately 400 artifacts were found, the majority of them dating to the 1864-era. The largest concentration of 1864-era artifacts was found on the eastern side of Sand Creek on the Dawson and Kern properties near the center of Section 24, Township 17 South, Range 46 West. The collection of artifacts indicates that this area was likely Black Kettle's camp of 1864. Participating in the survey were members from the National Park Service, the Colorado Historical Society, volunteers, landowners, and members from the Cheyenne and Arapaho Tribes of Oklahoma, the Northern Cheyenne Tribe, and the Northern Arapaho Tribe. In the vicinity of the Dawson South Bend, the area of archeological investigation was comprised of one contiguous area along Sand Creek about 3.5 miles long. A second area, approximately 20 miles south of the Dawson South Bend, was also investigated for a total inventory area of 680 acres.⁵ Metal detectors were employed as an inventory tool. Artifacts were found at depths between surface and 12 inches.

The research goals did not require, nor was it desirable, to find and recover all metallic evidence. Thus, the field approach taken was one of reconnaissance, where the goal was to find evidence of the site, define its boundary, and collect a judgmental sample of the site's artifacts. The 1999 archeological survey uncovered significant physical evidence to identify the massacre site. A total of 386 field numbers were assigned during the 1999 fieldwork; in some cases, such as the cache of .58-caliber round balls, one field number was assigned to a number of objects. The 1999 investigation approach required a judgmental artifact

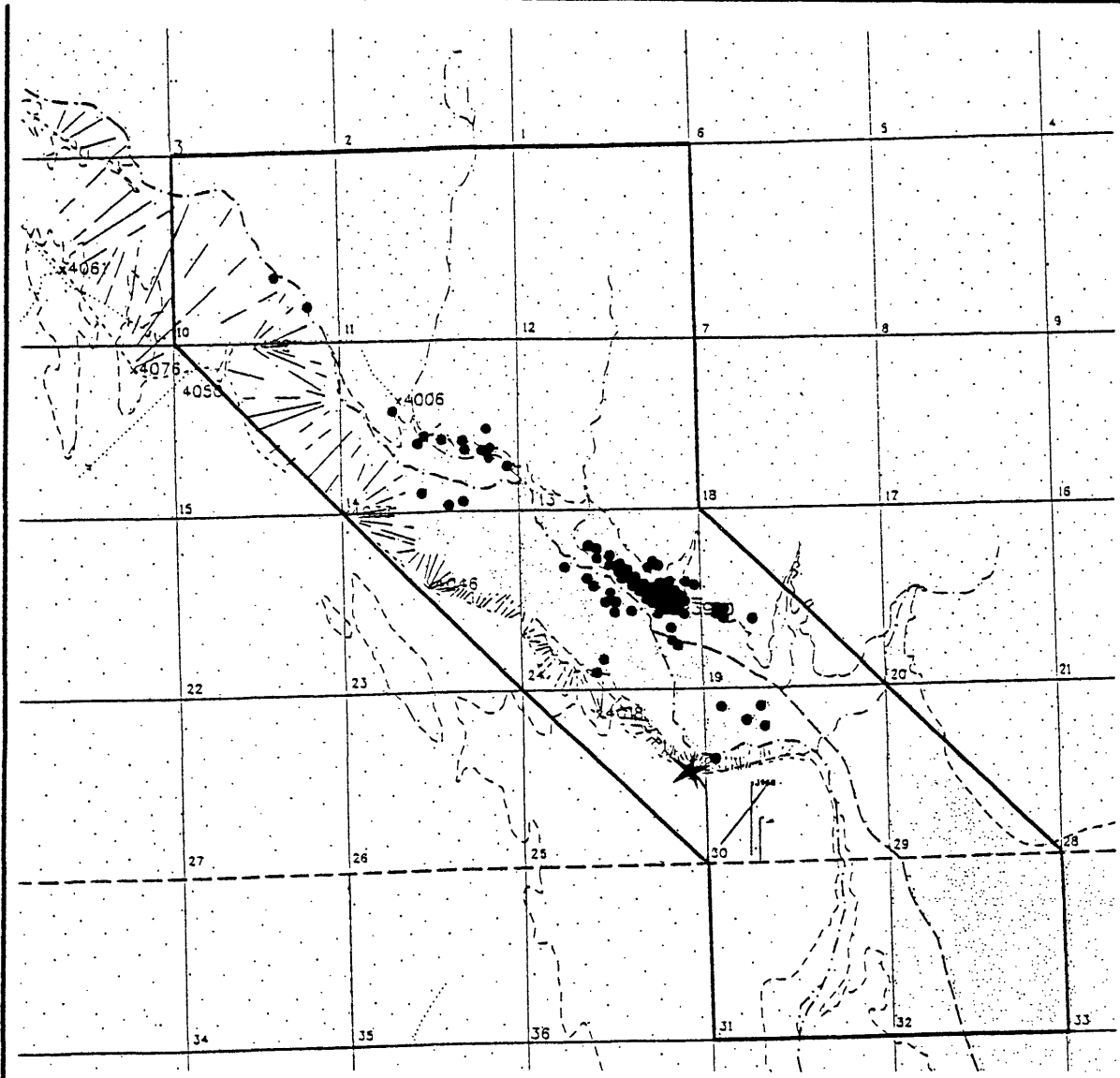
⁵No evidence of the massacre was found in the second area.

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Archeological Findings

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0 1/4 1/2 1 mile
Scale of Distances

LEGEND

- Artifact Site
- Sand Creek Massacre Site
National Register Boundary

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collection. There were a great many finds of baling wire, barbed wire, farm machine parts, nuts, bolts, and screws found during the metal detector sweeps. The obviously recent and clearly post-battle artifacts were not recorded. For the most part the non-period artifacts were removed and discarded at the request of the landowners. Artifacts of questionable identification or temporal span were collected for further identification and analysis. The artifacts were described and identified, where possible, and are detailed in archeologist Douglas Scott's report in *Sand Creek Massacre Project, Volume One: Site Location Study*. The emphasis of the analysis was to identify the artifacts and determine their datable range for the purpose of determining if the materials recovered could be associated with the Sand Creek Massacre of 1864.

It should be noted that no human remains were discovered during the 1997 or 1999 investigations. Following the massacre, the bodies of Indians that had been killed were left on the field and were not buried. As noted in Jerome Greene's report in the *Sand Creek Massacre Project, Volume One: Site Location Study*, Lieutenant General William Sherman visited the Sand Creek Massacre site in June 1868, and his party is reported to have collected relics and human remains from the site.⁶

Following is a summary of the major artifacts found during the 1997 and 1999 archeological investigations of the Sand Creek Massacre site.

Firearms and Munitions

Firearms and munitions comprised the majority of the artifacts found during both surveys. The majority dated from the Civil War time period, contemporary with the Sand Creek Massacre. They included:

- Three .30-caliber balls or lead shots
- Three .32-caliber conical bullets
- A broken and oxidized .32 Long unfired cartridge
- Three unfired .36-caliber conical bullets
- A single .38-caliber conical bullet
- Five .44-caliber bullets (three were fired in Colt revolvers, and the other two in Sharps firearms)
- Two .44-caliber Henry rimfire cartridges
- One .44-caliber center-fire cartridge case in .44-40-caliber and a .44-caliber bullet

⁶ Greene, "Report on the Historical Documentation of the Location and Extent of the Sand Creek Massacre Site," p. 45.

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- One .50-caliber round ball, a .50-caliber conical bullet, and a .50-caliber brass cartridge case
- A single 3-ring flat-nosed bullet
- Three .52-caliber Sharps bullets
- Three .54-caliber conical hollow-base minie-type lead bullets
- Fifteen other .54-caliber bullets
- A single Spencer .56-56-caliber cartridge case
- Six .58-caliber centerfire cartridge cases
- Four lead .58-caliber conical bullets
- A cache or cluster group of .58-caliber round balls. There are 174 balls of .58 caliber in the group, and one of .30 caliber.

12-Pounder Mountain Howitzer-Related Ammunition Fragments

A variety of historical accounts document the use of four 12-pounder mountain howitzers during the attack.⁷ The Model 1835 Mountain Howitzer was a light field piece intended for use in rough terrain.⁸ The bronze barrel of 4.62-inch bore diameter was just short of 33 inches long and weighed about 220 pounds. It was mounted on a lightweight two-wheeled mountain or prairie carriage. The gun could be towed by a single horse with additional horses packing two ammunition chests each, or it could be dismounted and packed on horses or mules.

The archeological survey yielded four spherical case fragments. The four fragments are body fragments of the sphere and are .4-inch thick. Also found were two fragments of 12-pounder mountain howitzer case fragments and a single .69-caliber ball.

Military Equipment

Military equipment found during the archeological surveys included the crescent end of an enlisted man's brass shoulder scale, a mounting tongue for a shoulder scale, a Model 1858 canteen stopper ring, a canteen stopper chain, and a Model 1859 army issue picket pin.

⁷Greene, "Report on the Historical Documentation of the Location and Extent of the Sand Creek Massacre Site," pp. 31-69.

⁸Warren Ripley, *Artillery and Ammunition of the Civil War* (New York: Van Nostrand-Reinhold Company, 1970). pp. 198-201. As cited in *Sand Creek Massacre Project, Volume One: Site Location Study*, p. 89.

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Personal Items

Several personal items were recovered during the surveys. Items collected included a fragment of a stamped brass suspender grip. Also found were several buttons, including three military general service buttons, a General Service type military button, a Staff Eagle type button, a New York State Militia button, three buttons associated with soldiers' trousers, and five civilian type buttons. Other personal items included three boot nails, a three-inch-long ornate brass fragment that represents one side of a photograph preserver or frame, a fragment of sheet silver, a sheet silver ornament, three bells (two "hawk bells" and a heavy cast brass bell), a sewing thimble, a one-inch lightweight brass D-shaped buckle, and three iron tinkling cones (common ornamental items on Native American dress).

Camp Equipage and Utensils

A number of pieces of camp equipment and utensils were discovered while surveying. These items included the following:

- Five tin cups
- Fragments of a coffee boiler
- Part of a tin plate
- A tin bowl
- Several strap tin handles
- A possible grater
- A number of fragments of sheet iron pans or boilers
- Two crushed and flattened tin cups
- A crushed and mangled tin plate and three other fragments of a second plate
- A crushed and deteriorated tin bowl
- A number of tinned iron and sheet iron fragments may be the remains of tin kettles, coffee boilers, pans, and pots
- Four sheet iron fragments that may represent parts of food graters
- Parts of three buckets including a bucket bale with a brass attachment ear
- The handle and grinding gears of a coffee grinder or mill
- Everyday utensils, including knives, forks, spoons, and possible meat skewers
- A fragment of a scissors or cutting shears blade
- Several pieces of cast iron representing several container types including a Dutch oven, a frying pan, a tea-type kettle, and rounded body cast iron kettles

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- Three cast iron fragments are parts to a stove
- Tin cans and can fragments

Tools

Tools were also found during the archeological surveys. These tools included three axe heads, a battered poll, three handmade awls, five files, an iron cross pien hammer, nine iron items categorized as scraping tools, and an iron tool wedge.

Horse Tack, Harness, and Related Horse Equipage

Several horse-related artifacts were discovered. These included an iron spur, a brass girth D-ring, rings either military or civilian in origin, one military-type iron skirt ring, three bridle curb chains, twenty-six tack buckles, eight horseshoes or horseshoe fragments, sixty-eight horseshoe nails, and a few pieces of horse-drawn wagon hardware.

Fasteners

Fasteners were recovered during the surveys as well. They included cut nails, wire nails, a railroad spike, a single brass upholstery tack, a washer, a shanked bolt, twenty-five pieces of strap iron, and three barrel hoops.

Miscellaneous Artifacts

Some of the miscellaneous artifacts found included a trunk lock, a brass gas jet and housing, a stamped brass collar for a kerosene lamp, a deteriorated iron bar, a possible iron wagon staple, an iron mounting plate, a square iron operating rod, a 3-inch-long iron finger lever, a possible chain link fragment, a 1/16-inch-diameter piece of wire, a piece of iron, a fragment of sheet brass, three iron fragments, and an iron shaft housing fragment. Also found were four lumps of melted lead, three brass percussion caps of unusual style, two tinned iron pieces, a gun lock bridge, and six iron arrowheads.

Lithic Items

Two lithic artifacts were recovered as surface finds including a two-hand grinding stone of granite and a work flake of Alibates flint.

