

APPENDIX E

Interpretive Strategy and Environmental Education Strategy

SLOAN CANYON NCA INTERPRETIVE STRATEGY AND ENVIRONMENTAL EDUCATION STRATEGY

The cities of Las Vegas and Henderson, Nevada, form one of the fastest growing metropolitan areas in the United States. A rapidly expanding, urban and suburban metropolitan area of homes, businesses, and infrastructure now surrounds the well-known lights of The Strip. Yet immediately on the edges of this expansion, much of the land is open and undeveloped. This constantly changing interface of urban and natural settings provides unique challenges and opportunities for the Bureau of Land Management (BLM), Las Vegas Field Office, which manages public lands comprising much of this open space. In November 2002, Congress designated the Sloan Canyon National Conservation Area (NCA), located adjacent to the City of Henderson, to preserve and protect a portion of southern Nevada's Mojave Desert as a permanent asset for future generations.

Residential housing, schools, parks, and businesses will eventually border much of the northern and western edges of the NCA; however, at present, the NCA is undeveloped, and most recreation use occurs near the Sloan Canyon Petroglyph Site. There is no visitor facility, there are multiple entrances with few roads, and most visitors do not come into contact with BLM staff. However, the future urban and diverse audience will need to understand the NCA's valuable natural and cultural resources to appreciate and protect them. Finding ways to achieve this understanding will be the challenge of the NCA Interpretive and Environmental Education Program.

This strategy clarifies and sets direction for the Interpretive and Educational Program at the Sloan Canyon NCA. It provides a vision for future interpretation, education, and visitor experience opportunities. The strategy guides the development of an effective interpretive program that would serve visitors; promote the health of the land; and enhance the public's enjoyment, understanding, and appreciation of the NCA. This document presents a brief overview of the interpretive planning process, a discussion of the purpose and significance of the NCA, existing visitor conditions in the NCA, and high-level actions related to the NCA's interpretive and educational goal and objectives. Whenever possible, the Interpretive and Environmental Education Programs should be in the same organizational group.

1.0 THE INTERPRETIVE PLANNING PROCESS

The ultimate goal of the interpretive planning process is to establish a cost-effective, focused, high-quality program that effectively addresses all audiences and that identifies a variety of visitor experience opportunities. Building on the high-level management actions prescribed in the Sloan Canyon NCA Approved Resource Management Plan (RMP), this strategy provides a framework within which a more detailed comprehensive interpretive plan would be prepared. It provides tactical guidance for subsequent planning and leads to implementing actions directed toward interpretation and visitor experience opportunities.

This strategy would help focus collaborative planning discussions with internal interpretive team members (e.g., subject matter experts) and external cooperators. External cooperators could include surrounding communities, interested tribes, and other federal agencies. Subsequent planning could include the development of appropriate interpretive services, facilities, programs, and media that protect and preserve resources while communicating the NCA's purpose, significance, compelling stories, themes, and values.

In addition to a tiered planning approach, the Interpretive and Environmental Education Program would integrate and support the ongoing planning efforts of other resource teams. For instance, there is a

common interest in managing the North McCullough Wilderness for key visitor experiences; therefore, wilderness and recreation planning should strongly tie with the Interpretive and Environmental Education Program.

2.0 PURPOSE OF THE SLOAN CANYON NCA

The Clark County Conservation of Public Land and Natural Resources Act of 2002 (the Clark County Act) established the Sloan Canyon NCA and the North McCullough Wilderness, which is entirely contained within the NCA. The approximately 48,438-acre NCA forms the natural, mountainous southern skyline of the cities of Henderson and Las Vegas and contains unique scenic and geologic features and important archaeological sites (see Figure E.1). The centerpiece of the NCA is the Sloan Canyon Petroglyph Site, one of the most significant cultural resources in southern Nevada. More than 300 rock art panels with nearly 1,700 designs represent native cultures dating from the Archaic to historic era.

