

Rocky Mountain Region / Black Hills National Forest

June 2022

Black Hills National Forest

Draft Forest Assessments: Cultural Resources

Custer, Fall River, Lawrence, Meade, and Pennington Counties, South Dakota

Crook and Weston Counties, Wyoming



Inyan Kaga (Inyan Kara), a sacred place within the Black Hills located near Sundance, Wyoming, in the Black Hills National Forest. Photo credit – Jena Rizzi



Harney Lookout Tower, on top of Black Elk Peak in the Black Hills National Forest, constructed by the Civilian Conservation Corps during 1935-1938. This is the highest fire lookout in the Black Hills at 7,244 feet. Photo credit - Tripadvisor.com

In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident.

Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotape, American Sign Language, etc.) should contact the responsible Agency or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English.

To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at http://www.ascr.usda.gov/complaint_filing_cust.html and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed form or letter to USDA by: (1) mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410; (2) fax: (202) 690-7442; or (3) email: program.intake@usda.gov (link sends email).

USDA is an equal opportunity provider, employer, and lender.

Contents

Chapter 1. Introduction	
Key Issues for Cultural Resources and Uses	2
Summary of Public Input	3
Use of Best Available Science	3
Chapter 2. Context	4
Context for Indigenous Occupation and Use	
The Paleoindian Period (14,000 to 9,200 B.P.)	
The Early Plains Archaic Period (9,200 to 5,000 B.P.)	5
Middle Plains Archaic Period (5,000 to 2,500 B.P.)	
Late Plains Archaic Period (2,500 to 1,500 B.P.)	
Late Woodland Period (1,500 (500 AD) to about 500 (1500 AD) B.P.)	6
Protohistoric Period (1700 to 1861 AD)	7
Rock Art Sites	
Context for Historic Occupation and Use	
Transportation	
Mining	
Logging	
Grazing and Ranching	
Fire Lookout Towers	
Recreation and Tourism	
Black Hills National Forest Administrative History	
Civilian Conservation Corps	
Information Gaps: Contexts and New Science	
Chapter 3. Current Conditions and Trends of CulturalResources	
Heritage Program Managed to Standard	
Status of Black Hills National Forest Resources Inventory	
Status of Cultural Resources	
National Register Listed Properties and Priority Heritage Assets	
Traditional Cultural Properties and Sacred Sites	
Issues with the Definition and Listing of Native American TCPs and Sacred Sites	
Resource Conditions	
Collections Management	
Trends Affecting Cultural Resources	
New Science	
Information Gaps	
Chapter 4. Sustainability	
Economic, Social, and Environmental Sustainability of Cultural Resources	
Chapter 5. Current Forest Plan and its Context within the Broader Landscape	
Current Forest Plan Management Direction	
What Plan Changes Are Needed to Respond to Cultural and Historic Issues?	
References	
QIQAAGIY QI 151111A	-37

List of Tables

Table 1. Known cultural site totals and types in the Black Hills National Forest
--

Chapter 1. Introduction

This document assesses the current known cultural resources and uses on the four ranger districts of the Black Hills National Forest, otherwise known as the "plan area," which covers approximately 1.2 million acres. Cultural resources are an object or definite location of human activity, occupation, or use identifiable through field survey, historical documentation, or oral traditions. Cultural resources are prehistoric, historic, archaeological, or architectural sites, structures, places, or objects, and traditional cultural properties. In this document, cultural resources include the entire spectrum of resources for which the Heritage Program is responsible, from artifacts to cultural landscapes without regard to eligibility for listing on the National Register of Historic Places (FSH2309.12).

The plan area contains cultural resources that demonstrate human occupation and utilization for at least the last 11,000 years, while the surrounding Northern Great Plains provide archaeological evidence going back at least 15,000 years. American Indians, ancestral to the ethnic affiliations of the Northern Great Plains tribes, have inhabited or utilized the resources of the area over much of this time. Occupation and use of the plan area by individuals of European, Chinese, and other descents has occurred over approximately the past 300 years. The plan area has been under the management of the Federal Government since 1897 when it was established by President Grover Cleveland as The Black Hills Forest Reserve. These lands were later transferred to the U.S. Department of Agriculture in 1905 and were split into three national forests: the Sundance National Forest (1908-1915 in Crook County), the Black Hills National Forest (1905-present in Lawrence, Meade, and Pennington Counties) and the Harney National Forest (1911-1915 in Custer and Fall River Counties). These three national forests were all merged in 1954 to create the Black Hills National Forest (Davis 1983, pp. 783-788).

During the 20th century, the Black Hills National Forest ranger districts went through numerous changes in boundaries, names, and acreage, extending well into recent times. For example, at its inception in 1899, the Black Hills Forest Reserve consisted of 20 ranger districts (Noisat and Sundstrom *in:* Rom et al. 1996, p. 5e-4). In 1996 the Black Hills National Forest contained seven ranger districts, and now in 2022 it contains four ranger districts.

The Bearlodge Ranger District, headquartered in Sundance, Wyoming, encompasses more than 200,000 acres in the northern portion of the Black Hills and is the only ranger district of the Black Hills National Forest located in Wyoming. The 375,000-acre Northern Hills Ranger District is also located in the northern portion of the national forest, but in the state of South Dakota with headquarters in Spearfish, South Dakota. The remaining two districts are also located in South Dakota and include the 357,258-acre Mystic Ranger District in the central section of the Black Hills and the Hell Canyon Ranger District, which manages about 600,000 acres in the southern portion of the national forest.

Currently, there are 9,266 documented cultural resource sites within the plan area. approximately 7,706 of which have been evaluated for historical significance (i.e., potential eligibility for listing on the National Register of Historic Places). These include both historic and indigenous resources. Of the sites evaluated, there are 1,241_National Register of Historic Places (National Register) eligible sites, 57 National Register listed properties, and 88 Priority Heritage Assets (PHA).

Cultural resources are managed by Federal law, regulation, policy, and guidelines including:

- The Antiquities Act of 1906 (16 USC 431-433) as amended through 2016
- The Archeological Resource Protection Act of 1979 (ARPA) (16 U.S.C. 470cc et seq.), as amended
- Executive Order 13007, Indian Sacred Sites of 1996
- Native American Grave Protection and Repatriation Act (NAGPRA) of 1900 (25 U.S.C.3001 et seq.), as amended in 1992

- National Historic Preservation Act of 1966 (NHPA) (54 U.S.C. 300101 et seq.), as amended in 1992
- Forest Service Heritage Program Management Manual (FSM 2360)
- Heritage Program Management Handbook (FSH 2309)
- Federal Land Policy and Management Act (FLPMA) (43 U.S.C. 1701-1784), 1976
- American Indian Religious Freedom Act (AIRFA) (42 U.S.C.), 1996
- U.S. Department of Agriculture Policy and Procedures Review and Recommendations: Indian Sacred Sites (2012 accepted by Secretary of Agriculture)
- Religious Land Use and Institutionalized Persons Act of 2000 (42 U.S.C. 42 U.S. Code 2000cc(a))
- Executive Order 13175—Consultation and Coordination with Indian Tribes, November 6, 2000
- Tribal Forest Protection Act (TFPA) (25 U.S.C. 3115a), 2004
- Title VIII, Subtitle B of the Food, Conservation, and Energy Act of 2008 (Farm Bill). Codified as the Cultural and Heritage Cooperation Authority (25 U.S.C. 32A)
- Title 36, Code of Federal Regulations, Part 219 (USDA Forest Service 2012 Planning Rule)
- Issuance by the National Park Service of Technical Bulletin 38, Guidelines for Evaluating and Documenting Traditional Cultural Properties, 1990

Two primary resource types fall under cultural resources. They are:

- Archaeological resources "Any material remains of past life or activities which are of archaeological interest" which provide scientific information regarding social and ecological conditions and changes through time, including how people adapted to these changes over the history of human occupation in the area. One element of this science is identifying how people actively managed their environment over time (ARPA16.USC 470bb(1)).
- Traditional Cultural Properties (TCP)-. A cultural resource that is eligible for inclusion in the National Register of Historic Places because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community. The entity evaluated for eligibility for inclusion in the National Register of Historic Places must be a tangible property; that is, a district, site, building, structure, or object as defined in 36 CFR 64.4. In other words, they are places on the landscape associated with cultural practices, traditions, beliefs, lifeways, or social institutions of living communities. They are rooted in a traditional community's history and are important in maintaining the continuity of cultural identity for the community.

Key Issues for Cultural Resources and Uses

The key issues related to cultural resources within the planning area center on the identification, evaluation, and protection of cultural resources. The pace and scale of mission critical work in the Black Hills National Forest requires analysis, survey, and consultation to identify significant cultural resources. Consultation and relationship building with tribes, descendant communities, and partnerships with other land management agencies and stakeholders is imperative to conduct this identification. The evaluation of significant cultural resources is reliant on comprehensive knowledge rooted in science and inclusive histories. Incorporating new science and research as well as gathering inclusive and updated histories has been challenging. It is imperative that significant cultural resources are protected. A key issue facing the Black Hills National Forest currently is the inability to protect non-renewable resources from natural and human effects. The various cultural resources and history in the Black Hills National Forest require an updated Class I Cultural Overview, survey of landscapes lacking previous adequate survey, evaluation of existing unevaluated sites, and completed data entry in the various web applications and the Black Hills National Forest files.

Key issues must be addressed to ensure that management of cultural resources in the Black Hills National Forest meets compliance with current law, regulation, policy and guidance. Since the 1997 forest plan, the Forest Service has developed policy that directs the management of cultural resources on national forests. Key program elements include:

- Coordination and consultation
- Planning
- Identification, evaluation, and allocation to management categories
- Protection and stewardship
- Public education and outreach
- Management of Heritage collections
- Permits, agreements, and contracts
- Information management and reporting

Summary of Public Input

Those parties interested in the cultural resources and their management in the Black Hills National Forest include the 16 Native American Tribes traditionally associated with the plan area; the public; the Vore Buffalo Jump Foundation in Wyoming; South Dakota and Wyoming archaeological societies; the historical societies and museums within Crook County, Wyoming; and Lawrence, Meade, Pennington, Custer, and Fall River Counties in South Dakota.

Native American Tribal Governments are sovereign nations that have a long cultural history with the plan area; therefore, consultation with these 16 Native American Tribal Governments is a government-to-government process. The 16 federally recognized Tribal Governments that are traditionally associated with the plan area and that will be consulted with include:

- Cheyenne River Sioux Tribe
- Cheyenne/Arapaho Tribes of Oklahoma
- Crow Creek Sioux Tribe
- Eastern Shoshone Tribe
- Flandreau Santee Sioux Tribe
- Lower Brule Sioux Tribe
- Mandan, Hidatsa and Arikara Nation
- Northern Arapaho Tribe

- Northern Cheyenne Tribe
- Oglala Lakota Nation
- Rosebud Sioux Tribe
- Santee Sioux Nation
- Sisseton-Wahpeton Oyate Tribe
- Spirit Lake Sioux Tribe
- Standing Rock Sioux Tribe
- Yankton Sioux Tribe

Use of Best Available Science

Information used to compile this assessment consists of Black Hills National Forest cultural resource inventory and site records, the Black Hills National Forest Cultural Resources Overview (Rom et al. 1996), corporate geographic information system (GIS) and Natural Resource Management (NRM) databases for the Black Hills National Forest, the Wyoming and South Dakota State Historic Preservation Office site records, Black Hills National Forest agency administrative records, and published literature such as scientific journals, articles, reports, and textbooks.

Chapter 2. Context

Context for Indigenous Occupation and Use

A synthesis of the cultural history of the Black Hills is contained in the Black Hills National Forest Cultural Resources Overview (Rom et al. 1996), as well as various project reports, academic books, and articles listed in the *References* section. The working chronology provided below is based on the Kornfeld et al. (1991, rev. 2010) synthesis *Prehistoric Hunter-Gatherers of the High Plains and Rockies*.

Early Paleoindian to Late Woodland peoples in the Black Hills Cultural Region relied on lithic/stone materials and simple, functional toolkits to exploit the natural resources of the Black Hills area. While differential exploitation of resources like big game, small game, and small horticultural resources differed between distinct archaeologically defined periods (Paleoindian, Archaic, and Late Prehistoric), the protohistoric and contact periods are represented by technological synchronicity between traditional culture and emerging pre-modern tools and resources. The Black Hills cultural region has been continually used and inhabited by Indigenous peoples since the beginning of the North American archeological record.

The Indigenous site types commonly found throughout the Black Hills include lithic scatters, stone circles, rock shelters, rock stacks/cairns, rock art (petroglyphs and pictographs), and quarries/lithic procurement sites. The Indigenous people of this time utilized lithic technology, with four major outside lithic sources found in Spanish Diggings, Wyoming; The Powder River Basin, Wyoming Knife River, North Dakota; and the Badlands White River Group of South Dakota (Cassels et al. 1984, p. 67). Obsidian is not commonly found in the Black Hills National Forest, but when it is, the source material has frequently been traced back to the Obsidian Cliffs in Yellowstone National Park.

The Paleoindian Period (14,000 to 9,200 B.P.)

The Paleoindian period, 14,000 (+) – 9,200 B.P. (Before Present), provides evidence for the earliest occupation of the Great Plains and the Black Hills. This period is broken into Early and Late Paleoindian periods based on projectile point (typically larger, or spear point) typologies. The early period consists of Clovis, Goshen, Folsom, Hell Gap, and Agate Basin. The late period consists of Alberta, Scottsbluff, and Eden, which are all part of the greater Cody Complex. Important Paleoindian sites in the Black Hills (but not in the Black Hills National Forest) include the Jim Pitts site, the Ray Long site, Agate Basin, and Angostura.