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Summary of Archeological Investigations

As National Park Service archeologist Douglas Scott discusses in chapter four of *Sand Creek Massacre Project, Volume One: Site Location Study*, the archeological data, including the artifact distributions and the artifacts themselves, point to the approximate center of Section 24, Township 17 South, Range 46 West as being Black Kettle's camp of 1864. According to Scott, there are three main lines of archeological evidence that lead to this conclusion. These are:

1. The majority of artifacts are types that were in use in 1864, and are comparable to goods given or acquired by the Cheyenne and Arapaho in the years immediately preceding and immediately after the massacre;
2. The internal evidence that the camp material was intentionally destroyed; and
3. The arms and ammunition evidence that combat occurred at this site and that the armament artifacts are consistent with those carried by the Colorado Volunteer Cavalry units that participated in the massacre.

The majority of the artifacts fall within a mid-nineteenth-century date range for manufacture and use. Some of the artifacts, particularly the recovered bullets and military equipment, clearly date to the American Civil War 1861-1865 era. Excluding the bullet and 12-pounder mountain howitzer case fragment evidence, the artifact assemblage is typical of a Native American camp of the mid-nineteenth century. Typical domestic items include brass, tin, and cast iron kettles, pots, and pans; utensils like knives, forks, spoons, plates, and bowls; ornaments; hide preparation tools; and many Euro-American items modified to meet the exigencies of Native American camp life. The artifact types, when compared to the lists of trade goods and annuity goods (items given out annually) known or requested by the U.S. Office of Indian Affairs for distribution to the Cheyenne and Arapaho in southern Colorado (per treaty agreements), demonstrate a striking degree of concordance.

Of similar importance to the camp site at Sand Creek are the camp items reported by the army as captured and destroyed at the burning of the Cheyenne and Sioux camp on Pawnee Fork in 1867 and after the Washita battle of 1868 in which Black Kettle's camp was again destroyed. These two examples list the actual items captured and destroyed, not just the goods issued in annuity distributions. In the case of the camp on Pawnee Fork, archeological investigations have recovered a large sample of those camp goods actually

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destroyed. In both cases the inventoried goods show excellent concordance with the Sand Creek archeological assemblage. The archeological assemblages also show excellent correlation as to types of goods present and the pattern of destruction to those goods. The Pawnee Fork assemblage is well documented as having been broken up and destroyed by the occupying troops. The Sand Creek assemblage has a remarkably similar pattern of destruction and breakage to durable items, like the cast iron kettles or the pick-axing of the coffee boiler, deliberate crushing and flattening of tin items like cups and cans, breakage of spoons and small utensils, and other evidence to suggest the troops intentionally made the camp items unserviceable to their owners.

The firearms' identification analysis clearly supports the dating of the majority of the recovered ammunition components as circa 1864. The bullet calibers and types – Starr, Sharps, Colt, .54-caliber musket, and .58-caliber musket, as well as fragments of a 12-pounder spherical case – are consistent with the known armament of the attacking force of the Colorado Volunteer Cavalry. The recovery of the 12-pounder mountain howitzer case fragments is nearly unequivocal proof in its own right that this is the Sand Creek Massacre site. In addition, archeologist Douglas Scott noted that the clear majority of weapon-related artifacts found in the village are associated with the attacking force. There is an almost complete absence of Native American weaponry artifacts that might have been fired at the Colorado attacking force. This line of evidence supports the documentary sources that the Cheyenne and Arapaho were caught unaware and failed to respond to the attack with any significant force. There is more evidence of fighting present in the distribution of the scattered bullets north and west of the village along the line of the flight for survival taken by the surprised village inhabitants.

Location of Artifact Collections

Artifacts collected during the 1997 and 1999 archeological investigations are the property of the landowners. As such, most of the Sand Creek Massacre site collection is in the possession of the Dawson and Bowen families. August "Pete" Kern, however, donated the artifacts found on his property during the 1999 investigation to the National Park Service. The Kern collection of approximately 200 artifacts is stored at the National Park Service, Midwest Archeological Center in Lincoln, Nebraska.

Different Interpretations of Locations of Elements within the Massacre Site

As with any historic event, understanding of the Sand Creek Massacre is still limited and obscured through time. Views differ regarding some of the specifics of the massacre within

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that boundary. However, it is important to note that the National Park Service, the Colorado Historical Society, the Cheyenne and Arapaho Tribes of Oklahoma, the Northern Cheyenne Tribe, and the Northern Arapaho Tribe all fully support the massacre site boundary presented in this nomination. They also believe that all the primary elements of the massacre, including the Indian encampment and the sandpits, are within the boundary. However, these groups have varying interpretations of the evidence regarding the location of some of these elements.

The National Park Service believes that the Indian village that was attacked by Chivington's troops on November 29, 1864, was in Section 24, Township 17 South, Range 46 West. This conclusion is drawn from historical documentation and archeological evidence. Completed prior to the archeological survey, a review of historical documents, which included an 1868 map of the Sand Creek Massacre area drawn by Lieutenant Samuel Bonsall, indicated that Section 24 was the likely site of the village. The 1999 archeological survey uncovered approximately 400 artifacts in a concentrated area within this section. As discussed by NPS archeologist Douglas Scott in *Sand Creek Massacre Project, Volume One: Site Location Study*, the type and distribution of these artifacts are consistent with a Native American encampment of approximately 500 people. The artifacts, which included 12-pounder mountain howitzer spherical case fragments and other Civil War-era ammunition, also indicate that the village was under attack by U.S. Army forces. Historical documentation indicates that the soldiers destroyed and burned the Indians' personal effects at the village site. Although there is no conclusive archeological evidence of the sandpits, historical records indicate they were located anywhere from 300 yards to a high of 2-plus miles upstream of the village, but most accounts coalescing at around one-quarter mile to one mile. As such, the National Park Service believes that the most likely location of the sandpits is in Sections 13 and 14, Township 17 South, Range 46 West.

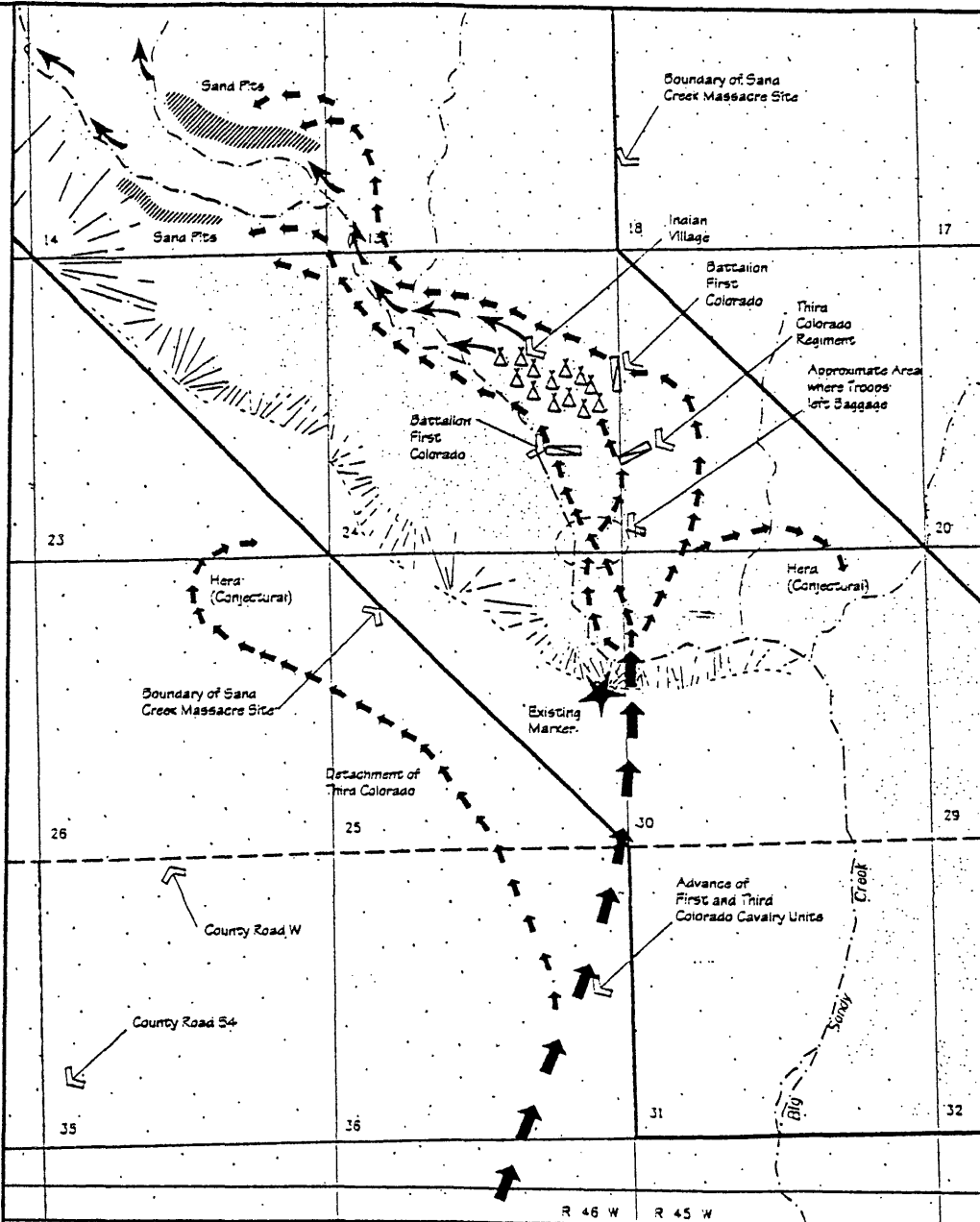
The Northern Arapaho Tribe concurs with the National Park Service on the location of the village and sandpits. The Northern Arapaho had originally considered another site, approximately 20 miles to the south, as the possible location of the massacre. After reviewing the results of the historical and archeological investigations – and following a site visit to the South Bend area by tribal elders employing traditional tribal methods – the Northern Arapaho concluded that Section 24 was the site of the village that was attacked during the Sand Creek Massacre, and that the sandpits are likely located in Sections 13 and 14.

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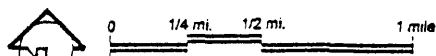
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National Park Service Site Map based on the Historical Documentation Report by Jerome Greene and the Archeological Report by Douglas Scott.

The Northern Arapaho Tribe concurs with this site map based on the historical and archeological evidence, as well as input received from Northern Arapaho tribal representatives and spiritual leaders who participated in the fieldwork and traditional tribal method process.

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Legend

- Indian Village
- Sand Pits
- Area of Indian Flight
- Routes of Troops
- Boundary of Massacre Site
- Troop Position
- Creek Channel

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Representatives of the other tribes have reached different conclusions. The Sand Creek Massacre project representatives of the Cheyenne and Arapaho Tribes of Oklahoma and the Northern Cheyenne Tribe believe that the Indian village attacked by Chivington was in the "vee" of the Dawson South Bend, which encompasses Section 25 of Township 17 South, Range 46 West, and Section 30 of Township 17 South, Range 45 West. These representatives believe there are several lines of evidence that support their conclusion. For example, George Bent, a mixed-blood Cheyenne survivor of the Sand Creek Massacre, had drawn several maps that identified the Sand Creek Massacre. Two of the maps show the village within the crux of a 90-degree bend of Sand Creek. The tribal representatives believe Bent's maps match the configuration of the Dawson South Bend, and are significant evidence that the village was located in that area. Some Cheyenne oral histories and traditional tribal methods also indicate that the Dawson South Bend was the village site. These traditional tribal methods include experiencing a spiritual presence and hearing voices at the South Bend, which has been periodically visited by Cheyenne and Arapaho people since at least the 1940s. Moreover, the Cheyenne Arrow Keeper blessed the Dawson South Bend as "Cheyenne earth" in 1978, thereby designating it as the Sand Creek Massacre site.

If, as the representatives of the Cheyenne and Arapaho Tribes of Oklahoma and the Northern Cheyenne Tribe believe, the village was in the Dawson South Bend, then what is the concentration of 400 artifacts approximately one mile north in Section 24? Laird Cometsevah, great-grandson of Cometsevah who was a survivor of the Sand Creek Massacre, believes the artifact concentration may be evidence of the sandpits, or perhaps a later Euro-American settlement. Others, including Colorado State Historian David Halaas, believe that the artifacts in Section 24 may represent the northern edge of the village, the area where the U.S. troops bivouacked after the massacre, or both. The State Historian believes that the conclusions reached by the National Park Service as to the extent and location of the village and the sandpits are not definitive, and that additional geomorphological and archeological work will indicate that the village site extended as far south as the Dawson South Bend. However, the Colorado State Historical Society also strongly supports the massacre site boundary as identified in the site location study and in this nomination.