The purpose of the Sloan Canyon NCA, per the Clark County Act of 2002, is—

“...to conserve, protect, and enhance for the benefit and enjoyment of present and future generations the cultural, archaeological, natural, wilderness, scientific, geological, historical, biological, wildlife, educational, and scenic resources of the Conservations Area.”

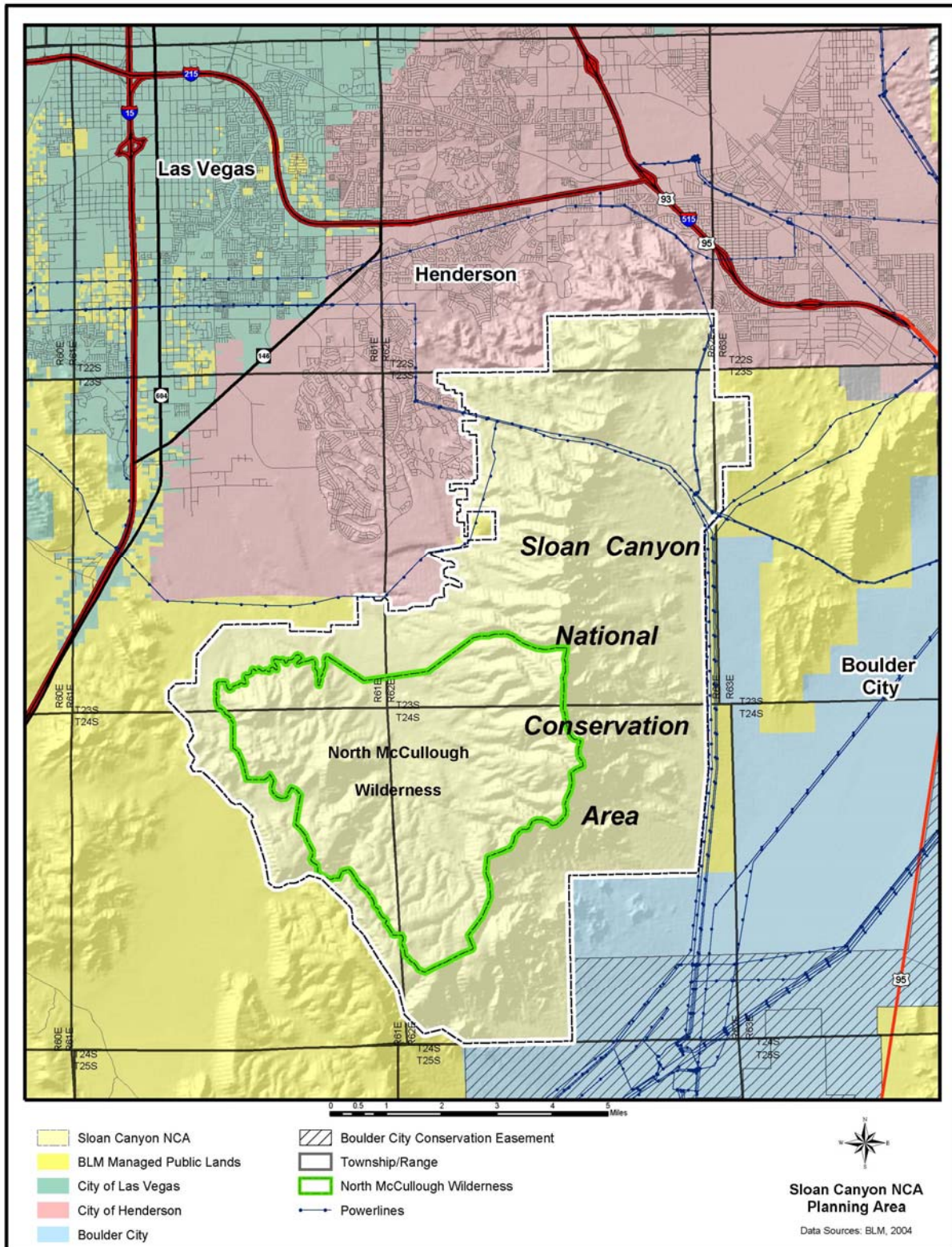
The Clark County Act directs the Secretary of the Interior, through the BLM, to manage the Sloan Canyon NCA in a manner that conserves, protects, and enhances the Conservation Area’s resources for the benefit and enjoyment of present and future generations. The Clark County Act identifies cultural, archaeological, natural, wilderness, scientific, geological, historical, biological, wildlife, educational, and scenic resources as important reasons for establishing the NCA. The designation of the North McCullough Wilderness, administered under the Wilderness Act of 1964 and Titles II and VI of the Clark County Act, requires that approximately 14,763 acres within the NCA be preserved and protected in their natural, primitive condition.