The Jim Pitts site is an example of a large, multicomponent hunting camp focused on meat processing and hunting stone tool production. It demonstrates multiple periods of time from Paleoindian to Archaic periods. The deepest component at the site is a Goshen level dated to $10,185 \pm 25$ B.P. Over the course of the sites use, parts of at least five bison were excavated and an array of point styles, including Goshen, Folsom, Agate Basin, several Fishtail points, James Allen, Cody, and Alberta, have also been found (Sellet et al. 2009).

The Ray Long site is known for the Angostura complex, an enigmatic Paleoindian group that occupied the Northern Great Plains about 9,000 years ago. However, archaeological and radiocarbon evidence indicate that the site was inhabited by people who both pre-date and post-date Angostura occupation (Buhta et al. 2013). Therefore, similarly to the Jim Pitts site, the Ray Long site shows occupation within the Black Hills area by people over multiple time periods from the Paleoindian to the Archaic.

Overall, the Paleoindian period is characterized by the hunting of big game such as mammoth and bison using long, lanceolate projectile points. Settlement and subsistence activities during the Paleoindian

period are well established in archaeological literature. To date, no early Paleoindian sites have been excavated in the Black Hills region, and archaeologists have found only limited evidence of Clovis, Goshen, and Folsom utilization of the area (Hays 2015, p. 24). From this evidence it has been hypothesized that Paleoindian groups entering the area may have been special task forces, such as warmweather hunters, rather than family units, entering the region around 10,000 B.P. (Noisat *in:* Rom et al. 1996, p. 2a–5).

The Northern Great Plains contains archaeological sites that provide the timeline for the Paleoindian period, but there are only a few definitive Paleoindian sites that have been identified in the Black Hills National Forest. Even with the limited number of Paleoindian sites in the Black Hills National Forest, some patterns have been noted. Most of these site types in the Black Hills National Forest appear to be concentrated in the interior of the Black Hills (west-central Limestone Plateau geologic region) and occur near low springs instead of perennial water sources (Tratebas 1986a, pp. 334-340), with lanceolate and fluted projectile points being the typical Paleo point found. One of the unique characteristics of Paleo sites in the Black Hills is that they are multicomponent in nature with many of them containing a Paleoindian point in addition to evidence for McKean, Late Archaic, or Late Woodland occupations. Great Plains Archaeologist Brad Noisat hypothesized that some Paleoindian points may not represent "occupations," but rather the discovery, collection, and use of earlier points by later peoples (Noisat *in:* Rom et al. 1996, p. 2a–5). Excavations and research conducted at sites in the Black Hills and Great Plains suggest that the Early and Middle Archaic period cultures occupied the same spaces as the Paleoindian cultures.

The Early Plains Archaic Period (9,200 to 5,000 B.P.)

In the Early Archaic Plains Archaic Period, big game hunting that had typified the Paleoindian occupations in the same era continued. These groups foraged widely over broad river valleys, plains and foothills flanking the Black Hills from summer to fall. Early Archaic era sites were located on lower slopes and valley floors (Noisat *in:* Rom et al. 1996, pp. 2b-1–2b-3). During this era, there is evidence of utilization of a "wide variety of plants and animals that indicate seasonal utilization of resources that were found in the Black Hills and not readily obtainable in the plains." Some archaeologists interpret the Black Hills as being a "refuge for human and animal populations during the early Archaic era" (Hays 2015, p. 25).

The diagnostic projectile point types of the Early Archaic are generally classified as large spear points with broad side-notches (Lookingbill or Bitterroot point typologies) close to the base and straight or slightly concave bases, as well as medium sized darts with a wide variety of blade forms. Common material types used in the manufacturing these points included White River Group chalcedonies and Knife River Flint. Other characteristic elements of the Early Archaic period included features and artifacts such as: roasting pits, slab and basin hearths, ground stone, various styles of scrapers, drills, bone needles, bone awls and shell pendants (Noisat *in:* Rom et al. 1996, p. 2b-2; Tratebas 1986a, p. 342). The material culture of this time period implies that Indigenous people were procuring and using the resources unique to the Black Hills and unavailable on the adjoining plains. They were crafting tools necessary for daily life. There were developing and modifying hunting and gathering implements such as blades and points out of local materials that they procured. They were using natural resources to create adornments and decoration.

Middle Plains Archaic Period (5,000 to 2,500 B.P.)

The Middle Plains Archaic period is marked by a number of innovations. The subsistence economy began to combine aspects of communal bison hunting, individual hunting of large game, and organized broad-spectrum foraging activities indicating a seasonal round of hunting and foraging. These patterns suggest intensive exploitation of diverse resources were occurring in the area (Sundstrom *in:* Rom et al. 1996, pp. 2c-01 to 2c-22).

Technologies in this period developed (or adopted) to permit the acquisition of surpluses of storable food including permit production, seed processing, and hunting using fixed game traps. Other commonly occurring features and innovations of the period include caches of tools and food, reutilization of tools, storage pits, hearths, increased ground stone usage, construction of pit houses for repeated seasonal occupation, and stone circles. The domestication of the dog is also noted in this period from remains that were found at a few notable sites in the Black Hills (Sundstrom *in:* Rom et al. 1996, pp. 2c-19 to 2c-22).

A group of projectile points called the McKean complex are commonly found in the Black Hills National Forest and are indicative of the Middle Plains Archaic Period. Since these point typologies are common during this time period, the Middle Plains Archaic is also sometimes referred to as the McKean Period (Kornfeld et al. 1991, rev. 2010). Other Middle Plains Archaic tools that may prove diagnostic to one or more complexes include keeled end scrapers (Sundstrom in: Rom et al. 1996, p. 2c-21) and large, basally notched bifaces, choppers, and adzes (Tratebas 1986a). Other lithic tools include bifacial knives, spokeshaves, microtools, and retouched flakes. A preference for exotic lithic raw material types, such as Powder River porcelanite and Knife River flint, are also typically found in Middle Plains Archaic sites in the Black Hills. Ground stone artifacts such as manos and metates were more commonly used during this time along with an increase in hearths and roasting pits. The relative abundance of these artifacts and features indicates an increased focus on processing plant food resources (Sundstrom in: Rom et al. 1996, pp. 2c-1 to 2c-21). The presence and abundance of these sites, features, and artifacts indicate that Indigenous people of this time period were heavily reliant on and engaging with the surrounding landscape. They were growing, gathering, hunting, and processing the flora and fauna of the area. The domestication of dogs suggests that Indigenous people were relying on dogs either as companions or to aid in hunting and survival. The presence of materials from far-off places suggests an expanded trade network and a local desire for diverse goods typically unavailable in the Black Hills.

Late Plains Archaic Period (2,500 to 1,500 B.P.)

The Late Archaic period is generally marked by corner notched projectile points (Pelican Lake and Besant Phases) gradually replacing Middle Archaic varieties. Late Plains Archaic projectile points are commonly found throughout the Black Hills. Similarly to the Middle Plains Archaic Period, there was a shift toward a semi-nomadic way of life and a greater reliance on bison hunting as the basis of subsistence. This shift appears to have happened gradually with tool kits reflecting a change toward more hunting and butchering tools and fewer composite and ground stone tool types (Sundstrom *in:* Rom et al. 1996b, pp. 2d-1 to 2d-23). A greater use of bison is evident in the faunal assemblages from the McKean and Lissolo Cave sites in the western foothills (Sundstrom *in:* Rom et al. 1996, p. 2d-21), at numerous bison kill sites, and from the presence of corrals and drive lines that have been identified in and around the Black Hills (Frison 1991).

An analysis of lithic raw material preferences for the Late Plains Archaic Period sites in the southern Black Hills appears to favor local cherts and quartzites, as well as Badland's plate chalcedony, which occurs in thin plates in the White River Badlands east of the Black Hills. Badlands plate chalcedony knives are commonly associated with secondary butchering and processing activities, possibly representing a Late Plains Archaic Period diagnostic trait (Tratebas 1986a).

Site types commonly associated with this period include rock shelters, bison kill sites, stone circles, lithic scatters, rock art, as well as rock stacks and cairns.

Late Woodland Period (1,500 (500 AD) to about 500 (1500 AD) B.P.)

In the Black Hills region, the late Prehistoric era is represented by a continuation of Archaic hunter-gather subsistence strategies. However, populations began to occupy various areas in the Black Hills in a seasonal rotation, utilizing higher elevations and the plains in the summer and the foothills in the winter.

Point technology shifted from larger, broader atlatl points to smaller and narrower bow and arrow points. This shift was marked by the appearance of the Avonlea Complex, which introduced the bow and arrow to the area. The era is also noted for a renewed interest in big game hunting and cooperative mass kill hunts as evidenced by the Vore Buffalo Jump Site, located in the Red Valley on the Wyoming side of the Black Hills and east of Sundance, Wyoming. It was used as a buffalo jump by Late Indigenous tribes over a span of 300 years until circa 1800 AD when the introduction of the horse and firearms caused drastic changes in hunting strategies and lifestyles in the region. At this time, the Black Hills may have been occupied and used by both northwestern Plains hunters and gatherers and Plains Village farmers (Noisat and Sundstrom *in:* Rom et al. 1996, pp. 2e-1 to 2e-15; Hays 2015, p. 25).

Processing of game increased as shown by the increased number of bifaces, flakes, adzes, and choppers recorded on sites. Common lithic material types included Powder River porcelanite and Spanish Digging from the west, and Badlands chalcedonies and Knife River Flint from the east (Cassells et al. 1984, p. 64). Evidence for an increase in the utilization of rock shelters is noted during this period as well.

Protohistoric Period (1700 to 1861 AD)

The term "Protohistoric" refers to the period after which European goods and species had entered the material cultural assemblage, but before permanent European settlement. Most information about this period comes from written accounts of the first European trappers, explores, missionaries, and military personnel venturing into the area. Native Americans supplied documentation in the form of oral historical narratives and pictographic records such as winter counts (Sundstrom *in:* Rom et al. 1996, p. 2f-1). The horse and the gun were introduced during this period by the Spanish and the French. Horses began to be traded by the Kiowas in the Black Hills and by the Missouri villagers. The increased use of the horse and gun lead to many changes in warfare, mobility, trade, nomadic bison hunting and foraging, and an increase in diversity of cultures within tribes; namely the Kiowa, Lakota, Crows, Cheyenne, Blackfoot, and Arapaho (Sundstrom *in:* Rom et al. 1996, p. 2f-2).

Many identifiable groups are known to have inhabited the Black Hills region by the 1700s. These groups included the Crow, Plains Apache, Cheyenne, Suhtai, Kiowa, and Kiowa-Apache, and possibly the Arapaho and Ponca groups. The Cheyenne and Suhtai would eventually join to form a single cultural unit. The Arikara and Mandan from the Missouri River valley were also in the area around this period and were known to travel to the Black Hills to trade and gather resources. During the early part of the 1700s, the Crow and their Kiowa and Kiowa-Apache allies were believed to have controlled the Black Hills area (Sundstrom *in*: Rom et al. 1996, pp. 2f-3 to 2f-4).

Later these groups moved south and west under pressure from Lakota Sioux, Arapahoe, and Cheyenne groups. By about 1770, the Lakota had entered the area and began to push the Cheyenne and Arapahoe farther west and south. As non-Natives began to encroach on the lands around the Black Hills, the Lakota and Northern Cheyenne formed an alliance to protect their lands, which by treaty extended from the Missouri River into southeastern Montana and northeastern Wyoming. The Protohistoric period saw the movement of diverse tribal groups in and out of the area, with the tribal diversity of the region being well documented in written accounts. European trade goods also helped identify the later sites from this period, although only a few Native American sites yielding European trade goods have been identified in the Black Hills. (Sundstrom *in:* Rom et al. 1996, pp. 2f-3 to 2f-4).

In the 1820s, fur trading was a high commodity and posts were being set up near the Black Hills. In the 1840s the bison hide trade reached a peak when about 100,000 hides were being shipped to St. Louis annually.

Rock Art Sites

Rock art studies in the Black Hills began in the 1930s and were led by E.B. Renaud of the University of Denver and para-Archaeologist, L.W. Buker. After Renaud and Buker, the study of rock art in the Black Hills was not revitalized until the 1980s and 1990s. In 1990, Alice Tratebas of the Bureau of Land Management initiated a project to record and analyze a significant rock art site in Wyoming. From 1992 to 1993, surveys were conducted by Alice Tratebas and crews to work on evaluating and nominating Black Hills rock art sites to the National Register of Historic Places. Linea Sundstrom followed in these footsteps and conducted additional surveys and site evaluations across the Black Hills in the early 2000s. From the information gathered during these surveys, new preservation techniques and recommendations for rock art sites in the Black Hills have been developed (Sundstrom *in:* Rom et al. 1996, pp. 3d-1 to 3d-5) along with a better understanding of the site types that occur within the Black Hills National Forest.

Thanks in part to these studies, it is now known that the Black Hills has one of the largest and most varied rock art assemblages in the Great Plains containing petroglyphs (pecked/incised) and pictographs (painted). Rock art in the Black Hills National Forest generally includes images such as incised grooves, abraded circles, animals, human figures, and a variety of unknown/unidentifiable geometric shapes and patterns. The diversity of rock art styles present in the Black Hills appears to mirror the cultural diversity that has occurred in the area for centuries (Sundstrom *in:* Rom et al. 1996, pp. 3d-1 to 3d-5). It should be noted that the meaning behind rock art is not up to the scientists' points of view but should be interpreted from a cultural perspective with information provided by local Tribes when they choose to share this information. Rock art sites are sacred to Indigenous people, and the location and content of these sites are kept confidential (see Executive Order 13007 – Indian Sacred Sites).

Context for Historic Occupation and Use

The Black Hills remained under Native American influence during the early part of the Historic Period and few non-native peoples, other than traders and missionaries, ventured into the area. From 1700 to 1750, the western Sioux (Lakota) were slowly drifting westward, rapidly adapting to a nomadic existence relying on bison hunting as a primary means of subsistence. The Lakota crossed the Missouri River around 1775, with the Oglala occupying the area between the Bad and Cheyenne Rivers, and the Brule occupying lands along the White River. With the acquisition of the horse in the late 1700s, the western Lakota became a dominant culture between the Missouri River and the Rocky Mountains (Reher 1977).