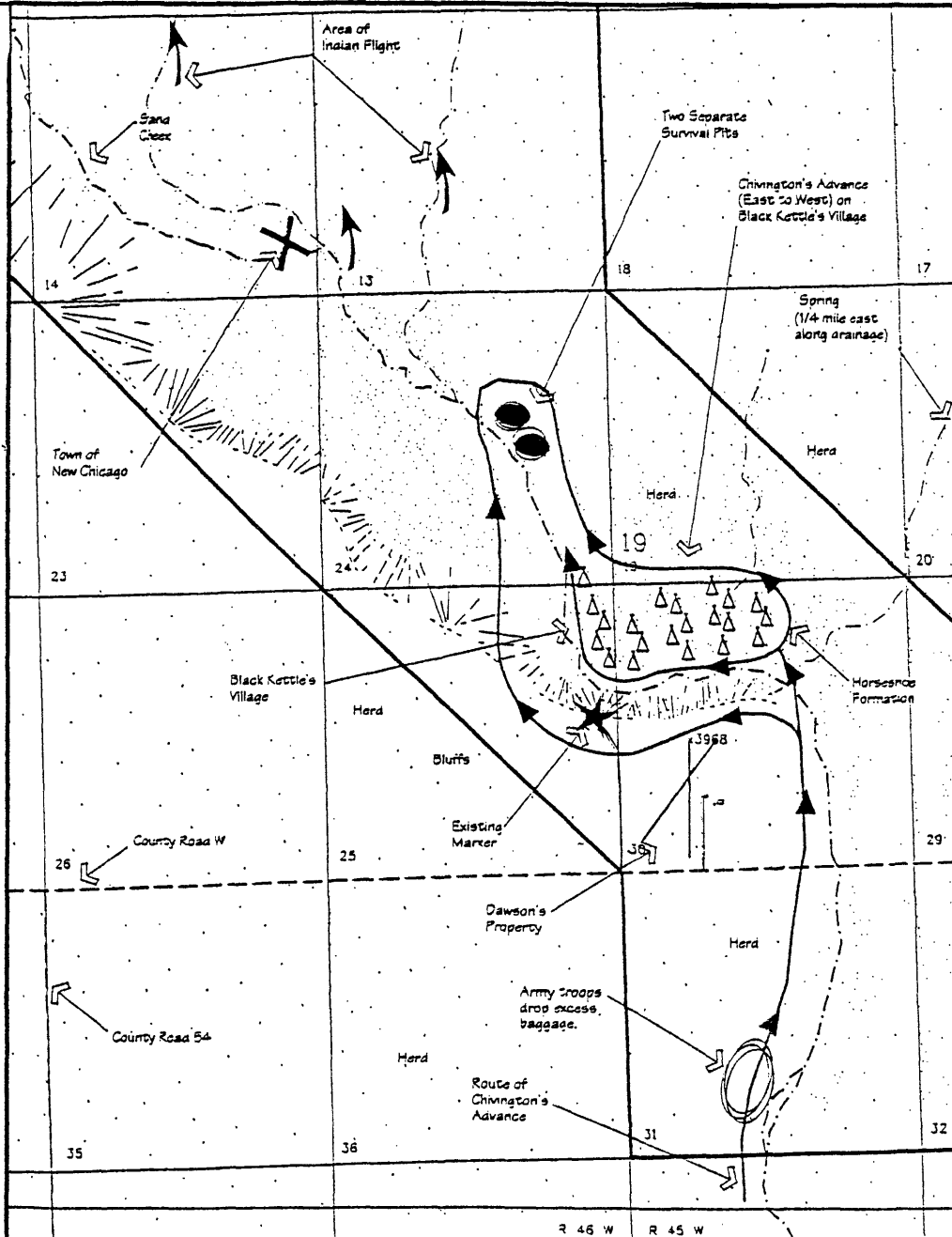
Oral histories are powerful testimony to the tragic and horrible events of November 29, 1864, and were an integral part of the site location study. They are also another source of differing interpretation as to the location of the massacre site. As detailed in the site location study, oral history interviewees were specifically questioned about geographical elements of the massacre site. The responses are remarkably consistent in terms of the

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




Southern Cheyenne/Southern Arapaho/Northern Cheyenne Map of the Location of the Sand Creek Massacre Site based on Traditional Tribal Methods, Oral Histories and the George Bent Maps.

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LEGEND

-  Route of Chivington's Troops
-  Black Kettle's Village
-  Area of Indian Flight
-  Site of Survival Pits

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Indian encampment being near a water source, the proximity of a large natural spring, accounts of people running up the creek, and the presence of trees and hills at the site. But, as noted by National Park Service Anthropologist Alexa Roberts, geographic details in the oral histories of the Sand Creek Massacre are peripheral to the descriptions of the extreme atrocities committed during the massacre. With important exceptions – such as the description of the site provided by Sand Creek Massacre descendant Laird Cometsevah – geographic details of the massacre site are non-specific as to exact location. (Some interviewees expressed a reluctance to provide more detail because of the oft-stated fear of government retribution, extreme emotion, or the belief that the stories belong to the families only.) Also, in some cases, descriptions of some physical elements of the massacre – such as the relative locations of the Cheyenne and Arapaho encampments, and the size and extent of the village – vary among the oral history accounts. Thus, while the National Park Service believes that the placement of the village in Section 24 is not in conflict with most oral history accounts of the massacre, that is not a view shared by all of the tribal representatives to the Sand Creek Massacre Site Location Study. The Northern Cheyenne and the Cheyenne and Arapaho Tribes of Oklahoma believe that the oral histories are strong evidence that the village is located in the “vee” of the Dawson South Bend. And, as noted above, traditional tribal methods employed by these tribes also support the placement of the village in the Dawson South Bend.

Future work, beyond the scope of this project, may resolve these differences. In particular, the project team recommends additional archeological work. Twelve 1864-era artifacts have been found in the Dawson South Bend, discovered either during the 1997 State Historical Fund-funded archeological survey or later by landowner William Dawson. The National Park Service interprets this paucity of artifacts in the Dawson South Bend as additional evidence that the Indian village that was attacked by Chivington’s troops was located one mile further north. However, the representatives of the Cheyenne and Arapaho Tribes of Oklahoma and the Northern Cheyenne, as well as the Colorado Historical Society’s Chief Historian, believe that additional intensive-level archeological work in the crux of the Dawson South Bend will result in the discovery of Indian encampment-related artifacts. The Northern Arapaho Tribe would also like to see additional archeological work. Specifically, the Northern Arapaho are interested in archeological evidence of sweat lodge rocks, tipi rings, and fire hearths.

Indeed, it is important to note that both the 1997 and 1999 archeological surveys of Sand Creek were conducted only at the reconnaissance level, and are not the final statement on the archeology of the massacre. The purpose of the Sand Creek Massacre Site Location Study was to “identify the location and extent of the massacre area.” As Douglas Scott

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noted in his report, the research goals did not require, nor was it desirable, to find and recover all metallic evidence. Thus, the field approach taken was one of reconnaissance, where the goal was to find evidence of the site and define its boundary.

While there may be different beliefs about the location of some of the components of the Sand Creek Massacre, it is again important to note that the National Park Service, the State of Colorado, the Cheyenne and Arapaho Tribes of Oklahoma, the Northern Cheyenne Tribe, and the Northern Arapaho Tribe are all in agreement with the Sand Creek Massacre Site boundary as presented in this nomination.

Contributing Resources

The only contributing resource is the Sand Creek Massacre Site itself. The site includes the point from which Colonel John Chivington and his troops launched their attack upon the Indian encampment, the Cheyenne and Arapaho village site, the sandpits area where most of the fighting and killing took place, and the area of Indian flight.

Noncontributing Resources

Chivington Canal – 1 structure

The Chivington Canal (ca. 1910-12) begins in the southwest quarter of Section 24, Township 17 South, Range 46 West, and extends in a southwesterly direction through Sections 19, 30, 29, and 32, Township 17 South, Range 45 West. Features on the canal include remnants of the headgates in Section 24 and a flume in Section 30. The canal was abandoned soon after 1918.

William and Jredia Dawson Residence – 3 buildings, 3 structures, 1 site

The Dawson complex is located in Section 30, Township 17 South, Range 45 West. On the Dawson complex there is a house built in the early 1950s, a metal building built in 1974, and a barn built in 1970. Also on the property are three structures and one site. They include an unpaved air landing strip, a boxcar used for storage, a corral, and the extant foundation of a residence that served as a line camp for the SS/Holly Ranch near the center of the section. In 1871, Hiram Holly established the Holly Ranch – which later evolved into the SS Ranch – over much of southeastern Colorado, and the open range cattle lands encompassed the Sand Creek Massacre study area. By the 1880s, SS Ranch pasture was under fence, and the Sand Creek Massacre site marked the western boundary of the “north pasture.” The fences were taken down by 1885.

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Abandoned Complex – 3 buildings, 2 structures, 1 site

In Section 31, Township 17 South, Range 45 West, there are the remnants of a ranch complex (ca. 1900) that includes: a frame outbuilding, a Quonset hut, a chicken house, a corral, a pump house, and the ruin of an adobe outbuilding.

County Road W – 1 structure

Within the massacre site, County Road W is an unpaved east-west road, that runs parallel with the section line from the southwest corner of Section 30 straight across to the southeast corner of Section 29.

Sand Creek Massacre Memorial Marker – 1 object

On August 6, 1950, the Colorado Historical Society participated in a dedication ceremony in Section 25, Township 17 South, Range 46 West, on property now owned by William and Jredia Dawson. Here, overlooking a bend of Sand Creek, local residents, the Colorado Arkansas Valley Inc., and the Eads and Lamar Chambers of Commerce placed a memorial marker, designating the area as the site of the massacre. The memorial marker is made from carved granite with an inscription that reads: "Sand Creek Battle Ground, Nov. 29 & 30, 1864."

Isolated Structures – 6 structures

The massacre site also includes several isolated structures. They include:

- Two livestock water tanks located in Sections 31 and 19, Township 17 South, Range 45 West
- Two livestock water tanks located in Sections 25 and 24, Township 17 South, Range 46 West
- One school bus body in Section 25, Township 17 South, Range 46 West
- One windmill in Section 24, Township 17 South, Range 46 West

The noncontributing resources may be re-evaluated at a later time to determine their local and/or state significance within the context of ranching in eastern Colorado.

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Narrative Statement of Significance

The site of the 1864 Sand Creek Massacre is eligible to the National Register of Historic Places under Criterion A because it is associated with a nationally significant event that profoundly influenced Indian-white relations on the western frontier during the last half of the nineteenth century, had devastating effects upon Cheyenne and Arapaho familial and social structures, and was a catalyst for years of ensuing U.S. Army-Indian warfare throughout the central plains. The Sand Creek Massacre also represents, in its broadest sense, the tragic extremes sometimes reached in the 500 years of conflict between Native Americans and people of European and other origins concerning the land that now comprises the United States. On November 29, 1864, approximately 725 soldiers, composed of 100-day volunteers from the Third Regiment, as well as five companies of the First Regiment of the Colorado Cavalry, under the command of Colonel John M. Chivington, attacked an Indian village of more than 100 lodges along Sand Creek in what is now Kiowa County, Colorado. Under the leadership of Cheyenne Chief Black Kettle, approximately 500 Cheyenne and Arapaho people were camped at this village, believing that they were not only at peace with the government, but also under the protection of the U.S. Army. Nevertheless, Chivington's forces launched a surprise attack upon the village. By day's end, at least 150 Cheyenne and Arapaho people had been killed, mainly women, children, and the elderly. Many of the soldiers followed up the attack by mutilating the bodies of Cheyennes and Arapahos killed during the strike. Although the soldiers returned to a heroes' welcome in Denver, the Sand Creek Massacre was quickly recognized as a national disgrace that was soon condemned by two congressional committees and a military commission. Since the day it happened, the Sand Creek Massacre has maintained its station as one of the most emotionally charged and controversial events in American history, a tragedy reflective of its time and place. A watershed event in U.S. Government/Indian relations, the Sand Creek Massacre created a climate of enormous distrust, and the months following the massacre witnessed an eruption of warfare throughout the plains that would last for years. Four years after the Sand Creek Massacre, Chief Black Kettle was killed by U.S. Army troops, led by Lieutenant Colonel George A. Custer, along the Washita River in Oklahoma (now designated as the Washita Battlefield National Historic Site). Custer's subsequent defeat at the Battle of the Little Big Horn in 1876, and the 1890 tragedy at Wounded Knee – which was the last major armed encounter between Indians and whites in North America – are also rooted, at least partly, in the events of November 29, 1864. In addition, the Sand Creek Massacre severely impacted

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the Cheyenne and Arapaho people and their ethnic homelands, the effects of which have had far-reaching repercussions that linger to this day. For both peoples, the site of the Sand Creek Massacre comprises sacred ground, consecrated by the blood of lost forbears and venerated today by descendants and friends of those who died, as well as of those who survived.