2.1 Significant Features of the Sloan Canyon NCA

The Sloan Canyon NCA encompasses the northern portion of the McCullough Range, lies southeast of the City of Las Vegas, and borders the City of Henderson. Volcanoes formed the McCullough Range, and a long basalt spine dominates the topography within the NCA. The eastern slopes of the range are much steeper than the western slopes, and the ridgeline offers excellent views of the Las Vegas Valley, numerous mountains, and the Eldorado and Jean dry lakes. Elevations within the NCA range from about 1,800 feet on the southeastern border to 5,000 feet at Black Mountain.

Archaeological evidence suggests that humans have used the NCA resources for nearly 7,000 years. Sloan Canyon Petroglyph Site, located within the southwestern portion of the NCA, contains more than 1,700 rock art elements within a 0.5-mile stretch of canyon. Although cultural affiliation has not been determined for each panel, archaeologists studying Sloan Canyon believe it has been used by many previous cultures, including Archaic. An ethnographic study completed for the Sloan Canyon NCA RMP and ongoing consultation with tribes have confirmed the cultural significance of the Sloan Canyon Petroglyph Site to today’s Native Americans. In addition to the Sloan Canyon Petroglyph Site, cultural resources inventories identified 19 other rock art sites in and around the NCA, but never in the quantities or as elaborate as in the canyon. The Sloan Canyon Petroglyph Site has been listed on the National Register of Historic Places since 1978.

Figure E.1. Sloan Canyon National Conservation Area Planning Area



The McCullough Range is located in the Mojave Desert near the confluence of two other unique geographic zones: Colorado Plateau and Great Basin. This setting plays a major role in the natural characteristics of the NCA. The primary ecosystem in northern portion of the McCullough Range is Mojave Desert Scrub, which is dominated by creosote and bursage with scattered stands of cholla cactus in varying densities, depending on elevation. The Blue Diamond cholla, considered a potential candidate species by the U.S. Fish and Wildlife Service, is also found within the NCA. Small communities of unique and isolated vegetation types, including several Special Status Species of beardtongue (*Penstemon spp.*), exist within the canyon and wash microclimates.

Although essentially only one ecosystem type is represented, the NCA supports a variety of wildlife, including desert bighorn sheep, mountain lions, Gila monsters, and the threatened desert tortoise. Two artificial wildlife water locations (guzzlers) were developed within the NCA through the cooperative efforts of the BLM, the Nevada Department of Wildlife (NDOW), and private conservation groups interested in improving habitat for bighorn sheep and other wildlife species.

Recreation is becoming an important use of the North McCullough Range. As urban growth in the Las Vegas Valley has enveloped the northern portion of the NCA, hiking, mountain biking, and off-highway vehicle use have become more prevalent. This situation can be contrasted to the southern portion of the NCA, which contains the approximately 14,763-acre North McCullough Wilderness. Because of its rugged character, which limits access, this southern portion received little visitation in the past, and opportunities abound for solitude and for primitive and unconfined recreation.

3.0 EXISTING CONDITIONS

The North McCullough Range received little visitation before the designation of the Sloan Canyon NCA and the North McCullough Wilderness. Although the NCA is still undeveloped, usage along the urban interface has increased with the growth of the Las Vegas Valley population.