By the mid-1800s, settlers had begun to infringe on Lakota territory from all directions through military and scientific expeditions, civilians traveling across the United States, fur trappers, and more. Throughout the 1840s, small wagon trains of white settlers traveled west to Oregon along the Platte River. In 1848, the United States acquired the western territories, which led to vigorous territorial exploration of the area. In 1849, these settlers were joined by thousands of miners rushing to the gold fields of California. The 1858 discovery of gold in the Colorado Rockies began a rush of miners and merchants to the Central Plains, while the discovery of gold in Montana in 1864 lured thousands to the Northern Plains.

On April 29, 1868, the United States entered into the Treaty of Fort Laramie "...with a collective of Native American Tribes historically known as the Sioux (Dakota, Lakota, and Nakota). The treaty established the Great Sioux Reservation, a large swath of lands west of the Missouri River. It also designated the Black Hills as "unceded Indian Territory" for the exclusive use of native peoples. But when gold was found in the Black Hills, the United States reneged on the agreement, redrawing the boundaries of the treaty, and confining the Lakota people—traditionally nomadic hunters—to a farming lifestyle on the reservation. It was a blatant abrogation that has been at the center of legal debate ever since" (Cutlip 2018). In 1874, General Custer led a military and scientific expedition to explore the interior of the Black Hills. This expedition confirmed the rumors of gold, and prospectors began to converge in the Black Hills. The U.S. Government, stating the protection of these speculators,

prospectors, and merchants, declared that this would require military intervention from the United States. This action by the United States broke the 1868 Treaty of Fort Laramie and started the forced expulsion of the Native American Tribes to reservations.

From 1887 to 1934, the Federal Government embarked on an effort to forcibly remove the plains Tribes, and their cultures, from the Black Hills through the systematic slaughter of the bison. In 1873, the Secretary of the Interior, Columbus Delano, stated that "[t]he civilization of the Indian is impossible while buffalo remain on the plains"; following this logic, the Army provided free ammunition to hide hunters, who in turn brought bison to the brink of extinction (NPS 2021). Records show that even before the 1873 decree from the Secretary of the Interior, drought and the demand for bison (skulls, tongues, hides, etc.) also contributed to the near extinction of the animals. In the 1840s the bison hide trade reached a peak when about 100,000 hides were being shipped to St. Louis annually. By 1844 the Oglala Lakota winter counts were documenting that the bison herds had been so depleted that many bands were beginning to face starvation (Sundstrom *in:* Rom et al. 1996, p. 2f-4). These early trade demands, along with the governmental push to eliminate Indigenous cultures, lead to the near extinction of the Great Plains bison herds.

By 1875, the gold rush to the Black Hills was in full swing. Dozens of boomtowns and camps were rapidly established. For example, Custer City in South Dakota had a drastic population increase to 10,000 by the spring of 1875. Rich strikes in Deadwood Gulch prompted the virtual abandonment of the south in favor of the gold fields of the northern Black Hills. By 1888, most of the former Great Sioux Reservation, including the Black Hills, was opened to homesteaders. As the initial gold rush subsided, the Black Hills economy focused on mining, logging, and ranching (Sundstrom 1989b).

Historic site types within the Black Hills of South Dakota are strongly influenced by mining and the industries that supported mining, such as timber, logging, townsites, and railroads. In Wyoming, historic sites are represented by settlement, ranching, mining, and timber activities. Common sites within the Black Hills can include placer mines, hard rock mines, homesteads, cabins, tie camps, line camp cabins, etc. (Noisat *in:* Rom et al. 1996, p. 1b-35).

Transportation

One of the earliest documented historic travel routes through the Black Hills National Forest was led by the Custer Expedition. Numerous interpretive signs posted today follow the route that General Custer and his expedition took through the Black Hills. Famous stops along the way include Inyan Kara, Custer, South Dakota, Black Elk Peak (formerly named Harney Peak), Castle Creek, French Creek, Box Elder Creek, and Fort Abraham Lincoln. Along the expedition route, at least two known rock outcrops that were used for scouting locations within the Black Hills National Forest hold inscriptions of Custer's initials. These sites are eligible and are regularly monitored by Black Hills National Forest archaeologists. Captain William Ludlow made a statement about the Black Hills during the Custer Expedition that "...its variety of resource and delightful climate; the protection it affords both against torrid head and arctic storms of the prairies will eventually make it a home of a thronging population" (Ludlow 1875). His prediction would turn out to be true with a large, and continuously growing, population living within the Black Hills (Cassells et al. 1984, p. 196).

Some of the earliest documented travel routes in the Black Hills were the mail delivery lines, stagecoach routes, and railroads. Multiple stage routes were established from the 1870s to the 1880s, including The Cheyenne and Black Hills Stage Route, The Sidney-Deadwood Route, The Bismarck-Deadwood Stage Line, The Medora-Deadwood Stage Line, and the Fort Pierre and Black Hills Stage Route (Sundstrom *in:* Rom et al. 1996, p. 5c-3).

The first railroad linking Deadwood, South Dakota, to the outside world arrived on December 29, 1890. From 1890 to 1905, Deadwood served as the center of the Black Hills rail network (Cassells et al. 1984,

p. 264). The establishment of the railroad also marked the end of the stagecoach, the end of the Old West, and the end of the Ghost Dance. The Ghost Dance was a Native American religious movement that originated in Nevada around 1870, faded, reemerged during the winter of 1888-1889, and spread rapidly through the Great Plains. It changed throughout this time but was inherently a movement with ceremonies that were believed "...would bring back dead Native Americans, return plentiful buffalo herds, and induce a natural disaster that would sweep away the whites, thus restoring their way of life that had existed prior to European contact" (Wishart 2011). The Ghost Dance ended in 1890 when hundreds of followers died at the Wounded Knee Massacre.

Numerous railroad lines went through the Black Hills to support the increase in logging and mining in the area. These lines connected to major cities such as Spearfish, Deadwood, Lead, Hill City, and Rapid City. Very few of these lines remain in use today, except for a small tourist steam engine that is still operating in Hill City, South Dakota, that provides a tourist train ride from Hill City to Keystone, known as the 1880 Train. Portions of this railroad grade were historically part of the Burlington Northern Railroad and are monitored by Forest Service archaeologists today.

The development of the highway and road systems in the Black Hills during the 1920s was a great feat that brought tourism to the area. Most notable are the two roads that go through Custer State Park known as the Needles Highway (1922) and Iron Mountain Road (1927). These roads contain steep switchbacks that showcases dramatic panoramic views of the Black Hills and its impressive rock formations. Along with these popular roads are the three pigtail bridges built during the Civilian Conservation Corps era and four rock tunnels, a few of which frame a view of Mount Rushmore. Also built in the 1920s was the 8-mile stretch of road from Custer, South Dakota, to Sylvan Lake, and the scenic Spearfish Canyon highway in Spearfish, South Dakota, which opened in 1930 (Sundstrom *in:* Rom et al. 1996, p. 5c-11).

Mining

Initial reports of gold-bearing deposits in the Black Hills were filed by U.S. government expeditions led by Lieutenant G.K. Warren in 1857 and Raynolds in 1859. In 1874 the prospectors accompanying General Custer's expedition to the Black Hills found gold, which led to a surge of people in the spring of 1875 (Cassells et al. 1984, p. 158). This led to the Gold Rush in the Black Hills and to the breaking of the 1868 Fort Laramie Treaty with the Native American Tribes.

Hardrock and placer mining techniques were used historically in the Black Hills. Hardrock mining extracts veins of precious minerals from solid rock whereas placer mining is the practice of separating heavy eroded minerals, like gold, from sand or gravel deposits. Hydraulic placer mining techniques were also used and included the use of dredges or extensive flume systems that facilitated the use of monitors, races, trenches, shafts, ditches, sluice boxes, and piping.

Gold, granite, tin, pegmatite, fluorite, mica, quartz, feldspar, and other metals and minerals were extracted from the Black Hills. "At a basic level, mineral exploration led to the initial exploration and settlement of the region. As the mining industry developed, second pursuits were established to augment or support the mining and milling activities." These included overland and railroad transportation, logging and timber activities, water management systems to deliver water to placer workings, mills, flumes, and mining communities (Buechler *in:* Rom 1996, p. 5a-4 – 5). Many of the current towns and cities in the Black Hills owe their existence to one or more of the varied elements of mining in the area.

One of the largest mining operations in the Black Hills was the Homestake gold mine (Homestake Mining Company) in Lead, South Dakota, which operated from 1877 to 2001, when it closed due to poor ore quality and inflation. Though the gold was considered low grade, a large amount of ore was present, which led to the mine remaining in operation and reaching an impressive depth of more than 6,000 feet. Today, the Homestake Mine remains a tourist stop in Lead, South Dakota. Historically, four main mining

districts existed in the northeastern Black Hills. They included Lost Mining, Deadwood, Upper Whitewood, and Lower Whitewood (Rom et al. 1996, p. 5a-16).

Several mining-related Priority Heritage Assets (PHA) are present within the plan area, including Spokane Mine and Mill, Gorman Gulch Mining District, St. Elmo-Clarabelle Complex, and Gold Mountain Mine and Mill. Common features associated with historic mining include, but are not limited to, prospecting pits, adits, mine shafts, trestles, mining equipment, mill sites, structural remains, flumes, ditches, and tram tracking.

Logging

The discovery of gold in 1848 significantly changed the manufacturing and marketing of lumber products in the West. Local demand for timber products increased as mining required massive amounts of lumber for tunnels, shafts, mills, and water systems. The lumber market continued to expand during the 1860s with the construction of railroads and the opening of new mining frontiers. Completion of the transcontinental railroad tied the Far West to the Great Basin, Midwest, and East, providing an economical means of transporting goods and people over the Rocky Mountains. With the new technology and a growing demand for railroad services, construction proceeded at a rapid rate throughout the nation.

By the turn of the century, timber stands had been depleted in the northeastern and eastern regions of the United States. At the same time, the national economy was expanding and the demand for goods and services diversified and increased. People looked to the West for cheaper, more abundant forest products for use in homes, factories, and shipbuilding. Lumber companies were limited to harvesting the timber immediately surrounding their mills, and once they had depleted this timber, they relocated. To ensure a continuing supply of harvestable timber, companies had to acquire large tracts of land. The industry needed an economical, efficient means of penetrating forested areas and transporting logs over long distances. Waterways had provided transportation in some areas but proved impractical in mountainous regions. By the latter part of the 19th century, oxen, horses, mules, wood flumes, chutes, steam donkeys, and incline railroads had all been used. Extractive industries such as mining had been using railroads for transporting materials long before the lumber industry.

The first successful attempts to adopt railroad logging in the 1860s were crude, but it soon proved to be more economical than other forms of transportation for logging. Just as the railroads were dependent upon logging for its timber, the logging industry became dependent upon railroads to transport its timber to the markets (Glover 1984).

During the 19th century, timber and mining were big economic producers for the Black Hills National Forest, with lumber being used for the construction of cabins, schoolhouses, fire lookouts, sawmills, mining towns, railroads, flumes, pipelines, and more (Brooks *in:* Rom et al. 1996, p. 5b-1). Many of these structures and their remains are still present on the landscape today and have been inventoried in the Black Hills National Forest cultural databases. Sites to note include the Mystic townsite, and flumes such as the Rockerville Flume and the Big Bend Flume. The flumes in the Black Hills National Forest were impressive structures that were made entirely of native timber and traversed more than 5 miles through the Black Hills National Forest. These features supplied water for power plants, mining, and timber activities. All that remains of the flumes today are degraded wood fragments and ditches along the landscape.

Clearcutting was a common practice in the Black Hills from the late 1870s to the 1880s, but processes and policies changed in 1891 with the passage of the Forest Reserve Act signed by President Benjamin Harrison. This act established the Forest Reserve, an agency that would later become the U.S. Forest Service. After the 1891 Act, the Homestake Mining Company filed an application to log a large area of timber at the confluence of Jim and Este Creek, 4 miles west of Nemo, South Dakota. This became the Case No. 1 timber sale (1899-1908). This was the first large-scale timber sale on any Forest Reserve

lands, and the procedures that were developed during this sale were later applied to other reserves across the country (Noisat and Sundstrom *in:* Rom et al. 1996, p. 5e-2). In the 20th century, clearcutting was forbidden and logging areas would be cut in 10-year cycles. Steam mill engines were replaced with gasoline-powered mill engines, and truck hauling replaced other transportation (Noisat and Sundstrom *in:* Rom et al. 1996, p. 5e-5).

Logging remains a major economic resource across the Black Hills National Forest. Timber activities in the Black Hills National Forest continue to be a major economic resource and are one of the largest driving economic factors for small towns such as Spearfish, Hill City, Custer, and Rapid City in South Dakota, and in Hulett, Wyoming. Also, refer to the *Timber and Socioeconomic* assessments done within the forest plan.

Grazing and Ranching

The attraction of the Northern Great Plains due to its open, "unused" prairie grasslands, eventually provided an incentive for ranching development. Texas cattle drivers discovered the rich grasslands of the northern plains as the southern ranges began to fill up with homesteaders. Large cattle outfits ventured into the prairies of the Dakota, Wyoming, and Montana territories. When the first shipment of Texas cattle reached the Black Hills in 1876, much of Wyoming was already cattle country. By 1880 the Black Hills Stock Association was organized. Reservations were used around this time also for grazing and beef through lease agreements, but they were not open to homesteading. The onset of the railroad to the areas also increased the livestock industry in the Black Hills. In their heyday of the mid-1880s, towns like Buffalo Gap and Belle Fourche were some of the busiest and most productive with cattle. Newcastle and Sundance, Wyoming, also became productive cattle producing towns during the boom during 1917-1927. Small crop farms and mid-sized family ranches had become the focus of the western Dakota economy by the turn of the 20th century (Sundstrom et al. *in:* Rom et al. 1996, pp. 4a-13 to 4a-14).