The Sand Creek Massacre site, which has only been the subject of reconnaissance-level archeological investigations, is also eligible to the National Register of Historic Places under Criterion D because it has yielded information supporting, in broad terms, oral tradition and historical documentation. In addition, it is likely to yield new information regarding U.S. military and American Indian conflicts. While the official period of significance for the Sand Creek Massacre site is the year 1864, the massacre affected American Indian/U.S. Army relations in the West through the Battle of the Little Big Horn and beyond.

On November 7, 2000, President Bill Clinton signed into law the "Sand Creek Massacre National Historic Site Establishment Act," Public Law 106-465, that authorized – upon federal acquisition of sufficient land – the establishment of a national historic site at Sand Creek. At present, the Sand Creek Massacre site, which encompasses approximately 7,680 acres, is owned by private individuals. And, although the site has been recognized through Public Law 106-465 as being nationally significant, the site previously had not been listed on the National Register of Historic Places because of the lack of information regarding the exact location of the site.

The landscape of the Sand Creek Massacre Site has changed little since 1864, including the general alignment of Sand Creek. Today the land is used for farming and stock raising. Few structures have been built on the site and thus it still maintains its historical integrity. Geomorphology studies indicate that the landforms and areal topography, including those of the meandering Sand Creek bottom and its immediately adjoining properties throughout the length of the massacre site, have remained substantially unchanged, thereby permitting considerable accuracy in interpreting the historical features of the site. Beyond remnants of an old irrigation ditch traversing part of the land, plus fence lines, water tanks and an occasional windmill – all parts of the past and present use of the area – the site terrain, as well as the surrounding landscape, remain largely undeveloped, thus assuring the integrity of the historic scene as it appeared during the middle of the nineteenth century.

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The following information is drawn from documentation prepared by the National Park Service – in consultation with the State of Colorado, the Cheyenne and Arapaho Tribes of Oklahoma, the Northern Cheyenne Tribe, and the Northern Arapaho Tribe – for the Sand Creek Massacre Project, which was mandated by Congress in 1998 through Public Law 105-243. The results of that project are published as *Sand Creek Massacre Project, Volume One: Site Location Study* and *Sand Creek Massacre Project, Volume Two, Special Resource Study and Environmental Assessment* (Denver: National Park Service, Intermountain Region, 2000).

General Background

Throughout the Civil War, Colorado officials brooded over possible secessionist tendencies of the territory's populace, and apprehensions arose over Confederate influences in Texas, the Indian Territory, and New Mexico potentially spilling across the boundaries to disrupt Colorado's relations with its native inhabitants. In Colorado Territory, reports of the Minnesota Indian conflict fostered an atmosphere of fear and suspicion that contributed to the war with the Cheyenne and Arapaho Indians in 1864-65. During 1862 and 1863, most area depredations involved not warriors from these tribes, but Shoshonis and Utes whose repeated raids on emigrant and mail routes south and west of Fort Laramie (in present southeastern Wyoming) disrupted traffic and threatened the course of Euro-American settlement. Aggressive campaigning in 1863 by columns of California and Kansas troops, including the massacre of a village of Shoshonis at Bear River in present Idaho by a force commanded by Colonel Patrick E. Connor, abruptly ended these tribes' forays. Meanwhile, on the plains east of the Rocky Mountains, conflicts were mostly confined to bands of Kiowas, Kiowa-Apaches, Arapahos, and occasionally Comanches, who stopped wagon trains bound over the Santa Fe Trail; elsewhere, the Lakotas and Pawnees maintained traditional conflicts with each other, encounters with but incidental impact on regional white settlement.⁹

⁹ Robert M. Utley, *Frontiersmen in Blue: The United States Army and the Indian, 1848-1865* (New York: The Macmillan Company, 1967), pp. 281-83; Alvin M. Josephy, Jr., *The Civil War in the American West* (New York: Alfred A. Knopf, 1991), pp. 292-94; Elliott West, *The Contested Plains: Indians, Goldseekers, and the Rush to Colorado* (Lawrence: University Press of Kansas, 1998), p. 287. The most definitive presentation of the events leading to Sand Creek appears in Gary L. Roberts, "Sand Creek: Tragedy and Symbol" (unpublished doctoral dissertation, dated 1984, University of Oklahoma, Norman), chapters 2 through 8. As cited in *Sand Creek Massacre Project, Volume Two: Special Resource Study and Environmental Assessment*, p. 26.

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Cheyennes and Arapahos

Of all the plains tribes, the Cheyennes and Arapahos appear to have been the least confrontational with white settlers during the early 1860s. Both tribes had been in the region for decades. The Cheyennes, Algonkian-speaking people whose agriculturalist forebears migrated from the area of the western Great Lakes, had occupied the buffalo prairies east of the Missouri River by the late seventeenth century. With the acquisition of horses their migration proceeded, and over the next few decades the Cheyennes ventured beyond the Black Hills as far north as the Yellowstone River and south to below the Platte River. By the first part of the nineteenth century, the tribe had separated into northern and southern bodies that still maintained strong band and family relationships. In the conflicts that followed over competition for lands and game resources, the Cheyennes became noted fighters who forged strong intertribal alliances with the Lakotas and the Arapahos. The Arapahos, Algonkian speakers possibly from the area of northern Minnesota, had located west of the Missouri River by at least the late 1700s and probably very much earlier, and by the early nineteenth century were variously established in what is now Montana, Wyoming, South Dakota, Nebraska, and Colorado. Their alliance with the Cheyennes extended back to the Cheyennes' entrance onto the eastern prairies, when both were semisedentary peoples, and was grounded in mutual enmity (at that time) toward the Lakotas' growing regional domination as well as intertribal trade considerations. (Like the Cheyennes, in time the Arapahos gravitated into northern and southern regional divisions, with the southern group eventually coalescing in the area that included south-central Colorado.) Despite occasional Cheyenne-Arapaho rifts, mutual warfare with surrounding groups during the early 1800s solidified their bond and presently included the Lakotas; together, the three tribes variously fought warriors of the Kiowas and Crows, and in the central plains Arapaho and Cheyenne warriors drove the Kiowas and Comanches south of the Arkansas River. A relatively small tribe, the Arapahos were driven by circumstances to become resourceful in the face of intertribal conflicts and the potential adversity wrought by the presence of Anglo-Americans.¹⁰

¹⁰For Cheyenne history and culture, see, Peter J. Powell, *Sweet Medicine: The Continuing Role of the Sacred Arrows, the Sun Dance, and the Sacred Buffalo Hat in Northern Cheyenne History* (2 vols.; Norman: University of Oklahoma Press, 1969); John H. Moore, *The Cheyenne* (Cambridge, Mass.: Blackwell Publishers, 1996); John H. Moore, *The Cheyenne Nation* (Lincoln: University of Nebraska Press, 1987); Donald J. Berthrong, *The Southern Cheyennes* (Norman: University of Oklahoma Press, 1963); George Bird Grinnell, *The Cheyenne Indians* (2 vols.; New York: Cooper Square, 1923); John Stands In Timber and Margot Liberty, *Cheyenne Memories* (New Haven: Yale University Press, 1967); and Peter J. Powell, *People of the Sacred Mountain: A History of the Northern Cheyenne Chiefs and Warrior Societies, 1830-1879, with an Epilogue, 1969-1974* (2 vols.; San Francisco: Harper and Row, 1981). For the Arapahos, see Virginia Cole Trenholm, *The Arapahoes, Our People* (Norman: University of Oklahoma Press, 1970); John R. Swanton, *The Indian Tribes of North America* (Washington: Smithsonian Institution Press, 1971), pp. 384-86; and Loretta Fowler, *Arapahoe Politics, 1851-1978* (Lincoln: University of

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Treaty of Fort Wise

In 1851, the Cheyennes and Arapahos subscribed to the Treaty of Fort Laramie, which assigned them land lying between the North Platte River on the north and the Arkansas River on the south running from the area of the Smoky Hill River west into the Rocky Mountains. By the late 1850s the southern divisions of both tribes ranged through central Kansas and eastern Colorado as they pursued their hunting and warring routine with enemy tribes, and for the most part ignored the gradual inroads of whites into their country. In 1857 the Southern Cheyennes experienced a confrontation with troops at Solomon's Fork, Kansas, and their subsequent attitude toward whites had become one of tolerance and avoidance.¹¹ During the Colorado gold rush and the concomitant movement by whites into and through the territory, most of the Cheyennes and Arapahos remained peaceable, and peace factions headed by Black Kettle and White Antelope of the Cheyennes and Little Raven of the Arapahos sought to continue that status. But the tide of emigration associated with the gold rush, particularly along the Platte and Arkansas valleys, led government authorities to impose new strictures on the Indians.

In 1861, these chiefs touched pen to the Treaty of Fort Wise, a document that surrendered most of the Indian territories as previously acknowledged by the Fort Laramie Treaty and granted them instead a triangular-shaped tract along and north of the upper Arkansas River in eastern Colorado, where they would henceforth receive government annuities and learn to till the land. The accord, however, did not include the consent of all Cheyennes and Arapahos living in the Platte country, and those leaders who signed drew enduring resentment from the northerners who were resisting such changes. Many of the affected people, including the band of Southern Cheyenne Dog Soldiers who repudiated the concept of any territorially confining pact, continued their age-old pursuits in the buffalo country,

Nebraska Press, 1982). As cited in *Sand Creek Massacre Project, Volume Two: Special Resource Study and Environmental Assessment*, p. 26.

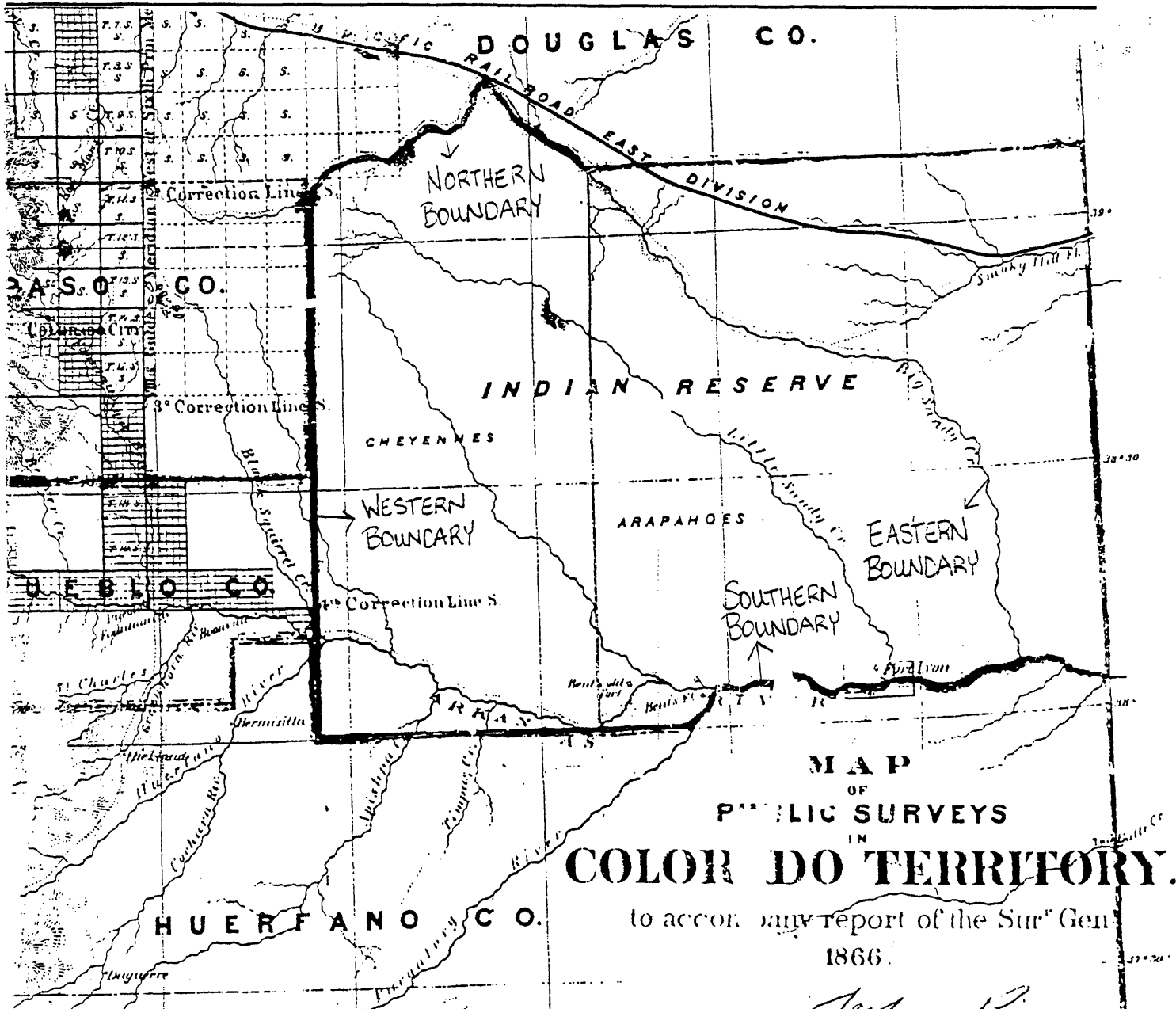
¹¹For the Solomon's Fork encounter, see William Y. Chalfant, *Cheyennes and Horse Soldiers: The 1857 Expedition and the Battle of Solomon's Fork* (Norman: University of Oklahoma Press, 1989). As cited in *Sand Creek Massacre Project, Volume Two: Special Resource Study and Environmental Assessment*, p. 26.