3.1 User and Audience Profiles

BLM began observations in November 2003 to determine patterns and trends of visitor use at the NCA. Between November 2003 and July 2004, about 4,000 total visitors were counted within the NCA, averaging 15 visitors per day. Extrapolated to a full calendar year, the observed visitor total would be about 5,500 annual visits. Visitor patterns indicated peak visitation (15 to 35 visits per day) on weekends and lower use (5 to 15 visits per day) on weekdays.

Because visitation data is limited, for purposes of planning and analysis, it was assumed that actual visitation is five times higher than the observed. Hence, current visitation is estimated at 28,500 visitors per year. Even without the development of additional visitor facilities, visitation is expected to increase as the NCA becomes better known and as the regional population and surrounding development grows. Although the City of Henderson had about a 22-percent growth rate for 2000 to 2003, the current annual growth rate in Clark County is 4 percent (Clark County 2003a in the *Sloan Canyon Proposed RMP/FEIS Reference List*). As a conservative estimate, if this constant growth rate were applied to NCA visitation, the total visitation in 2030 would be roughly 75,000. Specific NCA usage is unknown, but the general visitation categories are described below.

First-Time Visitors

First-time visitors seek interpretive opportunities and request information about facilities, recreational opportunities, and cultural and natural resources of the area or region.

Repeating and Recreational Users

Some repeated users may return to the Sloan Canyon NCA because they found information about a specific interpretive program or activity they would like to attend or participate in. Recreational users often travel with people who are already familiar with the area and have no interest in taking time out from their activity to attend “educational/interpretive programs.” Their main interest is information regarding conditions related to their chosen recreational activity, which might be posted at the trailheads; therefore, there might not be a need for them to visit the visitor center.

Native American Traditional Users

Native Americans from surrounding tribes that have historically used the area for traditional cultural activities may visit the NCA for cultural purposes.

Scientists and Researchers

Scientists and researchers from universities and government agencies may come to the NCA to conduct scientific research to further support the vision of the BLM and Sloan Canyon NCA management.

Hunters

Hunters permitted by NDOW would be only a very small percentage of the visitors to the NCA. Hunters would visit only during specific seasons of use and would be likely to focus on some areas of the NCA.

Community Outreach

Because of the NCA’s proximity to the urban Las Vegas Valley, there is a potentially large audience for outreach programs. This audience includes schools, service clubs, sporting clubs, and special events and could involve concessionaires and tour operators.