As national forests were established in the early 1900s, grazing activities became controlled through permits and fees as well as new laws and amendments that were enforced across all national forests. Cattle and sheep were grazed on government lands for years, until sheep were eventually banned on National Forest System lands beginning in 1909. Cattle are still an important economic driver within, and around, the Black Hills. Numerous historically established ranch families continue their ranching work today across the Black Hills landscape. Bison are also an important grazing animal and agricultural commodity in the Black Hills and Northern Great Plains. Bison herds are being reintroduced and grazed in the Reynold's Prairie region, Custer State Park, and smaller family ranches around the Black Hills. Wind Cave National Park is conserving the American bison by creating genetically pure herds to be grazed and protected on public lands in North America.

Numerous historic cattle grazing structures and features can still be found in the Black Hills, and many have been used and repurposed over the years for the same activities. A few historic family ranch sites that are important to the history of the area include Meeker Ranch, Williams Ranch, Miller Cabin, Ranch A, and others.

Fire Lookout Towers

Fire lookout towers in the Black Hills (Kamstra 2021) are an important historic, and in some cases modern-day, resource. During the 1920s, fire lookout towers consisted of little more than a tree platform and a tent camp. The Civilian Conservation Corps increased and modernized tower construction during the 1930s and early 1940s. If the summit of a peak was rocky, then the tower was typically constructed of locally sourced stones and logs. The cabs typically had plate glass on all four sides, ventilators in the roof, and catwalks with overhanging cornices. Most towers were two stories with the observatory on the upper portion (Noisat *in:* Rom et al. 1996, p. 5e-7). Currently, eight fire lookout towers in the Black Hills

National Forest are listed on the National Historic Lookout Register. One of these towers is Cement Ridge in Wyoming, and the other seven are in South Dakota. The seven in South Dakota are Bear Mountain (with an extensive photographic record), Harney Tower, Custer Peak, Elk Mountain, Mount Coolidge, Rankin Ridge, and Summit Ridge Lookout. These towers were built before and during the Civilian Conservation Corps era.

Cement Ridge Lookout is an excellent example of a fire lookout tower that is still in use today. It is in the Wyoming section of the Black Hills National Forest and just one mile west of the South Dakota state line. The site was first used for a lookout tower in the early 1900s, when the first structure was constructed in 1913. This structure was then replaced with a crow's nest and glassed-in house in the 1920s. The present stone 15-foot tower with a wooden 14-by-14-foot live-in cab was constructed by the Civilian Conservation Corps in 1941 (NHLH 2020). This lookout is also part of the PHA list and regularly receives visitors and recreators.

One of the most notable lookouts in the Black Hills National Forest is Harney Tower, which is located on the summit of Black Elk Peak (7,244 feet), the highest point in South Dakota. The structure that remains today was built over the course of three years, starting in 1935 and ending in 1938, making it one of the first Civilian Conservation Corps-era towers that were completed in the Black Hills. This tower is listed on the National Register of Historic Places and the National Historic Lookout Register, and it is one of the Black Hills National Forest PHA. The site is no longer in use today as a fire lookout, but more than 40,000 people visit it each year for hiking and tourism purposes.

During 1938-1942, multiple fire lookout towers were constructed throughout the Black Hills as the era of the Civilian Conservation Corps ended. The need for permanent fire lookout structures with dedicated fire lookout staff was emphasized as many of the young men from the Civilian Conservation Corps left for multiple fronts during World War II. Fire lookouts remained the primary method to monitor and suppress wildfire. With advances in technology and remote sensing of fire behavior, the staffing and use of fire towers has dwindled during the last 20 years. Nationwide, national forests continue to staff some strategically located fire lookout towers, with many of these structures serving as interpretive and educational resource destinations for day hikers.

Recreation and Tourism

(Also refer to the *Transportation* section of this document)

Tourism has been an important industry in the Black Hills National Forest since the 1920s with the creation of roads and the rise in automobile touring. The construction of the Needles Highway, Iron Mountain Road, and other scenic highways from the 1920s to 1930s by the Civilian Conservation Corps made the natural attractions of the Black Hills and its surrounding areas more accessible. Tourism in the Black Hills National Forest saw another increase in 1927 when President Calvin Coolidge came to the southern Black Hills to vacation and dedicate Mount Rushmore (Noisat and Sundstrom *in:* Rom et al. 1996, pp. 5d-1 and 5e-9).

A few historic railroad grades are currently used for tourist and recreational activities, such as the 1880 Train in Hill City (see the *Transportation* section) and the hiking or biking George S. Mickelson Trail, which was created through the Rails to Trails Conservancy. The George S. Mickelson Trail was once the Chicago, Burlington and Quincy Railroad that was last operated by the Burlington Northern Railroad in 1986. This trail is very popular and travels through Black Hills National Forest, private, and state lands, but is managed by the South Dakota Department of Game, Fish, and Parks. Another popular interagency trail system is the 111-mile-long Centennial Trail. Though not historic, this trail marks the 100th anniversary of the statehood of South Dakota (1889-1989) and showcases the diversity of resources that South Dakota offers.

Over the years, some lands in the Black Hills National Forest were transferred to the Department of the Interior to create units in the National Park Service such as Devil's Tower National Monument (1906), Jewel Cave National Monument (1908), and Mount Rushmore National Memorial (1941). Wind Cave National Park (1903) was also established near the Black Hills and was the first cave in the world to be designated as a national park. These parks and monuments are also major draws for tourism in and around the Black Hills.

Black Hills National Forest Administrative History

The Black Hills National Forest has been under the management of the Federal Government since 1897 when it was established by President Grover Cleveland as The Black Hills Forest Reserve. These lands were later transferred to the U.S. Department of Agriculture in 1905 and were split into three national forests called the Sundance National Forest (1908-1915 in Crook County), The Black Hills National Forest (1905-present in Lawrence, Meade, and Pennington Counties) and the Harney National Forest (1911-1915 in Custer and Fall River Counties). These three national forests were merged in 1954 to create the Black Hills National Forest (Davis 1983, pp. 783-788). During the 20th century the Black Hills National Forest ranger districts experienced numerous changes in boundaries, names, and acreage, extending well into recent times. For example, at its inception in 1899, the Black Hills Forest Reserve consisted of 20 ranger districts (Noisat and Sundstrom *in:* Rom et al. 1996, p. 5e-4). In 1996 there were seven districts, and now in 2022 there are four ranger districts: the Bearlodge Ranger District (Sundance, Wyoming), Northern Hills Ranger District (Spearfish, South Dakota), Mystic Ranger District (Rapid City, South Dakota), and Hell Canyon Ranger District (Custer, South Dakota).

The transfer of the forest reserves from the U.S. Department of the Interior to the U.S. Department of Agriculture in 1905 radically altered the management direction of the Forest Service from focusing on forestlands to administratively supervising national forest units. With this new culture came emphasis on fire suppression, sustainable resource use, and later, recreation. To carry out this management, Forest Service employees during the Custodial Era (1905-1932) typically managed their forest areas from a two-room ranger cabin that hosted the office in the front of the building and contained living quarters in the back.

As management of the national forests grew exponentially in the 1920s and into the Depression era (1933-1945), Forest Service administrative sites grew as well with a dedicated ranger/district office, supporting buildings, and separate living quarters. The tremendous amount of labor provided by the Civilian Conservation Corps from 1933 to 1942 built most of these administrative structures (see following Civilian Conservation Corps section). Following World War II, the national forests saw a tremendous increase again in management direction and programs throughout the mid-century, 1945-1970. Despite low facility budgets, the Forest Service expanded previous sites with building additions or built new sites using innovative and cost-effective materials like aluminum and T-1-11 siding. Ranger district sites and work centers continue to be the crux of national forest management. In addition to administrative facilities, fire lookout towers have served as an important resource. Fire lookouts provided critical support for fire suppression on national forests (see previous Fire Lookout Tower section).

An alternative to administrative facilities where Forest Service employees primarily work are recreation facilities constructed for the public to enjoy the national forests. Early recreation areas included small campgrounds and picnic areas. The 1915 Term Occupancy Act allowed for private recreation residences and resorts to be permitted on designated National Forest System lands. The Civilian Conservation Corps dramatically expanded recreation opportunities on the national forests by constructing larger campgrounds, picnic areas, boat launching areas, trail shelters, and numerous other facility types. During the mid-century, recreation on the national forests became a program of its own with the implementation of Operation Outdoors, a national directive that expanded recreation facilities for a growing recreating public. In addition to typical recreation facilities, the Forest Service constructed winter recreation

facilities such as snowmobile trails and ski slopes. Recreation residences continued to be built before the program limited new residences in the late 1960s. The Black Hills National Forest contains a total of about 156 recreation residences, 127 of which are spread between 20 recreation residence tracts or "summer-home groups." There are also 29 "isolated" summer home cabins. In total 73 of these recreation residences are eligible for the National Register of Historic Places.

Civilian Conservation Corps

The Great Depression was a brutal financial disaster for the United States and marked a turning point in American political and economic history. Young people entering the work force were deeply affected by the crisis. Jobs were not available for unskilled laborers and opportunities for people to even gain experience were scarce. In 1933, President Roosevelt introduced the New Deal program to the American people. The New Deal was a combination of short-term strategies designed for immediate relief, and longer-term strategies designed to promote national economic recovery. It included work programs like the Works Progress Administration and Civilian Conservation Corps. Workers in the New Deal programs operated under several Federal agencies, including the Soil Conservation Service and the National Park Service, but more than 50 percent of all the public works projects administered by the New Deal were undertaken by the Forest Service (Otis et al. 1986). The Civilian Conservation Corps enrollees worked to save areas infested with pine bark beetle, built and maintained trails, roads, and picnic areas, fought wildfires and engaged in rescue efforts, planted trees, built fences and telephone lines, and installed latrines, drinking fountains and signs, and constructed extensive erosion control structures throughout the plan area.

The Civilian Conservation Corps made a significant impact in the Black Hills and was active in the area from 1933 to 1942. In 1934 alone, the Corps built numerous stock dams, 26 miles of road, 62 miles of fence, 35 corrals, 276 miles of development roads, 29 bridges, 40 miles of telephone line, and 26 small buildings. The most extensive job that was completed in the Black Hills was the thinning of 204,600 acres of ponderosa pine, which was first large-scale thinning project completed in the nation (Derscheid 1986; and Sundstrom *in*: Rom et al. 1996, p. 4c-3).

Cultural resource sites related to Civilian Conservation Corps activities in the Black Hills National Forest include picnic shelters, Civilian Conservation Corps camps (Camp Bob Marshall), dams (Cook Lake, Sheridan, Pactola, Stockade, Bismarck, etc.), public camp sites, shelters, developed springs, roads, trails, culverts, bridges (such as pigtail bridges on the Needles Highway, Iron Mt. Road, and more), residences, houses, museums, fire lookouts, and so on. A majority of all the structures and features that remain from this period and are still used administratively are now considered eligible for the National Register of Historic Places.

Information Gaps: Contexts and New Science

A background history or context contains information about the period, the place, and the events that created, influenced, or informed the backdrop to the historic resources. This includes the political, social, environmental, cultural, and even economic influences Contexts are critical in determining significance and eligibility of cultural resources. Prepared comprehensive contexts enable managers to make efficient and informed decisions for resources that affect all national forest program areas. An extensive Black Hills Cultural Resource Overview was conducted in 1996 and provides the foundation for research conducted by archaeologists in the Black Hills. Since its development, additional research designs and questions have risen, providing the opportunity and need for additional contexts and information. Current information gaps exist regarding:

• Traditional ecological knowledge is evolving knowledge acquired by Indigenous and local peoples over hundreds or thousands of years through direct contact with the environment. Incorporation of

- this information into research designs and forest planning would result in a more wholistic management of natural and cultural resources, as well as serve for meaningful Tribal consultation and relationships.
- Built environment and structures are subject to natural deterioration by age, weathering, and use.
 As administrative buildings like ranger stations and lookouts, or recreation facilities like pavilions
 or boat launches, continue to age, they become cultural resources. Infrastructure such as dams,
 culverts, bridges, and roads are also resources subject to cultural resource management. A context
 and evaluative guide on the built environment would facilitate resource management.
- As an agency, the Forest Service has had a dynamic administrative history influenced by political and conservation movements, migration, the economy, and environmental change. Administration of lands managed by other Federal and State agencies has also shaped the Black Hills area in the last 100 years. These lands include Wind Cave National Park, Jewel Cave National Monument, Custer State Park, Devil's Tower National Monument, Fossil Cycad National Monument, Mount Rushmore National Memorial, lands managed by the Bureau of Land Management, and many others. A comprehensive context would fully explore and explain the roles that these agencies have had individually and collectively on the identity, population, settlement, politics, and economy of the region.
- There is a lack of comprehensive background on the role of recreation in the Black Hills, which have served as a tourist destination and have been marketed as such for more than 140 years. Hunting, fishing, climbing, sightseeing, hiking, and picnicking are just a few of the common recreational experiences. The recreation movement in the early 20th century prompted the development of recreation resident tracts on the national forest. Depression-era relief works enlisted the Conservation Civil Corps to construct many of the recreational facilities in use today including campgrounds, boat launches, overlooks, and day use areas. The additional significant trend of recreation in the area within the last 50 years has had an effect on how cultural resources and historic properties are managed on the national forest. A context that speaks to the history, evolution, and interconnectedness of recreation in the Black Hills would aid cultural resource program managers in the evaluation and management of the resources.