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1866 map depicting the Cheyenne and Arapaho Reservation in Colorado Territory established by the 1861 Treaty of Fort Wise. The northern and eastern boundaries were Big Sandy Creek. The southern boundary was the Arkansas River. The western boundary was approximately 20 miles east of Colorado City (near present-day Colorado Springs). *Western History Department, Denver Public Library*

Remarks:
Dotted lines for proposed surveys.
S. Townships to be sectionized.

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and refused to move onto the new reservation. Similarly, the Kiowas and Comanches, to the south, remained disinclined to participate in the treaty.¹²

The immediate circumstances leading to Sand Creek grew out of the Treaty of Fort Wise and the desire of Colorado Territorial Governor John Evans to seek adherence to it by all of the Cheyennes and Arapahos. Within the atmosphere prevailing in the wake of the Minnesota outbreak, Evans, an ambitious visionary, became committed to eliminating all Indians from the plains so that Euro-American travel and settlement could proceed safely and without interruption. He was also interested in seeing the transcontinental railroad reach Denver and wanted eastern Colorado free of tribesmen to facilitate that development. Adding to this, Evans and others feared that the tribes might somehow be influenced by the Confederate cause, to include being drawn into a plan to cut communications between the East and California by seizing posts in the Platte and Arkansas valleys. Concentrated on the Upper Arkansas Reservation, the Indians might not only be better controlled, but would be altogether cleared from roads used by miners and settlers, and to this end Evans invited the tribal leadership to attend a council scheduled for September 1863 on the plains east of Denver.

The Cheyennes and Arapahos were clearly not interested, however, and none appeared to negotiate; most regarded the treaty as a swindle and refused to subject themselves to living on the new reserve. They, moreover, believed the area devoid of buffalo, whereas the plains of central Kansas still afforded plentiful herds. Coincidentally, at Fort Larned, Kansas, a Cheyenne man was killed in an incident that fueled considerable controversy among the Indians and resolved them even further against more treaties. Governor Evans took the refusal to assemble as a sign that the tribes were planning war; he used the rebuff, along with rumored incitations of area tribes by northern Sioux, to promote the notion to federal officials that hostilities in his territory were imminent. Although Evans may have sincerely believed that his territory was in grave danger, it has been suggested that he lobbied to create a

¹²Donald J. Berthrong, *The Southern Cheyennes*, pp. 148-52; Robert M. Utley, *Frontiersmen in Blue* (New York: The Macmillan Company, 1967), pp. 283-84; George Bird Grinnell, *The Fighting Cheyennes* (New York: Charles Scribner's Sons, 1915), p. 120; Stan Hoig, *The Sand Creek Massacre* (Norman: University of Oklahoma Press, 1961), pp. 12-17; David F. Halaas, "'All the Camp was Weeping': George Bent and the Sand Creek Massacre," *Colorado Heritage* (Summer, 1995), p. 7. As cited in *Sand Creek Massacre Project, Volume Two: Special Resource Study and Environmental Assessment*, p. 27.

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situation that would permit him to forcibly remove the tribesmen from all settled areas of Colorado.¹³

Governor Evans, Colonel Chivington, and the Plains War of 1864

Evans's accomplice in the evolving scenario was Colonel John M. Chivington, a Methodist minister who had garnered significant victories against Confederate troops at Apache Canyon and Glorieta Pass in New Mexico. Nicknamed "The Fighting Parson," Chivington governed the Military District of Colorado within the Department of the Missouri, whose commanders were often preoccupied with operations elsewhere, thus affording him an opportunity to play out his military and political fortunes on the Colorado frontier. In January 1864, reorganization of the military hierarchy placed Chivington's district under Major General Samuel R. Curtis's Department of Kansas, a jurisdiction that remained considerably immersed in campaigns against Confederates in eastern Kansas and the Indian Territory, thus leaving Chivington to pursue his interests with total independence. As the war proceeded in the East, however, both Chivington and Evans grew alarmed at seeing territorial troops increasingly diverted to help fight Confederate forces in Missouri and Kansas. Evans lobbied for their return, and requested that regulars be sent to guard the crucial supply and communication links along the Platte and Arkansas valleys. Facing widespread manpower deficits in the East, Washington initially rejected his appeals.¹⁴

Chivington endorsed Evans's notion that the Indians in his territory were ready for war, even though evidence indicates that, despite the transgressions of a few warriors, the tribesmen believed they were at peace. In April 1864, however, when livestock, possibly strayed from ranches in the Denver and South Platte River areas, turned up in the hands of Cheyenne Dog Soldiers, Evans and Chivington interpreted it as provocation for the inception of conflict. In response, troops of the First Colorado Cavalry skirmished with those Indians at Fremont's Orchard along the South Platte River. They acted on Chivington's orders to "kill Cheyennes

¹³Gary L. Roberts, "Sand Creek: Tragedy and Symbol," pp. 76-108; Utley, *Frontiersmen in Blue*, p. 284; Grinnell, *The Fighting Cheyennes*, pp. 121-29; Alvin M. Josephy, Jr., *The Civil War in the American West* (New York: Random House, 1991), pp. 295, 297-98; Berthrong, *The Southern Cheyennes*, pp. 155, 158-61, 166-69. As cited in *Sand Creek Massacre Project, Volume Two: Special Resource Study and Environmental Assessment*, p. 29.

¹⁴Utley, *Frontiersmen in Blue*, pp. 284-85; Josephy, *Civil War in the American West*, p. 299. As cited in *Sand Creek Massacre Project, Volume Two: Special Resource Study and Environmental Assessment*, p. 27.

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wherever and whenever found." Soldiers during the following month assaulted numerous innocent Cheyenne camps, driving out the people and destroying their property, and in one instance killed a peace chief named Starving Bear, who had earlier headed a delegation that met with President Abraham Lincoln in Washington. In retaliation, parties of warriors mounted raids along the roads in Kansas, especially between Forts Riley and Larned, but refrained from all-out conflict. Attempting to stem the trouble, Curtis's inspector-general advised against further Chivington-like forays and instead counseled conciliation with the Cheyennes and protection of the travel routes. He complained that the Colorado men did "not know one tribe from another and . . . will kill anything in the shape of an Indian."

But it was too late. Following the murders of several more of their people, the Cheyennes escalated their raiding, and their camps soon swelled with stolen goods. Marauding warriors from among the Arapahos, Kiowas, and Lakotas, often minus the endorsement of their chiefs, opened attacks on white enterprises along the trails bordering the Platte, Smoky Hill, and Arkansas rivers in Nebraska and Kansas, killing more than thirty people and capturing several women and children. In Colorado, warriors attacked and murdered an entire family, the Hungates, on Box Elder Creek but thirty miles from Denver; public display of their bodies, coupled with fearful pronouncements from Governor Evans's office, drove most citizens from isolated ranches and communities to seek protection in Denver. In one panicked missive to the War Department, Governor Evans called for 10,000 troops. "Unless they can be sent at once," he intoned, "we will be cut off and destroyed." Although the Cheyennes received blame for the Hungate tragedy, Arapahos later confessed to the deed.¹⁵

Responding to the crisis, in July and August 1864, General Curtis directed several columns of troops to scour the country west, north, and south of Fort Larned. While the campaign brought meager results, it succeeded in opening the traffic route west along the Arkansas because of increased garrisons at the Kansas and Colorado posts. Curtis now strengthened his administration of the area by establishing a single district, the District of the Upper Arkansas, commanded by Major General James G. Blunt, to replace those that had previously monitored Indian conditions. Similar administrative changes were made in Nebraska. There, in August, Cheyennes attacked homes along the Little Blue River, killing 15 settlers and carrying off others. In response, Curtis mounted a strong campaign of Nebraska and

¹⁵Utley, *Frontiersmen in Blue*, pp. 285-87; Halaas, "George Bent and the Sand Creek Massacre," p. 7; Berthrong, *The Southern Cheyennes*, pp. 176-91; Hoig, *The Sand Creek Massacre*, pp. 36-90; West, *Contested Plains*, pp. 289-91; Grinnell, *The Fighting Cheyennes*, pp. 131-42. The quotes are cited in Josephy, *Civil War in the American West*, pp. 300, 303. As cited in *Sand Creek Massacre Project, Volume Two: Special Resource Study and Environmental Assessment*, p. 30.

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Kansas troops to search through western Kansas, but the soldiers found no Indians. Similarly, in September General Blunt led an expedition out of Fort Larned in south-central Kansas, eventually heading north seeking Cheyennes reported in the area. On September 25, two companies of Colorado troops under Major Scott J. Anthony encountered a large village of Cheyennes and Arapahos on Walnut Creek and engaged them, fighting desperately until Blunt arrived with support. The command pursued the Indians for two days, then withdrew from the field.¹⁶

Peace Initiatives

Following these operations, Blunt and Curtis became distracted from the Indian situation by a sudden Confederate incursion into Missouri that demanded their immediate attention. The diversion permitted Colonel Chivington to step forward, just at a time when the Cheyennes, Arapahos, and other tribes began slackening the war effort in preparation for the winter season. Buffalo hunting now superseded all else. Cheyenne leaders like Black Kettle, who had previously urged peace, regained influence. Black Kettle learned of a proclamation issued by Governor Evans calling upon all "Friendly Indians of the Plains" to divorce themselves from the warring factions and to isolate their camps near military posts to insure their protection. Those who did not thus surrender would henceforth be considered hostile. In late August, the chief notified Major Edward W. Wynkoop, commander at Fort Lyon, on the Arkansas River near present Lamar, Colorado, of his desire for peace. Following up, Wynkoop led his command of First Colorado Cavalry out to meet Black Kettle and the Arapaho leader, Left Hand, at the big timbers of the Smoky Hill River, near Fort Wallace, Kansas. At the council, the Cheyennes and Arapahos turned over several captive whites and consented to meet with Evans and Chivington in Denver to reach an accord. Then Black Kettle and the other leaders followed Wynkoop back to Fort Lyon.

When Black Kettle and six headmen arrived in Denver, the city was in turmoil because of the conditions wrought by the Indian conflict. Incoming supplies of food and merchandise

¹⁶Hoig, *The Sand Creek Massacre*, pp. 91-97; Utey, *Frontiersmen in Blue*, pp. 287-89; Josephy, *Civil War in the American West*, pp. 301-04; Berthrong, *The Southern Cheyennes*, pp. 193-208; Grinnell, *The Fighting Cheyennes*, pp. 155-58. For a participant's view of these broad operations, see Eugene F. Ware, *The Indian War of 1864* (New York: St. Martin's Press, 1960). As cited in *Sand Creek Massacre Project, Volume Two: Special Resource Study and Environmental Assessment*, p. 31.

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had been stopped by the warfare, and the citizenry was still shaken by the Hungate murders. Furthermore, in August, the governor had published a proclamation contradicting his earlier one and that called upon citizens to kill all Indians and seize their property, effectively extending an invitation for wholesale bloodshed and thievery. Evans had meantime received from federal authorities permission to raise a regiment of 100-day United States volunteers, to be designated the Third Colorado Cavalry, and Chivington was preparing it for field service. All of these developments made Evans's earlier pronouncements ring hollow, especially with many of the territory's citizens clamoring for vengeance. Moreover, the governor needed to back up his earlier war predictions with Washington officials and clear up questions regarding the status of Indian lands in Colorado. And if the tribes went unpunished, he believed it would likely only encourage them to renew the warfare next year.¹⁷

At the council at Camp Weld near Denver on September 28, 1864, Evans spoke evasively to the chiefs, informing Black Kettle that, although his people might still separate themselves from their warring kin, they must make their peace with the military authorities, in essence turning the situation over to Chivington. Anxious for peace, Black Kettle and his entourage acceded to all conditions and Chivington told them that they could report to Fort Lyon once they had laid down their arms. But the Camp Weld meeting was fraught with "deadly ambiguities." The Indians departed the proceedings convinced that since they had already been to the post they had made peace, although neither Evans nor Chivington admitted that such was the case. Further, a telegram from General Curtis admonished that "I want no peace until the Indians suffer more . . . [and only upon] my directions." Evans notified Washington authorities of the continued hostility of the tribesmen and of the need to deal with them by force of arms, noting that "the winter . . . is the most favorable time for their chastisement." Yet, in consequence of the Camp Weld meeting, Black Kettle prepared his people to accept the conditions and surrender themselves as prisoners of war.¹⁸

¹⁷Hoig, *Sand Creek Massacre*, pp. 98-107; Utley, *Frontiersmen in Blue*, pp. 290-91; Halaas, "George Bent and the Sand Creek Massacre," pp. 7-9; Josephy, *Civil War in the American West*, pp. 305-06; West, *Contested Plains*, p. 291; Grinnell, *The Fighting Cheyennes*, pp. 152-53. As cited in *Sand Creek Massacre Project, Volume Two: Special Resource Study and Environmental Assessment*, p. 32.