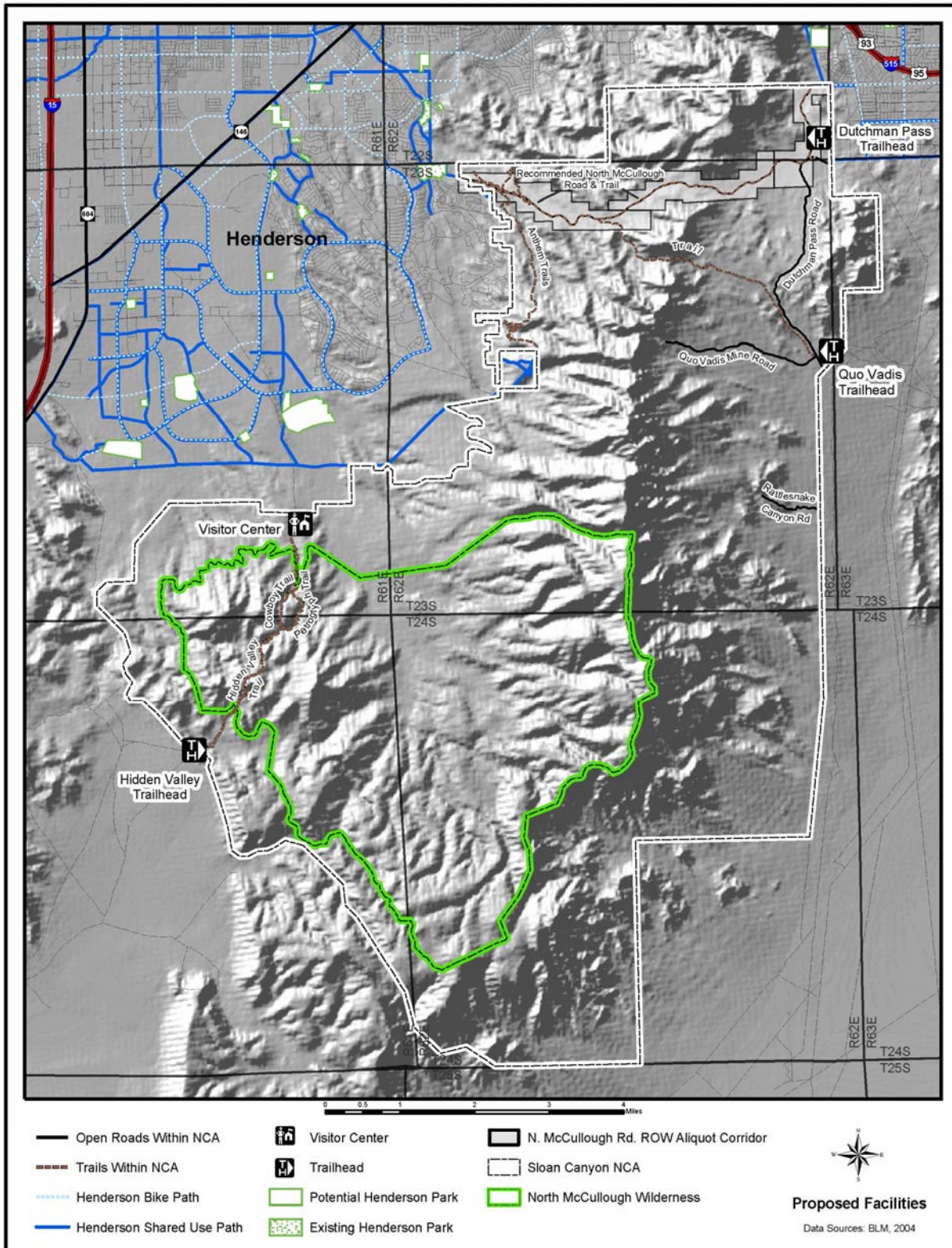
3.2 Potential Facilities and Access

No developed facilities exist within the NCA. However, the Sloan Canyon NCA Approved RMP discusses potential facilities and access points into the NCA, including the northern entrance of Sloan Canyon, Hidden Valley Trailhead, Dutchman Pass Trailhead, and Quo Vadis Trailhead. Figure E.2, Proposed Facilities Map, shows the locations of these potential facilities. Additional facilities could be developed over time as visitation increases and as resource monitoring indicates the need for additional protection.

Northern Entrance of Sloan Canyon

A visitor center could be constructed near the NCA boundary at the north entrance to Sloan Canyon. The visitor center could be used as an access point for the Sloan Canyon Petroglyph Site, provide onsite resource protection and interpretation, and provide NCA management. The visitor center could include amenities such as office spaces for the Sloan Canyon NCA staff and law enforcement; maintenance facilities; educational classrooms; and a public space to meet visitors’ needs for interpretation, information, and orientation.

Figure E.2. Proposed Facilities



Hidden Valley Trailhead

A multi-panel kiosk placed inside the NCA boundary would provide safety, orientation, and resource protection information as well as limited highlights of local recreational opportunities and interpretive stories.

Dutchman Pass Trailhead

A freestanding, multi-panel sign would be placed near the proposed North McCullough Road. Messages could include safety, orientation, resource protection information, interpretive stories, and recreational use by equestrians.

Quo Vadis Trailhead

A freestanding, two-panel sign would be located at the trailhead displaying informative messages, orientation, safety, and interpretive stories.

Minor Trailheads

Freestanding, single-panel sign or bulletin board would be placed at minor trailheads to display brief safety information on trail, orientation, and brief interpretive stories.