Chapter 3. Current Conditions and Trends of Cultural Resources

Heritage Program Managed to Standard

The Forest Service manages its cultural resources to specific standards. The Heritage Program Managed to Standard (FSH 2309.12) provides seven measures of stewardship for the agency's unique, non-renewable cultural resources. The Heritage Program Managed to Standard promotes an array of management tools such as National Historic Preservation Act Sections 106 and 110 studies, National Register of Historic Places designations and official listings, volunteerism and public study, interpretation, and condition assessments, among others. Assessed together, these indicators guide managers on issues such as whether an agency heritage program is managed to meet the objective in FSM 2360.2, to preserve America's heritage through "responsible stewardship activities that recognize, preserve, protect, enhance, and use cultural resources for the greatest public benefit." The Forest Service has met or exceeded these standards in the Black Hills National Forest but does recognize an opportunity to increase volunteerism.

The seven measures of stewardship are:

- Presence of a Heritage Program plan
- Inventory of National Forest System lands
- Evaluation for eligibility to a National Register
- Condition assessments on Priority Heritage Assets
- Cultural resource stewardship
- Opportunities for study and/or public use
- Volunteer hours

Since the forest began to follow and implement the Heritage Program Managed to Standard guidelines, there has been an improvement in the management and condition of National Register properties. This is also marked by an increase in use of the resources by visitors. For example, many tourists and locals seek out high profile National Register sites like Black Elk Peak, Meeker Ranch, or various fire lookout towers. The increase in use is accompanied by an increase in potential adverse effects. However, the Forest Service has engaged in stabilization or restoration projects at Meeker Ranch and Meeker Cabin, as well as security monitoring. Vandalism at Black Elk Peak resulted in a public education project in which the vandals repainted the inside of the lookout tower to its original color. The increase in use marks the opportunity to increase public education and outreach, including Passport in Time Projects, interpretation, volunteerism, and collaborative engagement.

Status of Black Hills National Forest Resources Inventory

Since the 1997 Black Hills National Forest Plan was finalized (and amended in 2006), a significant number of cultural resource inventories (i.e., field surveys) have been conducted, and thousands of sites have been documented and evaluated for eligibility to the National Register of Historic Places.

As of December 2021, approximately 615,167 acres out of the 1.2 million acres that make up the plan area have been surveyed for cultural resources, or about 51 percent. Because the Black Hills National Forest spans across two states, Wyoming and South Dakota, survey methods sometimes vary based on state guidelines and NHPA programmatic agreements. Survey methodologies are influenced by topography, anticipated site types, site densities, and deposition. All of these and other factors are taken into consideration when a survey is planned and executed.

When calculating the percentage of the plan area that has undergone cultural resource inventory, the adequacy of past inventory methods is considered. For example, cultural resource inventories conducted more than 20 years ago may not meet current standards and are sometimes considered inadequate. For this reason, surveys more than 20 years old were not used for this calculation. Though some past surveys were deemed "inadequate" for this document, they may be considered adequate upon a more thorough review on a case-by-case basis (SHPO 2021, p. 14).

Since the 1997 forest plan, more sophisticated tools such as GPS units with sub-meter accuracy and GIS location and site mapping has made site documentation more accurate and, by extension, management more effective in the long term. The Forest Service has recently started using LiDAR, online mapping systems, and is continuously refining survey strategies as surveys are completed.

Status of Cultural Resources

The Forest Service Natural Resource Manager Heritage database (NRM) was used to gather cultural site type information (table 1). The values listed are estimates and are not 100-percent accurate at showing the complexity of site types in the Black Hills National Forest. For example, the database does not consider that some of these resources are multicomponent, which means they contain both indigenous and historic components. Therefore, the values are not 100-percent accurate and some double counting most likely occurred. The values also include resources entered into the Natural Resource Manager database as site, potential site, merged [site], and district. Combining all these different entries of "site types" also may have led to some inconsistencies with site counts and totals.

Table 1. Known cultural site totals and types in the Black Hills National Forest

[NRHP, National Register of Historic Places. Source: Forest Service Natural Resource Manager Heritage database.]

Indigenous	Historic	Unevaluated for NRHP	NRHP Eligible	Non-eligible	Total
Sites	Sites		Sites	Sites	Sites
3,278	4,066	1,899	1,241	4,844	9,266

National Register Listed Properties and Priority Heritage Assets

There are 57 historic properties listed on the National Register of Historic Places (NRHP) and 88 Priority Heritage Assets (PHA) in the Black Hills National Forest.

As part of Heritage Program Managed to Standard Measure 4 (condition assessment and allocation into management categories), the Heritage Program is expected to identify PHAs on the unit. PHAs are sites of distinct public value that are, or should be, actively maintained and that meet one or more of the following criteria:

- 1. The significance and management priority of the property is recognized through an official designation such as listing on the NRHP or on a state register.
- 2. The significance and management priority of the property is recognized through prior investment in preservation, interpretation, and use.
- 3. The significance and management priority of the property is recognized in an agency-approved management plan.
- 4. The property exhibits critical deferred maintenance needs, and those needs have been documented. Critical deferred maintenance is defined as a potential health or safety risk or imminent threat of loss of significant resource values.

PHAs must meet certain criteria and often include National Register listed properties, and other examples of eligible cultural properties require consistent monitoring on a 5-year cycle. Some PHAs are visited more frequently due to high visitation, disturbances, and other factors.

Cultural resources listed on the NRHP and the PHA lists represent both historic and indigenous cultural resources, with indigenous sites dominating both lists. Indigenous sites include rock art, habitation localities, lithic quarries, as well as sacred areas and landscapes. Rock art sites (mostly found in the southern hills) dominate both lists. Specifically, history-related resources generally include mining districts, fire lookouts, monuments, historic townsites and complexes, Civilian Conservation Corps structures, flumes, pipelines, cabins, etc.

Traditional Cultural Properties and Sacred Sites

The entire Black Hills are sacred to Indigenous Tribes affiliated with the area. Traditional communities continue to use the plan area for economic subsistence as well as for social, recreational, and religious purposes. Ceremonies continue to be conducted that follow the landscapes and prominent landforms within, and outside of, the boundaries of the Black Hills National Forest. Some of these ceremonies and collection locations for natural materials are visited yearly following seasonal rounds. Certain ceremonies also take place at specific landforms in the Black Hills during the winter and summer solstices.

The following definitions presented in the Heritage Program Management Handbook (FSH 2309.12) are from Sacred Sites Executive Order 13007 and are summarized from the National Park Service's National Register Bulletin 38 – Guidelines for Evaluating and Documenting Traditional Cultural Properties, which the Forest Service also follows.

Sacred Sites

Executive Order 13007 – Indian Sacred Sites defines an Indian sacred site as "any specific, discrete, narrowly delineated location on Federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion; provided that the Indian tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site."

Traditional Cultural Property

A Traditional Cultural Property (TCP) is a cultural resource that is eligible for inclusion in the National Register of Historic Places because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community. The entity evaluated for eligibility for inclusion in the National Register of Historic Places must be a tangible property; that is, a district, site, building, structure, or object as defined in 36 CFR 64.4.

TCPs may include areas such as mountains, hills, springs, collecting areas, burial grounds, or other unique geographical features. The U.S. Department of the Interior provides examples such as:

- a location associated with the traditional beliefs of a Native American group about its origins, its cultural history, or the nature of the world,
- a rural community whose organization, buildings and structures, or patterns of land use reflect the cultural traditions valued by its long-term residents,
- a location where Native American religious practitioners have historically gone, and are known to go today, to perform ceremonial activities in accordance with traditional cultural rules of practice,

- an urban neighborhood that is the traditional home of a particular cultural group, and that reflects its continuing beliefs and practices, and
- a location where a community has traditionally carried out economic, artistic, or other cultural practices important in maintaining its historic identity (DOI 2012).

Issues with the Definition and Listing of Native American TCPs and Sacred Sites

Numerous TCPs are located across the Black Hills National Forest landscape. Due to cultural restrictions and the historical precedent of revealing traditional indigenous knowledge to non-indigenous people, many of these TCPs and Scared Sites are unknown to Forest Service personnel. Thus, it is imperative that clear and proactive tribal consultation occur throughout planning processes. The Forest Service manages known sites through consultation and in relation to National Register Bulletin 38, which defines the concept of a TCP within a National Historic Preservation Act context (DOI 1990). See the *Area of Tribal Importance* section for more information.

The current definitions of a TCP and Sacred Site may not represent the Indigenous point of view. Tribal nations pass down the knowledge that culturally important areas are sacred, and that these areas may be boundless. Therefore, asking Tribes to "draw lines around a TCP, attempting to mark where a site begins and where it ends, is often seen as inconsistent with the value or unique cultural characteristics of the place" (Lusignan 2009). There is also a reluctance to release information pertaining to specific TCPs for fear of future damage to, or inappropriate use of, these sacred areas. Moreover, continued disagreements or confusion have occurred in "...defining who is best suited to undertake identification and evaluations work, agreeing on what constitutes sufficient documentation, deciding how integrity should properly be considered, and determining how traditional cultural groups can best be defined" (ibid).

Resource Conditions

A variety of processes and systems have existed in the agency to record sites, surveys, and heritage program success. Since 2017, the Forest Service Natural Resource Manager (NRM) Heritage Application has served as the database for site and survey data. Natural Resource Manager also tracks targets within the Heritage Program Managed to Standard framework. A concerted effort occurred in 2017 to input legacy data into the Natural Resource Manager database; however, not all the data sets are entirely or accurately recorded. The Natural Resource Manager database allows for tracking of site condition, but only if it is accurately input from the field. The way in which the data are organized in Natural Resource Manager has changed over the years, which has made some information (especially legacy data) difficult to search. Black Hills National Forest staff has been entering data in a concise and equitable manner across the four districts since Natural Resource Manager became a mandatory tool in 2017 and therefore has confidence in the integrity of the data.

The 1997 forest plan requires monitoring of eligible historic properties in relation to project proposal and implementation. Monitoring is based on the evaluation of protection measures for resources discovered during project proposal evaluations, during implementation, or after implementation of the project. Some important cultural resources, such as PHAs, are monitored on a regular basis due to their locations being susceptible to high visitation from recreators or located in an area with a high likelihood for disturbances or impacts. Consultation efforts with recognized Tribal Governments demonstrating concern for areas of cultural importance are also to be monitored and reported.

Vandalism is an increasing threat to cultural resources along with increased recreation and off-highway vehicle use in the Black Hills National Forest. Historic mining, ranching, and homesteading sites with standing architecture are particularly vulnerable, especially in the southern Black Hills where recreational use is increasing yearly. The public is increasingly using wood from historic structures as firewood, and more graffiti and vandalism appears each year at sites such as Harney Tower, Black Elk Peak, Meeker

Ranch, and the Spokane Mine, all of which are prominent structures that are photographed for social media and visited throughout the year. This increase in vandalism and graffiti is also occurring in areas with Indigenous resources, such as sacred rock art sites. Indigenous sites have also become more prone to disturbances with the increased use of off-highway vehicles during the wet seasons (late fall and early spring) because vehicle tires dig into the ground and greatly impact surface and subsurface site integrity and value. With low funding and lack of resources, it is difficult for archaeologists and law enforcement officers to keep pace with the high demand and visitation to these non-renewable resources. More public education and law enforcement is needed, and more cameras should be installed at significant sites that are prone to vandalism before they are permanently destroyed.

The unauthorized collection of surface artifacts (e.g., projectile points and historic items) is also an ongoing problem. There is a common misconception that the collection of these artifacts is legal or merely a recreational endeavor. In addition to human-caused impacts to sites, natural weathering, erosion, and the increase in wildfires (and associated fire-related human activity) also pose threats to cultural resources.

Collections Management

The Black Hills National Forest artifact collections are still being sorted and cataloged in a few of the district offices. Black Hills National Forest artifacts and archives that have been properly inventoried are housed under agreements at one of the following three facilities: The University of Wyoming Archaeological Repository, Black Hills State University, and South Dakota Archaeological Research Center. The majority of the Black Hills National Forest artifacts and collections are stored at the South Dakota Archaeological Research Center. The Black Hills National Forest archives for South Dakota and Wyoming are housed at Black Hills State University. Artifact collections from the Bearlodge Ranger District in Wyoming are stored at The University of Wyoming Archaeological Repository.

- University of Wyoming Archaeological Repository, Laramie, Wyoming an estimated 24 cubic feet and 39,300 objects listed in their database.
- South Dakota Historic Society Archaeological Research Center, Rapid City, South Dakota 288.5 cubic feet.
- Black Hills State University, Spearfish, South Dakota 393 cubic feet.

Trends Affecting Cultural Resources

The current condition of cultural resources can be characterized by examining the number of historic properties that have been placed on, or determined eligible for, the National Register of Historic Places (NRHP) and by examining data and other information on impacts to historic properties and other resources. A historic property is a district, site, building, structure, or object included in, or eligible for inclusion on, the National Register of Historic Places, including artifacts, records, and material remains related to such a property or resource (54 U.S.C. 300308).

Off-highway vehicles are impacting cultural sites at an alarming rate. Vandalism and the unauthorized collection of surface artifacts are also increasingly popular as recreationists seek outdoor activities. Sites closer to roads and trails seem to be at a greater risk, given their ease of accessibility, location, and exposure to visitors passing by.

Like many other national forests, the Black Hills faces a legacy management perspective that at one time evaluated sites as ineligible to the NRHP simply because they were less than 50 years old. This was the result of a paradigm that viewed the maintenance of cultural resources as a time and cost burden, rather than a valuable resource. However, as time passed, these sites may have been eligible to the NRHP. While not every site previously deemed ineligible should be re-evaluated, an effort to revisit and reconsider

select sites should be made. In the Black Hills National Forest, this includes several Depression-era sites constructed by the Civilian Conservation Corps.

The evaluation of the condition of cultural resources, including historic properties, is problematic. For historic properties, objective criteria such as the evaluation of impacts from natural and human forces can be used to generate statements regarding their condition. However, the nature, intensity, and quality of the evaluation of impacts to properties have changed over the past half century. Additionally, individual archaeological biases play a role in the evaluation and assessment of cultural resources. This creates a need for a diversity of archaeological perspectives and specialties within the heritage program. Basic monitoring data indicate that most archaeological sites are in stable condition and most historic sites with standing architecture are in deteriorating condition.