¹⁸Berthrong, *The Southern Cheyennes*, pp. 210-13; Utley, *Frontiersmen in Blue*, p. 291; Hoig, *The Sand Creek Massacre*, pp. 110-28; Josephy, *Civil War in the American West*, pp. 306-07 (Quotes are in *ibid.*, p. 307); West, *Contested Plains*, p. 295; Grinnell, *The Fighting Cheyennes*, pp. 153-54. As cited in *Sand Creek Massacre Project, Volume Two: Special Resource Study and Environmental Assessment*, p. 34.

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First to arrive in late October at Fort Lyon were 113 lodges of Southern Arapahos under Little Raven and Left Hand. Because as prisoners the Arapahos could not hunt, Major Wynkoop issued rations to the destitute people while assuring them of their safety. But Wynkoop's action directly countered General Curtis's policy of punishing the tribes, and when word of his charity reached district headquarters at Fort Riley tempers flared. Wynkoop was summarily called there to explain his actions. At Fort Lyon, Major Scott Anthony, of Chivington's First Colorado Cavalry, replaced him. On arrival at Fort Lyon in early November, Anthony refused the Arapahos further provisions and temporarily disarmed them. When Black Kettle reached the fort he reported that his lodges were pitched some forty miles away on Sand Creek, a location that Anthony approved because he had no rations to feed the Cheyennes. The major told them that he was seeking authority to feed them at Fort Lyon. Major Wynkoop, who the Indians trusted, had given them assurances of Anthony's integrity, and the Cheyenne leaders had accepted these conditions prior to Wynkoop's departure from Fort Lyon on November 26. Advised to join Black Kettle's people on Sand Creek, only the Arapaho leader, Left Hand, complied and started his few lodges in that direction; Little Raven took his followers far away down the Arkansas.

Military Preparations

While all of this proceeded, Colonel Chivington orchestrated events in Denver that would climax in the confrontation with the Cheyennes and Arapahos on Sand Creek. Following a failed statehood vote, in which he was defeated as a candidate for Congress, Chivington directed his efforts to readying the new regiment, locally castigated as the "Bloodless Third" because its members had yet to kill a single Indian and were soon to close out their 100-day enlistment. Composed of but partly trained officers and undisciplined men from the local community, the Third Colorado Cavalry had been organized by Colonel George L. Shoup, who had previously served under Chivington. Earlier that fall, Chivington had envisioned attacking bands of Cheyennes reported in the Republican River country, but by November (and perhaps secretly all along) he targeted Black Kettle and his people. His every movement appeared calculated to that end, for the tribesmen technically were not at peace and were awaiting Curtis's consent before moving to Fort Lyon. In October, in this tense atmosphere,

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Colonel Chivington armed his command and, with Shoup commanding the regiment, started companies south to assemble at Bijou Basin, 60 miles southeast of Denver.¹⁹

On November 14, Chivington himself marched out of Denver with companies of the Third and First Colorado Cavalry regiments headed toward the Arkansas River. The weather turned foul, and the movement was beset with drifting snows that delayed units from rendezvousing at Camp Fillmore, near Pueblo. On the 23rd, Chivington inspected the united command, then all proceeded east along the Arkansas. The troops reached Fort Lyon at midday, November 28. Chivington had traveled quickly and quietly and his approach surprised the garrison. To secure knowledge of his presence and movements, the colonel placed a cordon of pickets around the fort and refused to allow anybody to leave. At Fort Lyon, Major Anthony greeted Chivington and, apprised of his mission to find and destroy Black Kettle's camp as prelude to striking the Smoky Hill villages, gave his wholehearted support to the extent of providing additional troops and offering guidance to the village. Some officers protested that Black Kettle's people were *de facto* prisoners of the government, awaiting only General Curtis's permission before they should arrive.

At around 8 p.m. on the 28th, Chivington led his column out of Fort Lyon paralleling an old Indian trail that headed northeast. Scarcely any snow lay on the ground. His command consisted of Shoup's Third Colorado Cavalry and about one-half of the First Colorado Cavalry divided under Major Anthony and First Lieutenant Luther Wilson, in all about 700 men bundled in heavy overcoats. Mules pulled along four howitzers and their ammunition and equipment. Some 37 miles away on the northeast side of Sand Creek stood Black Kettle's village of approximately 100 lodges housing about 500 people. Other Cheyenne leaders in the camp were Sand Hill, White Antelope, Bear Tongue, One Eye, and War Bonnet. Also here were approximately eight Arapaho lodges with Left Hand. Although some men were present, many had gone hunting, leaving mostly women, children, and the elderly in the village. Through the night of November 28-29, all were oblivious to the closing proximity of the soldiers.²⁰

¹⁹Utley, *Frontiersmen in Blue*, pp. 292-93; Hoig, *The Sand Creek Massacre*, pp. 129-32; Berthrong, *The Southern Cheyennes*, pp. 214-15; West, *Contested Plains*, pp. 297-98; Josephy, *Civil War in the American West*, pp. 307-08. As cited in *Sand Creek Massacre Project, Volume Two: Special Resource Study and Environmental Assessment*, p. 34.

²⁰The locations of the Cheyenne camp components are laid out according to George Bent in George E. Hyde, *Life of George Bent written from His Letters*, ed. Savoie Lottinville (Norman: University of Oklahoma Press, 1968), p. 149. See also, Peter John Powell, *People of the Sacred Mountain: A History of the Northern Cheyenne Chiefs and Warrior Societies, 1830-*

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Sand Creek Massacre Site
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The Massacre

Chivington's force kept a lively pace through the cold, moonless night, so that the first streaks of dawn on November 29 revealed the white tipis of the Cheyennes and Arapahos a few miles off to the northwest. Advancing closer, the soldiers gained a ridge overlooking Sand Creek from which they could clearly discern the camp. Pony herds ranged on either side of the stream, and Chivington dispatched units to capture and corral the animals before the Indians might use them. As the tribesmen slowly awakened, the troops descended into the dry streambed and moved northwest along it with the howitzers in tow. While troops of the First Colorado rode ahead, Chivington halted the men of the Third about one-half mile from the village so that they could remove their overcoats and other luggage. He exhorted them at the prospect before them, then sent them forward toward the camp, whose occupants had gradually become aroused at the noise of the approaching threat. Nearing the lower end of the village, the soldiers deployed their force and opened fire. As the startled Indians ran out of their homes, howitzers hurled exploding shells that turned the people away to congregate near the westernmost lodges while their leaders tried to communicate with the attackers. Then shooting erupted everywhere. The leader White Antelope ran forward, arms raised and waving for attention, but a soldier bullet cut him down. Black Kettle, proponent for peace and guardian of his people, reportedly raised an American flag and a white flag on a pole near his lodge to announce his status, but it was ignored in the heat of the onslaught.

Chivington's command continued the small arms fire from positions northeast and southeast of the camp. Caught in crossfire, the warriors responded by attempting to shield the women, children, and elderly who ran to the back of the lodges. Most of the howitzer rounds fell short of their mark, although some burst over the village. As the soldiers advanced on horseback along either side of the creek, they kept up their shooting, and those on the north (east) bank of the stream passed through the fringe of the camp. The mass of people began to flee in all directions for safety. Many ran into and up the creek bottom, which appeared to afford a natural protective corridor leading away from the assault. Riding on either side of the Indians, however, the cavalry troops indiscriminately fired hundreds of rounds into the fleeing tribesmen, and began to inflict large numbers of casualties among them. Meantime,

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other Indians bolting the village at the opening of the attack had managed to obtain horses and were running generally north and southwest over the open terrain as they tried to elude squads of pursuing cavalymen. Many of them were chased down and killed by the flying troops.

But it was the mass of people in the streambed that drew the attention of most of the soldiers. As they reached a point several hundred yards above the village, these people – composed mostly of noncombatants – sought to find shelter in hastily dug pits and trenches in the creek bed, most excavated by hand at the base of the dry stream banks. The Sand Creek bottom was several hundred yards wide at this point, and the people sought shelter along either bank, digging hiding places and throwing the sand and dirt outward to form protective barriers. Having pursued the Cheyennes and Arapahos to this location, the troops dismounted on either side of the stream and approached cautiously. Some began firing at Indians sheltered in the pits beneath the opposite banks, while others crawled forward and discharged their weapons blindly over the top of the bank. Thus trapped, the Indian people fought back desperately with what few weapons they possessed. Shortly, however, the howitzers arrived from downstream, took positions on either side of the Sand Creek bottom, and began delivering exploding shell into the pits. This bombardment, coupled with the steady fire of the cavalry small arms, was too much for the people, and by the time the affair was over at around 2 p.m., at least 150 Cheyennes and Arapahos lay dead, most of them killed during the slaughter in the defensive pits above the village or in the stream bed as they ran from the camp to elude the soldiers. Chivington lost ten men killed and thirty-eight wounded in the encounter. Throughout the balance of the day, parties of cavalymen roamed the area for miles around finishing off any survivors they could find. That night, nonetheless, many of those wounded during the carnage managed to get away from the pits and join other village escapees who, over the next several days, journeyed northeast to the Cheyenne camps along the Smoky Hill River. Surprisingly, despite the suddenness and ferocity of the Sand Creek assault, the majority of villagers, including many who were severely wounded, somehow escaped the soldiers and survived.

Those who did not survive became the objects of widespread mutilation at the hands of the soldiers, particularly of members of the "Bloodless Third." Over the next day, these largely untrained and undisciplined troops, including some officers, roamed the site of the destruction, scalping and otherwise desecrating the dead, thereby compounding the basic butchery of the event. The soldiers then plundered and burned the village and destroyed its contents. The captured pony herd traveled south with Chivington as he continued his campaign, and the dead and wounded soldiers were removed to Fort Lyon. Chivington had

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earlier planned to mete similar treatment upon the Smoky Hill assemblage, but instead turned toward the Arapaho village that Major Anthony had earlier sent away from Fort Lyon. These tribesmen had fled by the time the troops followed Sand Creek to its mouth on the Arkansas River. The Third Colorado then moved upstream to Fort Lyon before heading back to Denver, where they were greeted on December 22 by a throng of cheering citizens ecstatic over the "victory" of Sand Creek. Scalps from the Indian victims were ceremoniously exhibited at a local theater as the soldiers recounted their participation. As if the true number of deaths were not enough, Chivington boasted of having killed between 500 and 600 Indians in his attack.²¹

Outcry and Aftermath

In the aftermath of Sand Creek, as word gradually spread about the brutality of the onslaught, questions arose about Chivington's version of events. Although Chivington had numerous supporters, particularly in Colorado, the truth shocked and sickened many Americans. In 1865, Sand Creek became the focus of three federal investigations, one military and the others congressional, looking into justification for, and details of, the action. Senator James R. Doolittle (R-Wisconsin), chairman of the Senate Committee on Indian Affairs, directed an inquiry following receipt of information about the event that "made one's blood chill and freeze with horror." In the West, General Curtis was ordered to find out what had occurred at Sand Creek. The examinations resolved that Chivington and his troops had conducted a premeditated campaign that resulted in the needless massacre of the Cheyennes and Arapahos, and that the atrocities that followed were an abject disgrace. By then, however, the colonel and his men were out of the service and could not be prosecuted for their actions, and only Chivington's political future suffered. The Joint Committee on the Conduct of the War concluded in its assessment of Chivington that "he deliberately planned and executed a foul and dastardly massacre which would have disgraced the veriest savage among those who were the victims of his cruelty." The committee also resolved that Governor Evans "was fully aware that the Indians massacred so brutally at Sand Creek, were then, and had

²¹This account of Sand Creek is based upon information in Roberts, "Sand Creek," pp. 421-41; Hoig, *The Sand Creek Massacre*, pp. 145-62; Utey, *Frontiersmen in Blue*, pp. 295-96; Josephy, *Civil War in the American West*, pp. 308-11; Powell, *People of the Sacred Mountain*, I, pp. 301-09; Hyde, *Life of George Bent*, pp. 151-56; Grinnell, *The Fighting Cheyennes*, pp. 163-73; and Berthrong, *The Southern Cheyennes*, pp. 217-22. Chivington's figure is in his report of December 16, 1864, in *The War of the Rebellion: A Compilation of the Official Records of the Union and Confederate Armies* (73 vols., 128 parts; Washington: Government Printing Office, 1880-1901), Series I, Vol. XLI, Part I, p. 949. As cited in *Sand Creek Massacre Project, Volume Two: Special Resource Study and Environmental Assessment*, p. 38.