3.3 Issues and Influences

The following resources and management issues could be addressed through the interpretive media (e.g. brochures, websites).

Safety Issues

- Summer temperatures in southern Nevada regularly exceed 100°F, and many visitors may be unprepared for the severity of such exposure.
- There is little road access into the entire NCA, and most portions require self-sufficiency. Some visitors may be unprepared, ill equipped, or inexperienced in handling wilderness, wildlife, and weather dangers.
- Monsoon-driven heavy thunderstorms, accompanied by lightning and flash flooding, often occur during summer, and some of the most frequently visited areas are wash bottoms. Visitors may be unaware that these floods are extremely dangerous.
- Potable water is not available in the NCA.

Visitor-Related Resource Issues

- “Leave No Trace,” “Tread Lightly,” and/or other minimum impact resource use might not be practiced by some visitors.
- Some visitors may not know they are in an NCA and/or do not know understand the rules and regulations leading to unintentional infractions or resource violations.
- Cultural resource site protection in backcountry is an issue.

- The limited number of access points might concentrate visitor use, impacting the resource and visitor experience.

Other Management Issues

- A perceived and sometimes real conflict might exist between recreational users.
- Public and visitors do not recognize the significance of Sloan Canyon NCA.

4.0 INTERPRETIVE GOAL AND ASSOCIATED OBJECTIVES AND ACTIONS

The Sloan Canyon NCA Approved RMP identifies the following goals, objectives, and actions that provide a framework for more detailed interpretive planning:

Provide opportunities for on- and offsite visitors to develop an appreciation and understanding of the NCA's resources through educational, informational, and inspiring interpretive experiences.

Objective 1

Provide orientations, education, accurate information, regulations, and interpretation that helps meet the user's needs (e.g., tours, kiosks, brochures, virtual tours, website, libraries, community outreach).

Actions

- Provide thematic interpretive presentations to enhance the appreciation, understanding, and protection of the NCA's natural, cultural, and recreation resource values.
- Identify ways of increasing the NCA's interpretive services through cooperative efforts with other government and nongovernment agencies, Native American tribes, cooperating associations, permitted outfitters and guides, concessionaires, and nonprofit organizations.
- Develop criteria and procedures for identifying interpretive needs and evaluating programs and media.
- Identify and maintain accurate databases on interpretive projects and facilities associated with the NCA.
- Prepare an annual implementation plan that would identify the NCA's priorities to be accomplished for the year.
- Identify and compile basic information (safety, orientation, and recreational information) that could be provided to customers through appropriate media (online, visitor access areas, cooperative sites, and programs).

Objective 2

Identify opportunities for Native American tribes to provide programs and products.

Actions

- Partner with interested Native American tribes in developing interpretive programs, educational material, and media on NCA resources that are consistent with the NCA mission, including integrating regional historic and contemporary tribal relationships with the NCA and the expanded story of traditional cultures.
- Develop a repository for storing Native American archival literature, including space where visiting Native Americans can conduct cultural research.

Objective 3

Provide interpretation that fosters stewardship behavior in visitors so their actions would have a minimum impact on the NCA's resources.

Actions

- Use interdisciplinary teams to identify local resource management issues to be addressed by interpretive efforts.
- Select interpretive media and techniques that minimize impact to and enhance the protection of the resources.

Objective 4

Increase public awareness of NCA management goals.

Actions

- Broaden public support for the NCA by providing outreach programs to a diverse audience. Inform the public about the sensitive nature of the NCA resources, purpose of the NCA designation, and need for NCA regulations.
- Consider developing a diverse range of high-quality experiences that is consistent with NCA purposes and is based on NCA's resources and values, with consideration for sustainable practices and traditional uses.

Objective 5

Provide opportunities for research specialist, researchers, and managers to participate in the development of outreach presentations and media.

Actions

- Promote, coordinate, and disseminate research to enhance scientific understanding of the NCA environment and incorporate this research into the Interpretive and Education Program for the public's benefit.