New Science

Cultural resources contain important scientific information on past human - environment interactions that can inform our knowledge of ecosystem evolution. Native American resource use and management is documented in the archeological record and can provide valuable data on historic environmental conditions and how our existing, and potentially future, environment is shaped in part by their activities.

Scientific information gathered from palaeoecological studies of the region can contribute to our knowledge of climate change and ecological sustainability of the plan area. Scientific investigation of historic properties and their associated sciences can also provide an understanding of how humans have successfully adapted to a changing environment, or when they have failed to do so.

Davies et al. (2019) studied the carbon and nitrogen isotopes of Northern Great Plains bison from the terminal Pleistocene and throughout the Holocene with significant climate adaptations. When compared with that of modern bison, they discovered an unrealized resiliency and adaptability of the species. This discovery helps to tell the story about human interaction (hunting and migration) with bison. These studies could also influence the management of bison herds in the future and their population sustainability. Kelly et al. (2012) examined ancient cultural and population changes based on the fluctuations of Rocky Mountain natural environments and climate change and determined that populations slowly but surely changed to reveal more resilient and adaptable cultures than previously suspected. Cuff (1976) focused on the paleoecology and depositional environment of the Black Hills and determined that the composition of the Mowry Shale layer of the Black Hills environment was the result of re-floated and decomposed fauna, based on the salinity of the shale. Despite being antiquated, the Cuff (1976) findings serve as a foundational discussion for climate change, animal and human migration in the Black Hills region, and geological composition encountered by indigenous populations in the deep past. Lee and Puseman (2017) documents the importance of specific landscapes (ice patches and the alpine) and the paleoecological environment of the indigenous inhabitants of the Greater Yellowstone area. That investigation of wooden hunting implements (dating anywhere from 9230 ± 25 B.P. to 215 ± 20 B.P.) is a testimony to the use, availability, preference, and modification of local wood sources. Research designs that consult archaeological and paleoecological contexts of the past could provide insight to such themes in the Black Hills region.

Understanding past patterns of human land use also informs on the forces that have contributed to current ecological conditions, as practices such as farming, mining, and logging can affect the subsequent health of ecosystems for hundreds of years. As such, information about past environmental change and human land use is critical for making decisions about maintaining ecological sustainability in future land management. The interpretation of historic properties also creates opportunities to educate the public about environmental change and human adaptation in the past, and ecological sustainability in the future. It is important for land and resource managers to commit to researching and contributing to the growing body of scientific knowledge and information of the area.

Information Gaps

Information gaps for cultural resource inventories and evaluations include the discussion that approximately 50 percent of the Black Hills National Forest is lacking an adequate cultural resource survey. Pre-2000 inventories may be suspect in terms of their adequacy of information and fulfillment of the National Register of Historic Places process; some of these inventories require resurveying and updating. This is determined on a case-by-case basis through consultation with the SHPO and tribes when appropriate. Post-2000 surveys and inventories have standardization of methodologies and include strict criteria, such as the use of GPS/GIS device, 30-meter spaced transects/field surveys, shovel testing, when necessary, high-quality digital photographs taken on site, and thorough notes and site forms that follow SHPO standards.

Of the known resources within the plan area, approximately 78 percent or 7,000 of the 9,000 known resources have been evaluated for eligibility to the NRHP, leaving approximately 2,000 resources unevaluated. The percentage of NRHP evaluated sites and acreage covered within the Black Hills National Forest is much higher than that of many other national forests in the Nation (Campbell and Cain 2018). This management practice of evaluating sites situates the Black Hills National Forest in good standing with the Heritage Program Managed to Standards.

Land exchanges, easements, or interagency projects have led to the documentation of some resources and surveys that are relevant to the archaeology and history of the Black Hills National Forest but are located outside its current administrative boundaries. As a result, there is a paucity of information for the sites and history immediately surrounding the national forest boundary. For example, a large-scale rock art survey conducted in the 1990s and 1980s could contribute significantly to similar resources located on lands managed by the Forest Service.

There is also limited understanding in how cultural resources will respond to, and are responding to, climate change impacts in the Black Hills. A draft climate change vulnerability report for the Black Hills was released in October 2021 by the Western Wildland Environmental Threat Assessment Center. This report stated that temperatures are predicted to increase, snowpack will decrease, and precipitation and flooding will potentially increase (Timberlake et al. 2021). If this is the case, then cultural resources like lithic material, habitation areas, stone circles, and other indigenous resources could be impacted in the future from flooding, landslides, ground and soil disturbances from off-highway vehicles on wet roads, increased recreationists due to longer seasons of warmer weather, increased deterioration of historic structures, increased forest fires damaging resources, and other impacts that are unknown at this time.

Globally, archaeologists are formulating research designs and analyzing assemblages to determine if and how past civilizations responded to climate change. Research questions focusing on the Black Hills cultural resources and climate change have the potential to advance knowledge globally and contribute to the growing body of literature and action regarding environmental health.

These information gaps, in addition to the lack of recently researched/published indigenous and historic contexts, inhibit managers in making 100-percent efficient and critical conclusions for cultural resources during evaluations. Having full awareness of resources, increased monitoring of sensitive resources, upto-date contexts, and Federal requirements will be beneficial for future management direction.

Chapter 4. Sustainability

Economic, Social, and Environmental Sustainability of Cultural Resources

Cultural resources are an integral part of the public's identity and relationship to their heritage. Access to these resources through the landscape and material culture provide tangible connections for Americans to the people and events that have shaped their communities and collective histories. Cultural resources further reveal how identities are inextricably tied with local communities and the state, region, and nation. Archaeological and historic preservation has become a fundamental tool for strengthening American communities. Cultural resource management has proven to be an effective tool for a wide range of public goals including small business incubation, affordable housing, sustainable development, neighborhood stabilization, center city revitalization, job creation, promotion of the arts and culture, small town renewal, heritage tourism, economic development, and others.

Recent data suggest a significant uptick in outdoor recreation. The number of national forest and grassland visitors increased by 18 million – from 150 million visitors in 2019 to 168 million in 2020. More than 141 million visitors sought out recreation opportunities, specifically, on their visits (USDA Forest Service 2020). Tourism is the second largest industry in South Dakota, after agriculture. Please refer to the *Recreation* assessment for Black Hills tourism statistics and information.

Cultural connections not only bolster communities but are also vital to the local and state economy. The National Trust for Historic Preservation defines "cultural heritage tourism" as traveling to experience the places, artifacts, and activities that authentically represent the stories and people of the past and present. While cultural tourism can potentially threaten ecosystems and resources if not carefully managed, such tourism has tremendous benefits for the local and state economy by contributing to lodging, food and beverage, retail, and recreation/entertainment economic sectors. Furthermore, cultural tourism, historic designations, and historic rehabilitation create jobs and businesses, increase tax revenues, diversify the local economy, increase interpretive experiences and education to reduce unintentional impacts, increase local knowledge of resources to reduce unintentional impacts, and create opportunities for economic partnerships.

Local opportunities exist to leverage heritage tourism. The Native American Tourism and Improving Visitor Experience (NATIVE) Act, or Public Law 114-221, serves to establish a more inclusive national travel and tourism strategy. This law also has the potential to deliver significant benefits for tribes, including jobs creation, elevated living standards, and expanded economic opportunities. Intentional recreation planning to incorporate the NATIVE Act through government-to-government consultation will result in expanded opportunities. This is not a focus of the 1997 plan and can occur regardless of forest plan revisions.

Beyond the economy, heritage tourism fosters greater connections between public and cultural resources by increasing local traditions and culture, generating local investment in historic resources, building community pride in heritage, and increasing the awareness of the site or area's significance (CPI 2017).

Historic preservation/rehabilitation is another option for environmental, economic, and social sustainability. Preservation and reuse of historic buildings reduces resource and material consumption, contributes less waste to landfills, and consumes less energy than building demolition and reconstruction. Over the past decade, advances in high performance or "green" buildings have been numerous but have primarily focused on new construction. As a result, the preservation and adaptability of historic and older buildings has not always been at the forefront of the "green" movement agenda. However, this is changing as historic buildings, which are typically energy efficient because of inherent characteristics, can

be upgraded with new technologies to maximize energy performance with few to no adverse effects to historic properties (NPS 2017b).

Cultural resources provide an essential ecosystem service that enhance heritage values and identity by providing non-material benefits that people obtain from ecosystems. The ecosystem services provided by the cultural resources and uses of the plan area, by definition, are cultural services in that these resources and uses provide social, psychological, spiritual, recreational, and emotional connections between people and the land.

Another significant aspect of cultural resources is that they serve as primary sources of data and contain important scientific information on past ecological conditions and human-environmental interactions over a broad timescale. Studying these resources can inform other disciplines and resource managers on current ecological conditions. These studies and data from cultural resources are vital for decisionmakers to make culturally sensitive or sustainable decisions and are important for the general public in making economic or value judgments that can impact communities. Historic properties within the plan area contain a wealth of information for scientific researchers regarding ecological conditions and changes over the past 13 millennia, and human successes and failures in coping with these changes.

Cultural resources, historic buildings, archeological sites, and cultural landscapes experience similar effects from climate change as natural resources in the same area. Cultural resources are individually unique and non-renewable. Much of their meaning is tied to their specific location on the land. Even some plants used for cultural purposes are tied to a specific view or place. Weathering, sunlight, moisture, wind, and other natural factors have always posed challenges for protecting cultural resources. Current trends suggest that the rates, combinations, and intensity of these factors are already increasing. Climate change projections indicate that these irreplaceable resources are likely to be altered, deteriorated, or removed at faster rates or in ways not previously observed. Unlike natural systems, cultural resources are utterly dependent upon people to help them withstand and remain sustainable within climate change (NPS 2017a).

Cultural and historic resources and uses in the plan area are critical to the social, economic, and ecological sustainability of the plan area, the Rocky Mountain region, and the nation.

Chapter 5. Current Forest Plan and its Context within the Broader Landscape

Current Forest Plan Management Direction

The 1997 forest plan provides several guidelines for heritage.

- Provide five projects per year to increase the numbers and types of heritage resource interpretive sites and opportunities.
- Conduct six heritage resource stabilization and rehabilitation projects per year.
- Nominate approximately five sites per year to the National Register of Historic Places.
- Inventory 50,000 acres each year.
- Conduct three research projects each year to support heritage resource management.
- Manage all NRHP registered heritage sites in consultation with the State Historic Preservation Officer (SHPO) and the President's Advisory Council on Historic Preservation.
- Provide opportunities for the public to participate in heritage management activities, including the monitoring, excavation, and protection of archaeological sites.
- Consider long-term forest management needs in determining appropriate use of mitigation of effects to, or avoidance of, heritage resources during project planning.
- Issue appropriate authorizations to qualified persons or entities for the study, research, interpretation, tourism, adaptive use, other cultural activities, or mitigation of effects at National Register listed or eligible heritage sites.
- Use cooperative programs, agreements, and other partnerships to further the goals of heritage resource management.
- Utilize heritage resources for a variety of public uses and enjoyment.
- Support Windows on the Past, Passport in Time, or other Forest Service heritage management emphasis programs whenever possible.
- During all planning and implementation activities, incorporate information, data, and ideas in the Black Hills Heritage Resources Overview and the forest heritage resources database.

What Plan Changes Are Needed to Respond to Cultural and Historic Issues?

The overarching need for change is a need for more management flexibility to respond to variable resource or climatic conditions.

• As noted throughout this document, the lack of an updated and comprehensive context is a concern. The ability to objectively evaluate sites is hindered by the lack of thematic and localized research and knowledge of specific movements and groups that influenced the sites and the cultural development of the Black Hills. An updated context would include the administrative history of the Black Hills National Forest, the roles and history of other land management agencies (municipal, State, and Federal) in the Black Hills region, and the role of the recreation movement. This context should also include an evaluative guide and discussion regarding the built environment of the Black Hills. The current forest plan directs emphasis on the existing and outdated Black Hills Overview.

- Incorporate new science, conduct and include ethnographic studies and data, and incorporate emerging climate change research into archaeological research designs, surveys, and evaluations. Contribute to the growing research community through presentations, evaluations, conferences, and publications. Black Hills archaeology represents a unique dataset that can serve to advance the field regionally and nationally.
- Evaluate eligibility on the National Register of Historic Places for the remaining unevaluated sites. Encourage the re-evaluation of sites previously deemed ineligible by antiquated management practices rooted in the "50 years or older" methodology.
- NAGPRA was not mentioned in the 1997 forest plan and needs to be included in this revision.
 Establish a comprehensive written Plan-of-Action as guidelines when human remains are encountered in the field that includes protocols on points of contact, actions to take, tribal consultation, timelines, repatriation process, and rules for including the public or stakeholders. Additionally, law enforcement should be aware and practiced on how to deal with a NAGPRA situation in the Black Hills National Forest.
- Contribute to the diversity and success of the heritage program and tell a more inclusive story of the Black Hills by employing professionals from diverse cultures, backgrounds, specialties, and experiences. Partner with Native American colleges and Historically Black Colleges and Universities, and leverage agency employment platforms such as Resource Assistants programs or internships to support a diverse workforce. Seek out current high demand specialties such as architectural historians, historical archaeologists, and historic preservationists to build a team of heritage professionals with a skillset to respond to the various resource needs.
- The Black Hills National Forest Heritage Program coordinates with heritage professionals from the National Park Service, Bureau of Land Management, Bureau of Reclamation, and other agencies. Additionally, occasional surveys or other investigations are conducted by volunteers or county and municipal sponsored historical organizations under the supervision of qualified staff. This includes projects that cross administrative boundaries. The adjacent boundaries of the Black Hills National Forest with other lands managed by multiple agencies and owned by the public provides a unique opportunity for archaeologists from different backgrounds to collaborate in meeting shared resource and program goals through surveying, recording, and protecting/conserving cultural resources for future generations and research. These relationships have been useful in the past on numerous occasions and will continue to be utilized in the future.
- Conduct surveys of the remaining un-surveyed landscape.
- Build and foster collaborative relationships with other agencies.
- Develop a cultural resource protection protocol and respond to the growing issue of irreversible resource damage. Place priority on public education and enforcing actions when damage and vandalism are occurring at archaeological sites and to cultural resources. Support law enforcement actions including patrols, cameras, or other surveillance at known vandalized sites. Prosecute violators that damage significant non-renewable resources.
- Mitigate safety concerns on sites like historic mining adits and shafts by limiting entrance with bat
 gates. Deter visitors from exploring these dangerous features. These enclosed spaces contain many
 hazards, and they have become very unstable over the years. Provide public education on safety
 risks. More education could be used in this situation as well.
- Native American TCPs should be approached differently. It is imperative that proactive Tribal Consultation be used throughout the process.
- Consider historic structures for adaptive reuse into recreation rentals or leasing opportunities.
 Encouraging innovative and sustainable approaches to preserving, conserving, reusing, and managing cultural resources.