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been, actuated by the most friendly feelings towards the whites. . . .²² Ultimately, Evans paid the price for his involvement in events preliminary to the massacre and was dismissed as governor. In time, the Cheyenne and Arapaho victims of Sand Creek received scant restitution through the Treaty of the Little Arkansas, concluded in 1865, which purported to compensate them for suffering and property losses, a provision as yet unfulfilled. The treaty repudiated Chivington's massacre and promised to bestow lands on chiefs and survivors of Sand Creek whose parents or husbands had fallen at Chivington's hands, as well as redress for white citizens who had been impacted by the warfare.²³

National Significance of the Sand Creek Massacre

The Sand Creek Massacre is nationally significant for several reasons. In the lives lost at Sand Creek, both the Cheyennes and Arapahos experienced familial and societal disruptions that have since spanned the generations of their societies. While the event thus impacted both tribes, it most directly carried devastating physical, social, political, and material consequences among the relatively small (ca. 3,000) Cheyenne population, and indisputably changed the course of their tribal history. Beyond the basic human loss, the deaths of numerous chiefs in the massacre, occurring at a time when the Cheyennes were already experiencing fragmentation in their system with the evolution of the Dog Soldier Band, ultimately had long-range influences on the structural bonds within Cheyenne society. The Council of Forty-four, the central entity of Cheyenne government, was devastated with the losses of White Antelope, One Eye, Yellow Wolf, Big Man, Bear Man, War Bonnet, Spotted Crow, Bear Robe, and Little Robe, besides those of the headmen of three warrior societies. In addition, the losses in material fixtures, including homes, clothing, furnishings, and even

²²Josephy, *Civil War in the American West*, pp. 311-12 (including first quote); Uteley, *Frontiersmen in Blue*, pp. 297 (second quote), 309; Hoig, *The Sand Creek Massacre*, pp. 163-76 (including third quote, p. 166); Roberts, "Sand Creek," pp. 479-521. The three published products of these investigations are: U.S. Senate, 38 Cong., 2 sess. *Report of the Joint Committee on the Conduct of the War, Massacre of the Cheyenne Indians*. Report No. 142 (Washington: Government Printing Office, 1865); U.S. Senate, 39 Cong., 2 sess., *Report of the Joint Special Committee. Condition of the Indian Tribes with Appendix (The Chivington Massacre)*. Report No. 156 (Washington: Government Printing Office, 1867); and U.S. Senate, 39 Cong., 2 sess. *Report of the Secretary of War, Communicating . . . a Copy of the Evidence Taken at Denver and Fort Lyon, Colorado Territory by a Military Commission Ordered to Inquire into the Sand Creek Massacre, November 29, 1864*. Executive Document No. 26 (Washington: Government Printing Office, 1867). As cited in *Sand Creek Massacre Project, Volume Two: Special Resource Study and Environmental Assessment*, p. 38.

²³Berthrong, *Southern Cheyennes*, pp. 240-44; Roberts, "Sand Creek," pp. 510, 562-66. As cited in *Sand Creek Massacre Project, Volume Two: Special Resource Study and Environmental Assessment*, p. 39.

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artwork during the destruction of Black Kettle's village were immense, with immediate and future impacts within the tribal community. Among the 50 or so Arapahos at Sand Creek, seemingly few survived, and their chief, Left Hand, was mortally wounded in the massacre. Other effects among the Arapahos were similar to those among the Cheyennes, and the Arapaho bands in the Arkansas country were divided ever after.²⁴

A major result of the Sand Creek Massacre was its effect on the course of Indian-white relations, notably the implementation of federal Indian policy over ensuing decades. Although largely instigated independently by federalized territorial forces operating under the license of Colorado authorities, the event and its aftermath produced an atmosphere of pervasive and nervous distrust between the federal government – principally the army, as the instrument of national policy – and the plains tribes that complicated their associations and compounded negotiations on virtually every matter. In a single devastating strike, the Colorado troops had eliminated nearly all of the Cheyenne chiefs who had favored peace; those leaders who survived Sand Creek thereafter became staunch advocates of resistance. News of the treachery spread among the tribes like wildfire. As one official warned of an upcoming meeting with Indians when troops might be operating in the vicinity, "An angel from Heaven would not convince them but what another 'Chivington Massacre' was intended."²⁵

The months following Sand Creek witnessed an eruption of warfare throughout the central plains, with Cheyenne, Lakota, and Arapaho warriors striking the emigration routes along the North Platte, South Platte, Republican, and Arkansas valleys. In the north, Sand Creek added further fuel to the invasion of Indian lands already underway there via the Bozeman Trail, producing several army expeditions against the tribes, as well as an unsuccessful attempt to militarily occupy the region. On the southern plains, troops attempted to subdue the tribes and overawe them with similar campaigns. In 1865, 1867, and 1868, tenuous treaties arranged between the government and the plains Indians sought to isolate them on designated tracts removed from the principal arteries westward, but peace remained elusive. These conflicts included the November 27, 1868, attack by the 7th U.S. Cavalry led by Lt. Col. George A. Custer upon Chief Black Kettle's Cheyenne village along the Washita River in

²⁴Powell, *People of the Sacred Mountain*, I, pp. 309-10; Roberts, "Sand Creek," pp. 684-91. As cited in *Sand Creek Massacre Project, Volume Two: Special Resource Study and Environmental Assessment*, p. 42.

²⁵Indian Agent Jesse H. Leavenworth to Brevet Major General John B. Sanborn, August 1, 1865. National Archives, Record Group 393, Part III, Entry 769, Vol. 2, p. 171.

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Oklahoma (now designated as the Washita Battlefield National Historic Site). The conflicts of the 1870s, including the Great Sioux War of 1876-1877 and Custer's death at Little Big Horn, also could trace their origins at least partly to the Sand Creek Massacre and its long-term unsettling effects among the plains tribesmen.²⁶

The Sand Creek Massacre relatedly played a role in the Indian reform movement as partly manifested in the congressional investigations that followed the tragedy, and initially produced an outcry against the military that continued throughout the period of the post-Civil War Indian conflicts. The effect was to place the army in the position of trying to prevent noncombatant casualties during its Indian campaigns, a concept that often conflicted with military tactics that included surprise dawn attacks on villages whose occupants were often asleep. Traditional impressions to the contrary, because of public indignation over Sand Creek and the anti-military sentiments it produced, both Generals William T. Sherman and Philip H. Sheridan, whose administrative domains included the plains region, sought to keep noncombatant losses low in the campaigns that followed, an objective that was not always achieved. In addition, partly because of the federal inquiries that followed the event, the Sand Creek Massacre directly impacted congressional thinking about the role of the army in Indian policy. It not only heightened anti-military bias among Indian reformers, but it blunted then-current efforts to transfer control of Indian affairs from the Interior Department to the War Department. Moreover, Sand Creek became an important symbol in the movement for reform of policies towards Indians, and from 1865 through the 1880s was repeatedly highlighted as proof of the essential inhumanity of federal policy. In more recent times, it has been used by Native Americans and modern Indian activist movements as proof of the genocidal intent of United States Indian policy.²⁷

The Sand Creek Massacre was one of several clearly indisputable human catastrophes that influenced the course of Indian-white relations on the frontier during the last half of the nineteenth century, the others being the Bear River Massacre of Shoshoni Indians on January 29, 1863; the Marias River Massacre of Piegan Indians on January 23, 1870; and the

²⁶For these events, see Utley, *Frontiersmen in Blue*, pp. 300-40, and Roberts, "Sand Creek," pp. 523-66, 686. The quote is from Indian Agent Jesse H. Leavenworth to Brevet Major General John B. Sanborn, August 1, 1865, (National Archives, Record Group 393, Part III, Entry 769, Volume 2), p. 171. As cited in *Sand Creek Massacre Project, Volume Two: Special Resource Study and Environmental Assessment*, p. 42.

²⁷Roberts, "Sand Creek," pp. 568-69, 604. As cited in *Sand Creek Massacre Project, Volume Two: Special Resource Study and Environmental Assessment*, p. 43.

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Sand Creek Massacre Site
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Wounded Knee Massacre of December 29, 1890, in which at least 250 Lakota Indians died.²⁸ In the two former cases, the massacres ended extended periods of conflict with those small bodies and doubtless exhibited some of the same cultural manifestations among them as among the Cheyennes and Arapahos after Sand Creek. Wounded Knee occurred after the Lakotas had been forcibly settled on reservations. Yet because of the influences of the pervasive Cheyenne and Arapaho societies throughout the Great Plains region, the cultural, political, and military repercussions from Sand Creek truly lingered for a generation, affecting intercultural relationships in matters of peace, war, and daily existence that in many respects have continued to the present. Thus, in its immediate, direct, and long-range impacts upon the Cheyenne and Arapaho societies and the plains Indian community, as well as in its immediate and subsequent bearing on the progression of federal Indian and military policy respecting the plains tribes, the Sand Creek Massacre comprised an event of outstanding significance as reflected within the broad national patterns of United States history.

²⁸Fatality figures for these encounters are from *Bear River Massacre Site: Final Special Resource Study and Environmental Assessment* (Denver: National Park Service, 1996), p. 16; Jerome A. Greene, *Reconnaissance Survey of Indian-U.S. Army Battlefields of the Northern Plains* (Denver: National Park Service, 1998), p. 85; and Richard E. Jensen, R. Eli Paul, and John E. Carter, *Eyewitness at Wounded Knee* (Lincoln: University of Nebraska Press, 1991), p. 20. As cited in *Sand Creek Massacre Project, Volume Two: Special Resource Study and Environmental Assessment*, p. 43.

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Section 9

Major Bibliographic References:

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Section 10

UTM References (continued):	Zone	Easting	Northing
5	13	720360	4267090
6	13	717100	4267010
7	13	717040	4268600
8	13	712080	4273290

Verbal Boundary Description

The boundary of the Sand Creek Massacre is indicated on the attached USGS map and is delineated by the polygon whose vertices are listed under the UTM References.

Boundary Justification

The boundary of the Sand Creek Massacre Site was determined using section boundaries on USGS maps that incorporate all related features of the massacre. The boundary of the massacre site is approximately 5 1/2 miles in length and two miles in width, a configuration that matches historic descriptions of the length and extent of the Sand Creek Massacre. The massacre site boundary incorporates all the major elements of the Sand Creek Massacre, including the village site, the sandpits area, the area of Indian flight, and the point from which Chivington and his troops launched their attack upon the Indian encampment. The length and extent of the Sand Creek Massacre site, as identified in this nomination, was agreed upon by the Cheyenne and Arapho Tribes of Oklahoma, the Northern Cheyenne Tribe, the Northern Arapaho Tribe, the State of Colorado, and the National Park Service.

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Additional Documentation

Maps

USGS Maps

North of Chivington Quadrangle, Colorado, 7.5 minute series (topographic), 1982
North of Brandon Quadrangle, Colorado, 7.5 minute series (topographic), 1982

Historic Map

"Map of Public Surveys in Colorado Territory, 1866" (depicting the Cheyenne and Arapaho Reservation established by the 1861 Treaty of Fort Wise)

Sketch Maps (in the order in which they appear in the nomination form)

"Boundary of the Sand Creek Massacre Site"

"Site Map of Place Names Used in the Documents"

"Archeological Survey Areas"

"Archeological Findings"

"National Park Service Site Map based on the Historical Documentation Report"

"Southern Cheyenne/Southern Arapaho/Northern Cheyenne Map of the Location of the Sand Creek Massacre Site based on Traditional Tribal Methods, Oral Histories and the George Bent Maps"

"Boundary of the Sand Creek Massacre Site – Photograph Key"

"Sand Creek Massacre National Historic Site" (showing the Sand Creek Massacre Site within the boundary of the authorized national historic site)

Index of Photographs

Photograph #1

Photographer: Rocky Mountain Aerial Survey Inc.

Date of Photograph: May 14, 1999

Location of original negative: National Park Service, Denver, CO

Direction of camera: Down

Photograph #2

Photographer: Rocky Mountain Aerial Survey Inc.

Date of Photograph: May 14, 1999

Location of original negative: National Park Service, Denver, CO

Direction of camera: Down

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Sand Creek Massacre Site
Kiowa County, Colorado

Photographs #1 and #2 are of the Dawson South Bend including the diversion point and a portion of the Chivington Canal. For the best view, lay photo #1 on top of photo #2 until Sand Creek and the Chivington Canal match up.