- Contribute to heritage tourism by updating interpretive signage and programming. Increase audience by diversifying the interpretive experiences offered in the Black Hills National Forest.
- Invest in partnerships and agreements to increase volunteer and visitor experiences. Leverage existing platforms such as Passport in Time, Urban Connections, and outdoor youth programs to provide experiences and opportunities.
- Develop projects based on the NATIVE Act to collaborate with tribal partners and bring awareness and economic stimulation to the tribal communities in and around the Black Hills.
- Continue monitoring PHA sites on a 5-year cycle, or more frequently if the site warrants it.
- Research the era of indigenous archaeologies. The use of cultural specialists within cultural resource management firms and tribal cultural surveys will be used much more frequently in the future. Acknowledgement of cultural resources outside the scope of traditional archaeological resources is going to be essential for future progress and resource management.
- Use existing agreements or develop new ones to accomplish mission critical work. The use of programmatic agreements has become a common and necessary practice since the last forest plan amendment. They are now used throughout the Black Hills in Wyoming and South Dakota. Programmatic agreements are intended to facilitate the Section 106 compliance process when circumstances permit. Therefore, these documents help expedite the 106 processes for specific projects, and commonly recurring activities and undertakings in the plan area. In keeping with the agreements and to build and maintain successful relationships with SHPOs, THPOs, consulting parties and stakeholders, the Forest Service must uphold and honor the terms of programmatic agreements. Forest Service line and staff officers as well as Heritage staff must have training in how to use the programmatic agreements.
- Develop plan components that manage for Native American traditional cultural properties and sacred sites while conserving the anonymity of such sites where appropriate.
- Develop plan components that protect historic properties and tribal use areas at risk of damage or destruction during non-prescribed and unplanned fire.
- Update plan components to protect areas that may be identified as a sacred site or part of an important cultural landscape by a tribe.

References

- Buhta, A.A., B.A. Bradley, M. Kay, L.A. Hannus, and R.P. Winham, et. al. 2013. The archeology, history, and geomorphology of the Ray Long Site (39FA65), Angostura Reservoir, Fall River County, South Dakota. Manuscript III. Prepared by: Archaeology Laboratory Augustana College, Sioux Falls, SD. Prepared for DOI, Rapid City, South Dakota.
- Cassells, S., D.B. Miller, and P.V. Miller. 1984. PAHA SAPA, a cultural resource overview of the Black Hills National Forest, South Dakota and Wyoming. Prepared under contract between Plano Archaeological Consultants and the U.S. Forest Service (#53-67TO-3-90).
- Colorado Preservation Inc. (CPI). 2017. Economic benefits of historic preservation: Preservation for a changing Colorado. Colorado Preservation Inc., Denver, Colorado.
- Cuff, R.M. 1976. Paleoecology and depositional environment of the Mowry Shale (Albian), Black Hills Region. Master of Science thesis. University of Wisconsin, Madison.
- Cutlip, K. 2018. In 1868, Two nations made a treaty, the U.S. broke it and Plains Indian Tribes are still seeking justice. Accessed May 4, 2022, at: https://www.smithsonianmag.com/smithsonian-institution/1868-two-nations-made-treaty-us-broke-it-and-plains-indian-tribes-are-still-seeking-justice-180970741/
- Davies, G., B. McCann, J. Sturdevant, F. Swenson, and I.V. Ovchinnikov. 2019. Isotopic paleoecology of Northern Great Plains bison during the Holocene. Scientific Reports 9:16637.
- Davis, R.C. (ed.). 1983. Encyclopedia of American forest and conservation history. New York: Macmillan Publishing Company for the Forest History Society, Vol. II, pp. 743-788.
- Derscheid, L.A. 1986. The Civilian Conservation Corps in South Dakota 1933-1942. Brookings, South Dakota, South Dakota State University Foundation Press.
- Frison, G.C. 1991. Prehistoric hunters of the High Plains (second edition). Academic Press, New York.
- Glover, V.J. 1984. Logging railroads of the Lincoln National Forest, New Mexico. USDA Forest Service, Southwestern Region. 83 pp. Accessed May 4, 2022, at: https://foresthistory.org/wp-content/uploads/2017/01/Logging-Railroads-of-the-Lincoln-National-Forest.pdf
- Hays, H.G. 2015. A Class III cultural resource inventory of the Bear Lodge project, Bull Hill Mine for rare element resources in the Black Hills, Crook County, Wyoming. Forest Service Project No. R2015020300340. Boulder, Colorado: Western Cultural Resources Management, Inc.
- Kelly, R.L., T.A. Surovell, B.N. Shuman, and G.M. Smith. 2012. A continuous climatic impact on Holocene human population in the Rocky Mountains. Proceedings of the National Academy of Sciences of the United States of America, 110(2):443-447. Accessed May 10, 2022, at: https://doi.org/10.1073/pnas.1201341110
- Kornfeld, M., G.C. Frison, and M. Larson. 1991, rev. 2010. Prehistoric hunter-gatherers of the High Plains and Rockies, Third ed.
- Lee, C.M., and K. Puseman. 2017. Ice patch hunting in the Greater Yellowstone Area, Rocky Mountains, USA: Wood shafts, chipped stone projectile points, and bighorn sheep (*Ovis canadensis*). American Antiquity 82(2), pp. 223–243.
- Ludlow, W. 1875. Report of a reconnaissance of the Black Hills of Dakota, made in the summer of 1874. U.S. Government Printing Office, Washington D.C.
- Lusignan, P.R. 2009. Traditional cultural places and the National Register. The George Wright Forum. Vol. 26, Number 1.

- National Historic Lookout Register (NHLH). 2020. Accessed August 7, 2020, at: http://www.nhlr.org/lookouts/us/SD
- Otis, A.T., Honey, W.D., Hogg, T.C., and Lakin, K.K. 1986. The Forest Service and the Civilian Conservation Corps: 1933-42. U.S. Department of Agriculture, Forest Service Publication No. FS-395.
- Reher, C.A. 1977. Adaptive process on the Shortgrass Plains. *In:* L.R. Binford (ed.). For Theory Building in Archaeology: Essays on Faunal Remains, Aquatic Resources, Spatial Analysis, and Systemic Modeling. Academic Press, New York, pp. 113-140.
- Reher, C.A., and L.A. Lahren. 1977. A preliminary evaluation of archaeological resources and an assessment of impacts: Wolf Canyon project, Fall River County, South Dakota. Manuscript on file in the project record, Black Hills National Forest, Supervisor's Office, Custer, South Dakota.
- Kamstra, R. 2021. Rex's forest fire lookout page: South Dakota forest fire lookout tower sites. 2021. Website accessed November 2021, at: https://www.firelookout.com/sd.html
- Rom, L., T. Church, and M. Church (eds.). 1996. Black Hills National Forest cultural resources overview, vols. 1 and 2. Authors: L. Rom, B. Noisat, L. Sundstrom, J. Sundstrom, J. Buechler, R. Church, P. Wolf, T. Church, and A. Brooks. Black Hills National Forest, Supervisor's Office, Custer, South Dakota.
- Sellet, F., Donohue, J., and Hill, M.G. 2009. The Jim Pitts site: A stratified Paleoindian site in the Black Hills of South Dakota. American Antiquity, 74(4), 735–758. https://doi.org/10.1017/s0002731600049039
- South Dakota State Historic Preservation Office (SHPO). 2021. South Dakota guidelines for complying with Federal and State preservation laws. State Historic Preservation Office and the South Dakota State Historical Society. Accessed May 4, 2022, at: https://history.sd.gov/preservation/laws.aspx
- Sundstrom, L. 1989a. Additional rock art from the southern Black Hills. South Dakota Archaeology 13:29-54.
- Sundstrom, L. 1989b. Culture history of the Black Hills with reference to adjacent areas of the Northern Great Plains. J&L Reprints in Anthropology, Lincoln, Nebraska
- Sundstrom, L. 1989c. Archaic hunting practices depicted in northwestern Plains rock art style. Plains Anthropologist 34 (124:1):149-170.
- Timberlake, T.J., J.E. Halofsky, L.A. Joyce, and D.L. Peterson (eds.). 2021. Climate change vulnerability in the Black Hills National Forest. U.S. Department of Agriculture, Forest Service Western Wildland Environmental Threat Assessment Center, Pacific Northwest Research Station.
- Tratebas, A.M. 1978a. Archaeological surveys in the Black Hills National Forest, South Dakota, 1975-1977. Manuscript on file in the project record, State Archaeological Research Center of South Dakota, Rapid City, South Dakota.
- Tratebas, A.M. 1978b. Cultural resource survey of the Placerville Camp, Pactola District, Black Hills National Forest, pp.10-78. Manuscript on file in the project record, Black Hills National Forest Supervisors Office, Custer, South Dakota.
- Tratebas, A.M. 1979. Archaeological test excavations of four sites in the Black Hills National Forest, South Dakota. Contract Investigations Series 6, State Archaeological Research Center of South Dakota, Rapid City, South Dakota.
- Tratebas, A.M. 1986a. Black Hills settlement patterns: Based on a functional approach. PhD dissertation, Indiana University, Department of Anthropology.

- Tratebas, A.M. 1986b. National Register evaluation of 39PN447, 39PN448, and 39PN463 on the Johnson Timber Sale, in Pennington County, South Dakota (E 5-86). Manuscript on file in the project record, Black Hills National Forest, Supervisors Office, Custer, South Dakota.
- USDA Forest Service. 2020. U.S. Forest Service National Visitor Use Monitoring survey results, National summary report. Data collected FY 2016 through FY 2020. Accessed May 4, 2022, at: https://www.fs.usda.gov/sites/default/files/2020-National-Visitor-Use-Monitoring-Summary-Report.pdf
- U.S. Department of the Interior (DOI). 2012. National Register of Historic Places Traditional Cultural Properties (TCPs). A quick guide for preserving Native American cultural resources. U.S. Department of the Interior, National Park Service, American Indian Liaison Office.
- USDI National Park Service (NPS). 2017a. Climate change: Science and impacts webpage. Accessed May 4, 2022, at: https://www.nps.gov/subjects/climatechange/scienceandimpacts.htm
- USDI National Park Service (NPS). 2017b. Sustainability webpage. Technical Preservation Services, Accessed May 4, 2022, at: https://www.nps.gov/tps/sustainability.htm
- USDI National Park Service (NPS). 2021. What happened to the bison? (webpage) Accessed May 4, 2022, at: https://www.nps.gov/articles/000/what-happened-to-the-bison.htm
- Wishart, D.J. (ed.). 2011. Ghost dance. *In:* Encyclopedia of the Great Plains. University of Nebraska Lincoln, Nebraska. Accessed May 3, 2022, at: http://plainshumanities.unl.edu/encyclopedia/doc/egp.rel.023

Glossary of Terms

Some definitions taken from the 1997 forest plan, the 2015 Forest Handbook, and the 2021 South Dakota Programmatic Agreement.

Archaeology: The study of human history and prehistory through the analysis of artifacts and other physical remains left behind by humans. Studies are also conducted through landscape surveys, excavation, and subsurface testing.

Avoidance: No activities associated with an undertaking that may affect historic properties shall occur within a historic property's boundaries or viewshed where setting is an important element to the site's significance. Portions of undertakings may need to be modified, re-designed, or eliminated to avoid historic properties.

Archaeological Resource: Any material remains of past human life or activity including but not limited to pottery, basketry, bottles, weapons, weapon projectiles, tools (or byproducts of stone tool manufacture), structures or portions of structures, pit houses, rock paintings, rock carvings, intaglios, graves, human skeletal materials, or any portion or piece of any of the foregoing items (16 USC 470bb). For purposes of evaluating significance under NHPA, these materials must be, with certain exceptions, at least 50 years old (Title 36, Code of Federal Regulations, Part 60 – National Register of Historic Places, section 60.4). For coverage under ARPA, materials must be at least 100 years of age, and of archaeological interest, which means capable of providing scientific or humanistic understanding of past human behavior, cultural adaptation, and related topics through the application of scientific or scholarly techniques such as controlled observation, contextual measurement, controlled collection, analysis, interpretation, and explanation.

Artifact: Any object that shows evidence of human manufacture, modification, or use, or are byproducts of human manufacture or use.

Collection: Material remains that are excavated or removed during a survey, excavation, or other study of a prehistoric or historic resource, and associated records that are prepared or assembled in connection with the survey, excavation, or other study (Title 36, Code of Federal Regulations Part 79 – Curation of Federally Owned and Administered Archaeological Collections). Other types of collections include those acquired through Native American Graves Protection and Repatriation Act (NAGPRA) compliance, archival collections such as historic records and photographs, and Forest Service History collections (FSM 2366.1).

Collection management: The long-term physical well-being and safety of collections. Includes issues of conservation, access and use, inventory, and information management.

Consultation: The process of seeking, discussing, and considering the views of other participants, and where feasible, seeking agreement with them regarding matters arising in the Section 106 process (36 CFR 800.16(f)). Consultation is formal communication required in legislation and is between the Forest Service Responsible Official and specific parties indicated in the pertinent legislation. NHPA defines consultation as the process of seeking, discussing, and considering the views of other participants designated in statute or regulation, and where feasible, reaching agreement with them regarding matters affecting cultural resources on National Forest System lands. Notification may also be required in legislation, but unlike consultation, does not necessarily require discussion or agreement.

Corporate database: The Forest Service Natural Resource Manager (NRM) database, formerly and more widely known as the Forest Service Integrated Data Management System (Infra). The Heritage Program component includes all cultural resource information in a records and spatial (GIS) format.

Cultural landscape: As defined by the National Park Service, a geographic area (including both cultural and natural resources and the wildlife or domestic animals therein), associated with a historic event,

activity, or person, or that exhibits other prehistoric or historic cultural or aesthetic values. There are four general types of cultural landscapes, not mutually exclusive: prehistoric/historic sites, historic designed landscapes, historic vernacular landscapes, and ethnographic landscapes.

Cultural resource: An object or definite location of human activity, occupation, or use identifiable through field survey, historical documentation, or oral evidence. Cultural resources are prehistoric, historic, archaeological, or architectural sites, structures, places, or objects, and traditional cultural properties. In this document, cultural resources include the entire spectrum of resources for which the Heritage Program is responsible, from artifacts to cultural landscapes, without regard to eligibility for listing on the National Register of Historic Places (FSH2309.12).

Curation: The management and preservation of a collection according to professional museum and archival practices, including, but not limited to:

- 1. Inventorying, accessioning, labeling, and cataloging a collection,
- 2. Identifying, evaluating, and documenting a collection,
- 3. Storing and maintaining a collection using approved methods and containers and under environmental conditions and physically secure controls following industry standards,
- 4. Periodically inspecting a collection and taking such actions as may be necessary to preserve it, and
- 5. Providing access and facilities to study a collection and handling, cleaning, stabilizing, and conserving a collection in such a manner as to preserve it.

Effects (Cultural Resources): 36 CFR 800.16 defines effect as "alteration to the characteristics of a historic property qualifying it for inclusion in or eligibility for the National Register." Impacts to the characteristics that qualify a heritage resource for the National Register of Historic Places. These can include alterations in location, setting, use, design, materials, feeling and association. Adverse effects include physical destruction or damage; isolation from or alteration of setting; introduction of visual, audible, or atmospheric elements; physical deterioration from neglect or from any action; and transfer, lease, or sale.

Eligible: Indicates a specific cultural resource that qualifies for or is already listed on the National Register of Historic Places (NRHP).

Evaluation: Assessment of a cultural resource's eligibility for listing on the National Register by applying the criteria at 36 CFR 60.4. Heritage assets. A Federal accounting term defined by the Federal Accounting Standards Advisory Board, as "property, plant, and equipment that are unique for one or more of the following reasons: historical or natural significance; cultural, educational, or artistic (for example, aesthetic) importance; or significant architectural characteristics." This definition applies to all Federal accounting. See *Priority Heritage Assets* section.

Heritage Professional: A Forest Service staff or advisory position with education and expertise in archaeology, history, cultural resource management, or related disciplines. Heritage professionals are in the GS-170-History, GS-190-General Anthropology, and GS-193-Archaeology job series. They provide professional recommendations and services to help land managers meet their Heritage Program responsibilities (Forest Service Manual, 2360.5).

Heritage Program: The comprehensive Forest Service program of responsibilities related to historic preservation. The purpose of the Heritage Program is to manage prehistoric/indigenous and historic cultural resources for the benefit of the public through preservation, public use, and research (Forest Service Manual, 2360.5).

Historic Property: 36 CFR 800.16 defines historic properties as "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic

Places. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian Tribe or Native Hawaiian organization and that meet the National Register criteria." Any prehistoric or historic district, site, building, structure, or object included in or eligible for inclusion in the National Register. This term includes artifacts, records, and remains related to and located within such properties.

Heritage Program: The comprehensive Forest Service program of responsibilities related to historic preservation. The purpose of the Heritage Program is to manage prehistoric, historic, and ethnographic cultural resources for the benefit of the public through preservation, public use, and research. The Heritage Program also contributes relevant information and perspectives to natural resource management.

Heritage Program Plan: A comprehensive planning document that establishes goals, objectives, and desired outcomes for the Heritage Program on a given unit of the National Forest System. A Heritage Program Plan identifies and defines the activities necessary to understand, preserve, protect, enhance, and develop the interpretation of cultural resources. See FSM 2362.3

Historic Preservation: A general term describing all activities related to management and stewardship of properties significant in American history, architecture, archaeology, or culture, including, but not limited to, identification, evaluation, recordation, documentation, curation, acquisition, protection, management, rehabilitation, restoration, stabilization, maintenance, reconstruction, or any combination of the foregoing activities.

Heritage Stewardship: Systematic, responsible management actions to recognize, maintain (conserve), protect, and use cultural resources for agency and public benefit.

Historic Context: An organization format that groups historic properties that share similarities of time, theme, and geography, for example, the Civil War period, railroad logging, or the North Cave Hills. The development of historic contexts is the foundation for decisions about the planning, identification, evaluation, registration, and treatment of historic properties. The use of historic contexts in organizing major historic preservation activities ensures that those activities result in the preservation of the wide variety of properties that represent our history, rather than only a small, biased sample of properties.

Identification: The general term for the component of cultural resource management that involves locating and recording the existence of cultural resources that may be eligible for listing on the National Register (as historic properties). The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation further clarify identification as "activities undertaken to gather information about historic properties in an area. The scope of these activities will depend on: existing knowledge about properties, goals for survey activities developed in the planning process, and current management needs."

Indian Tribe: Federally recognized Indian or Alaskan native Tribe, band, nation, pueblo, village, or community included in Federally Recognized Indian Tribe List Act of 1994 (25 U.S.C. 479a). NHPA defines Indian Tribe as "an Indian Tribe, band, nation, or other organized group or community, including a native village, regional corporation or village corporation, as those terms are defined in section 3 of the Alaska Native Claims Settlement Act (43 U.S.C. 1602), which is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians."

Inventory: The record of cultural resources known to occur within a defined geographic area. An inventory includes a compilation and synthesis of existing information and field surveys for evidence of past human activity. Inventory is sometimes used interchangeably with "survey," but in FSM 2360 and FSH 2309.12 context, the term inventory is more inclusive (see Survey).

Mitigation: Actions taken to reduce or eliminate effects caused to heritage resources. Avoidance is not considered a mitigation measure.

Monitoring: Systematic and periodic assessment of the physical condition of cultural resources and any ongoing or potential human-caused or environmental threats to them. It may be the basis for implementing corrective actions where degradation is identified. Monitoring is also done to evaluate the adequacy of protective treatments to cultural resources affected by undertakings authorized by the Forest Service and to review the accuracy of survey strategies and methods.

National Environmental Policy Act of 1969 (NEPA): NEPA is Federal law that guides the decision-making process for public lands in the United States. NEPA requires that all Federal agencies involve the interested public in their decision-making, consider reasonable alternatives to proposed actions, and prepare environmental documents that disclose the impacts of proposed actions and alternatives.

National Historic Landmark (NHL): Nationally significant historic places designated by the Secretary of the Interior because they possess exceptional value or quality in illustrating or interpreting the heritage of the United States. National Historic Landmarks enjoy extra protections and consideration under the Historic Sites Act of 1935 as amended (16 U.S.C. 461-467), the NHPA, and 36 CFR 800.10.

National Historic Preservation Act of 1966 (NHPA): The National Historic Preservation Act of 1966 was passed primarily to acknowledge the importance of protecting our Nation's heritage from rampant Federal development. It was the triumph of more than a century of struggle by a grassroots movement of committed preservationists. The NHPA established a framework to foster a new ethic through all levels and agencies of the Federal Government. Section 106 of the NHPA requires Federal agencies to consider the impact of their actions on historic properties and provide the ACHP with an opportunity to comment on projects before implementation. Because of Section 106, agencies have to assume responsibility for the consequences of their actions on historic properties and be publicly accountable for their decisions. Section 110 calls on all Federal agencies to establish preservation programs and designate Federal Preservation Officers to coordinate their historic preservation activities.

Some key elements from the Act:

- Sets the Federal policy for preserving our nation's heritage
- Establishes a Federal-State and Federal-Tribal partnership
- Establishes the National Register of Historic Places and National Historic Landmarks Programs
- Mandates the selection of qualified State Historic Preservation Officers
- Establishes the Advisory Council on Historic Preservation
- Charges Federal agencies with responsible stewardship
- Establishes the role of certified local governments within the states.

National Register of Historic Places (NRHP): A list of heritage/cultural resources that have local, state, or national significance. The list is maintained by the Secretary of the Interior. The National Register is the Nation's official list of the Nation's historic places worthy of preservation. Authorized by the National Historic Preservation Act of 1966, section 101(a)(1)(A) (16 U.S.C. 470a(a)), the National Register is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect historic and archaeological resources. Properties listed on the Register include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture. The Secretary's administrative responsibility for the National Register is delegated to the National Park Service.

Not Eligible: Indicates a specific cultural resource that does not qualify for the National Register of Historic Places (NRHP).

Paleoecology: A branch of ecology that is focused on the characteristic of ancient environments and their relationships to ancient plants and animals.

Priority Heritage Asset (PHA): Heritage assets of distinct public value that are or should be actively maintained and meet one or more of the following criteria:

- 1. The significance and management priority of the property is recognized through an official designation such as listing on the National Register of Historic Places or on a state register.
- 2. The significance and management priority of the property is recognized through prior investment in preservation, interpretation, and use.
- 3. The significance and management priority of the property is recognized in an agency-approved management plan.
- 4. The property exhibits critical deferred maintenance needs and those needs have been documented. Critical deferred maintenance is defined as a potential health or safety risk or imminent threat of loss of significant resource values.

Sacred Sites Executive Order 13007: defines an Indian sacred site as "any specific, discrete, narrowly delineated location on Federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion; provided that the Indian tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site."

Secretary's Standards and Guidelines: The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation. The Standards and Guidelines prepared under the authority of Sections 101(f), (g), and (h), and Section 110 of the National Historic Preservation Act provide technical information about archaeological and historic preservation activities and methods for all Federal agencies. Visit www.nps.gov for a list of available standards and guidelines.

Section 106: requires Federal agencies to consider the effects of their projects on cultural resources/historic properties that are either listed in, or eligible to be listed in the NRHP. The goal of the section 106 review process is to seek ways to avoid, minimize, or mitigate any adverse effects to cultural historic properties. Section 106 is part of the National Historic Preservation Act of 1966 (NHPA). The process required for Section 106 is outlined in 36CFR (Code of Federal Regulations) Part 800, Protecting Historic properties, and was issued by the Advisory Council on Historic Preservation (ACHP).

Section 110: Sets out the broad historic preservation responsibility of Federal agencies and is intended to ensure that historic preservation is fully integrated into the ongoing programs of all Federal agencies. Section 110 is part of the National Historic Preservation Act of 1966 (NHPA).

Significant/Significance: In the context of the Forest Service Handbook, terms with legal and regulatory application in the Historic Sites Act, the NHPA, and at 36 CFR 60, which mean that a cultural resource meets the eligibility criteria for listing on the National Register of Historic Places because of its significance at the local, state, or national level. The use of the term "significant or significance" in historic preservation legislation and by the historic preservation professional community pre-dates and has little relation to the term "significantly affecting the human environment" used in the National Environmental Policy Act of 1969 as amended (NEPA) (42 U.S.C. 4321 and 4331-4335).

Site: The location of human activities or events often used to mean the same as cultural resource. According to the Glossary of National Register Terms in National Register Bulletin No. 16A, site means "location of a significant event, a prehistoric or historic occupation or activity, or a building or structure, whether standing, ruined, or vanished, where the location itself possesses historic, cultural, or archaeological value regardless of any existing structure."

State Historic Preservation Officer (SHPO): Per NHPA Section 101, the governor of a state may designate and appoint a State Historic Preservation Officer to administer the state's historic preservation

program, to reflect the interests of the state and its citizens in the preservation of their cultural heritage, and to advise and assist Federal agencies in carrying out their NHPA Section 106 responsibilities.

Survey: In the context of the Forest Service Handbook, survey is field work to identify and record cultural resources. Field survey may be of different intensities (reconnaissance, sampling, or intensive), depending on variables such as existing knowledge of the area and the management goals for the identification. In areas where the ground surface is difficult to see, field survey may include subsurface probing to determine the presence or absence of cultural material.

Traditional Cultural Property (TCP): A cultural resource that is eligible for inclusion on the National Register of Historic Places because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community. The entity evaluated for eligibility for inclusion on the National Register of Historic Places must be a tangible property; that is, a district, site, building, structure, or object as defined in 36 CFR 64.4.

Tribal Consultation: The U.S. Department of Agriculture Policy of Tribal Consultation, Coordination, and Collaboration provides an operation definition as follows: "The timely, meaningful, and substantive dialog between U.S. Department of Agriculture officials who have delegated authority to consult, and the official leadership of federally recognized Indian Tribes, or their designated representative(s), pertaining to U.S. Department of Agriculture policies that may have Tribal implications." Tribal consultation is government to government as required under Executive Order 13175 – Consultation and Coordination with Indian Tribal Governments, issued November 6, 2000 (E.O. 13175).

Undertaking: NHPA Section 301(7) (16 U.S.C. 470w) defines undertaking as "a project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including those carried out by or on behalf of a Federal agency; those carried out with Federal financial assistance; those requiring a Federal permit, license, or approval; and those subject to State or local regulation administered pursuant to a delegation or approval by a Federal Agency."