Photograph #3

Photographer: Arnie Thallheimer, Custom Photography, Inc.

Date of Photograph: May 1999

Location of original negative: National Park Service, Denver, CO

Direction of camera: Southeast

This photo gives a general view of Sand Creek in the vicinity of the massacre.

Photograph #4

Photographer: Arnie Thallheimer, Custom Photography, Inc.

Date of Photograph: May 1999

Location of original negative: National Park Service, Denver, CO

Direction of camera: Northeast

This photo shows the southern portion of the massacre site that is on the Dawson property.

Photograph #5

Photographer: Arnie Thallheimer, Custom Photography, Inc.

Date of Photograph: May 1999

Location of original negative: National Park Service, Denver, CO

Direction of camera: West

This photo shows the northern portion of the massacre site that is on the Bowen property.

Photograph #6

Photographer: Arnie Thallheimer, Custom Photography, Inc.

Date of Photograph: May 1999

Location of original negative: National Park Service, Denver, CO

Direction of camera: East

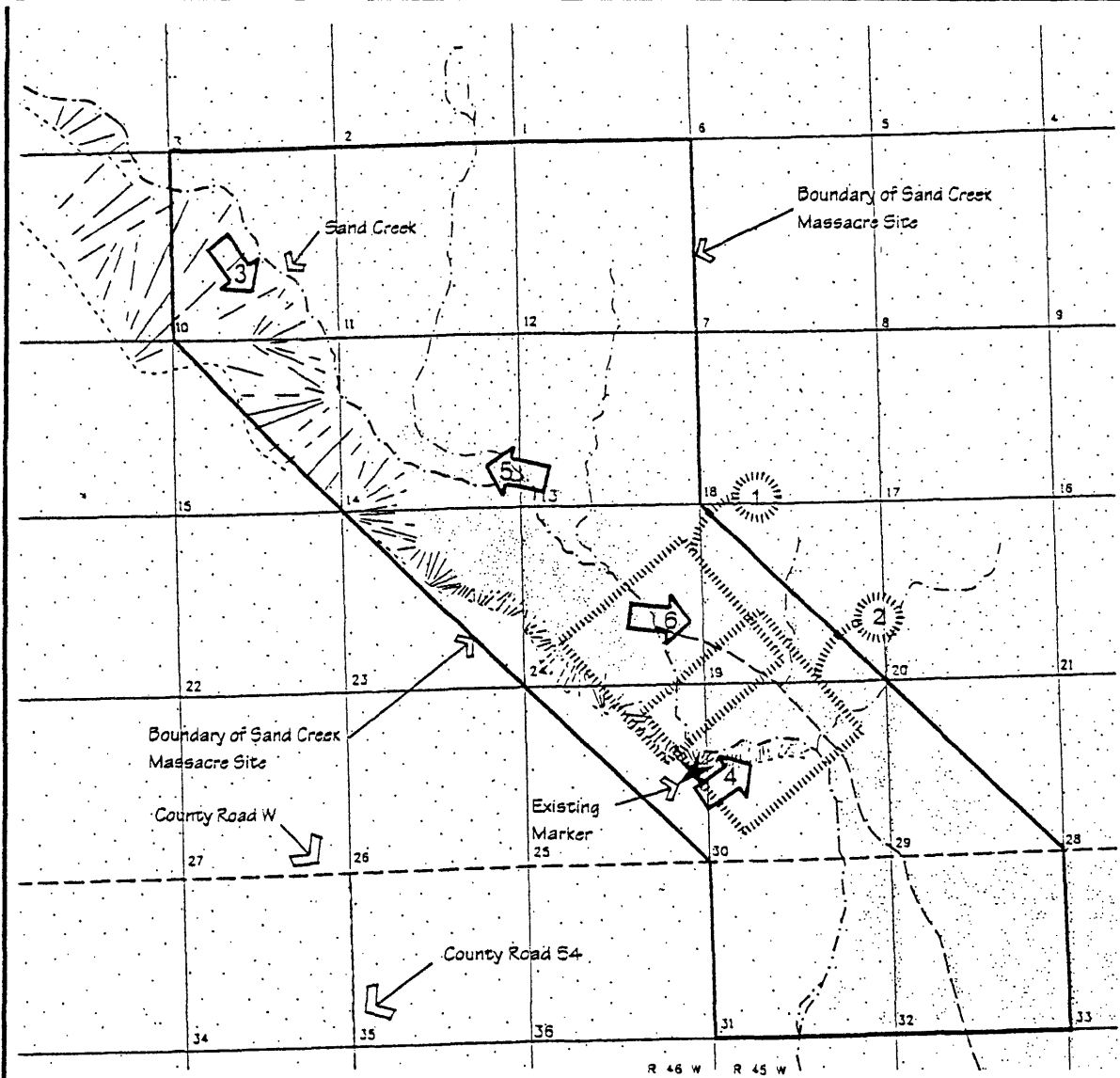
This picture is of Douglas Scott, lead National Park Service archeologist, holding an artifact at the massacre site. Most artifacts were found at depths of surface to 12 inches as shown in the photograph.

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Sand Creek Massacre Site
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Boundary of the Sand Creek Massacre Site

Photograph Key

Sand Creek Massacre
Special Resource Study

US Department of the Interior
National Park Service



0 1/4 1/2 1 mile
Scale of Distances

LEGEND

Sand Creek Massacre Site
National Register Boundary

Photograph number, location and view

Aerial photograph

United States Department of the Interior
National Park Service

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Section Property Owners Page 47

Sand Creek Massacre Site
Kiowa County, Colorado

Property Owner(s)

name/title: William and Jredia Dawson
street & number: 55411 County Road W **telephone:** 719-729-3529
city or town: Chivington **state:** CO **zip code:** 81036

name/title: Charles B. and Frances Bowen
street & number: 50311 County Road Y **telephone:** 719-729-3366
city or town: Chivington **state:** CO **zip code:** 81036

name/title: A. S. "Pete" Kern Jr.
street & number: PO Box 490 **telephone:** 719-767-5314
city or town: Cheyenne Wells **state:** CO **zip code:** 80810

name/title: Rose Ann Cass
street & number: 2224 Princess Anne Lane **telephone:** 703-494-5327
city or town: Woodbridge **state:** VA **zip code:** 22191

name/title: Cheryl Jackson (Tonso)
street & number: 354 The Eagle Place **telephone:**
city or town: Durango **state:** CO **zip code:** 81301

name/title: Marc Goodrich
street & number: 9247 Twilight Lane **telephone:** 913-894-5874
city or town: Lexana **state:** KS **zip code:** 66219

name/title: Judson E. Goodrich
street & number: 6396 Stone Bridge Road **telephone:** 707-538-4391
city or town: Santa Rose **state:** CA **zip code:** 95409

name/title: Arthur and Martha Goodrich Coate (winter address)
street & number: 7693 Pebble Creek Circle #304 **telephone:**
city or town: Naples **state:** FL **zip code:** 34108

name/title: Arthur and Martha Goodrich Coate (summer address)
street & number: 4992 West 129th Place **telephone:**
city or town: Leawood **state:** KS **zip code:** 66209

name/title: Suzanne Tresko
street & number: 2410 S. Inland Empire Way **telephone:** 509-624-7068
city or town: Spokane **state:** WA **zip code:** 99224

name/title: Carmen Gard
street & number: 2509 Valley Park **telephone:**
city or town: Wichita **state:** KS **zip code:** 67204-4105

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Section Property Owners Page 48

Sand Creek Massacre Site
Kiowa County, Colorado

Property Owner(s) - continued

name/title: Jack and Eunice Dixon
street & number: 14445 CR 38 **telephone:** 719-438-5717
city or town: Eads **state:** CO **zip code:** 81036

name/title: Burl and Catherine Scherler
street & number: 21899 CR 59 **telephone:** 719-729-3367
city or town: Sheridan Lake **state:** CO **zip code:** 81071

name/title: Melva Thompson Stockstill
street & number: 463 Pamela **telephone:** 316-722-1824
city or town: Wichita **state:** KS **zip code:** 67212

name/title: Alberta Gwen Thompson McKibben
street & number: 4101 Panorama **telephone:** 316-663-4558
city or town: Hutchinson **state:** KS **zip code:** 67502

name/title: H.S. Tennell
street & number: 909 Velray Drive **telephone:** 806-298-2463
city or town: Abernathy **state:** TX **zip code:** 79311

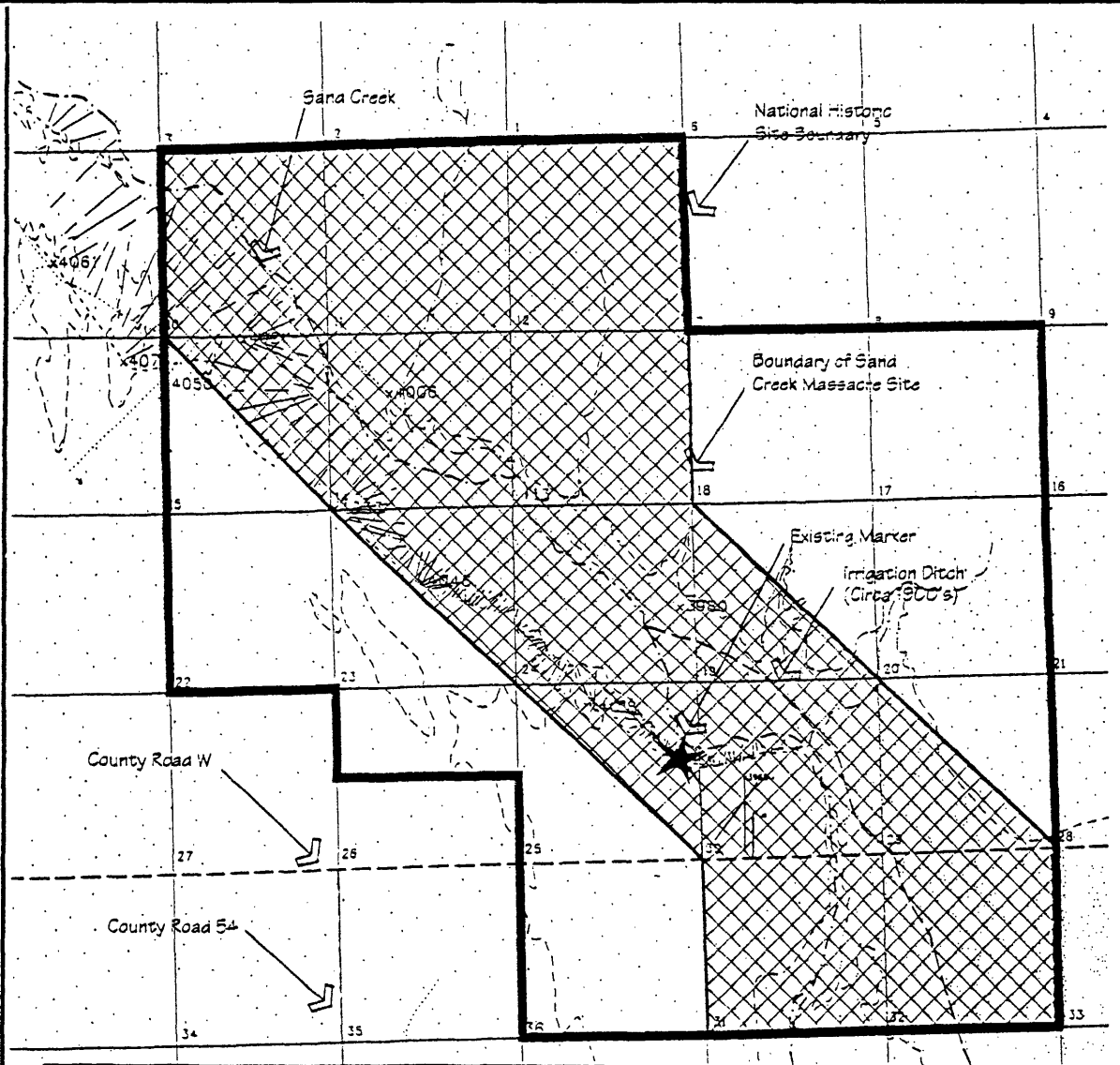
name/title: Kiowa County Commissioner
street & number: PO Box 100 **telephone:** 719-438-5810
city or town: Eads **state:** CO **zip code:** 81036

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Sand Creek Massacre Site
Kiowa County, Colorado



Sand Creek Massacre National Historic Site

Sand Creek Massacre
Special Resource Study

US Department of the Interior
National Park Service



0 1/4 1/2 1 mile
Scale of Distances

LEGEND



Sand Creek Massacre Site
National Register Boundary



Sand Creek Massacre National Historic
Site Boundary

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As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historic places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.



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